State Bierstadt 4-65 35-34 2AH

Facility ID: 467266

SENE Sec. 35-T4S-R65W

Remediation Project #: 34460

Form 19 Data Package

May 2024

Prepared by Tasman, Inc.

On behalf of Crestone Peak Resources Operating, LLC

PHOTO LOG

Photographic Log

Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Surrounding land use, facing N		

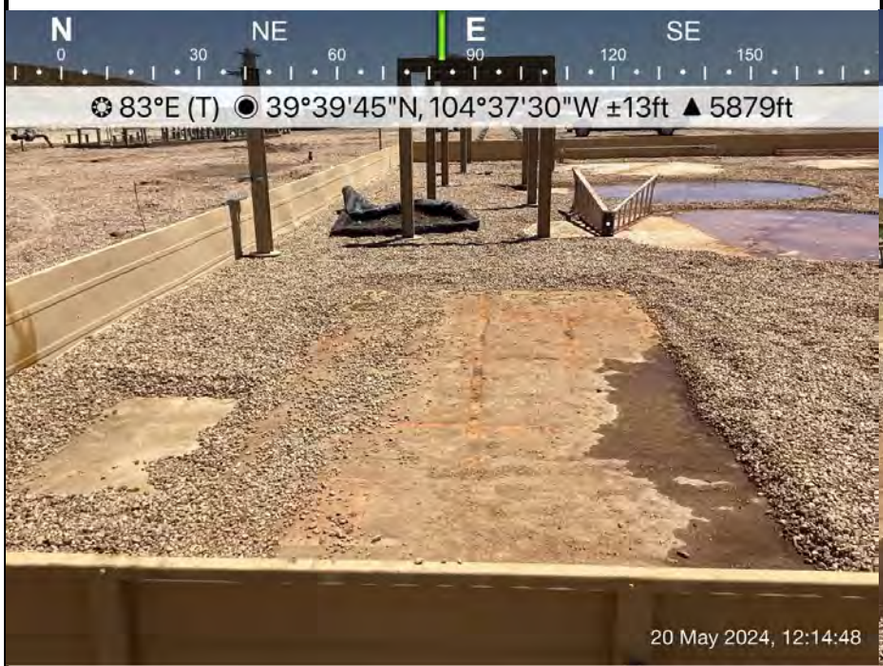
Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Surrounding land use, facing E		

Photographic Log

Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Surrounding land use, facing S		

Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Surrounding land use, facing W		

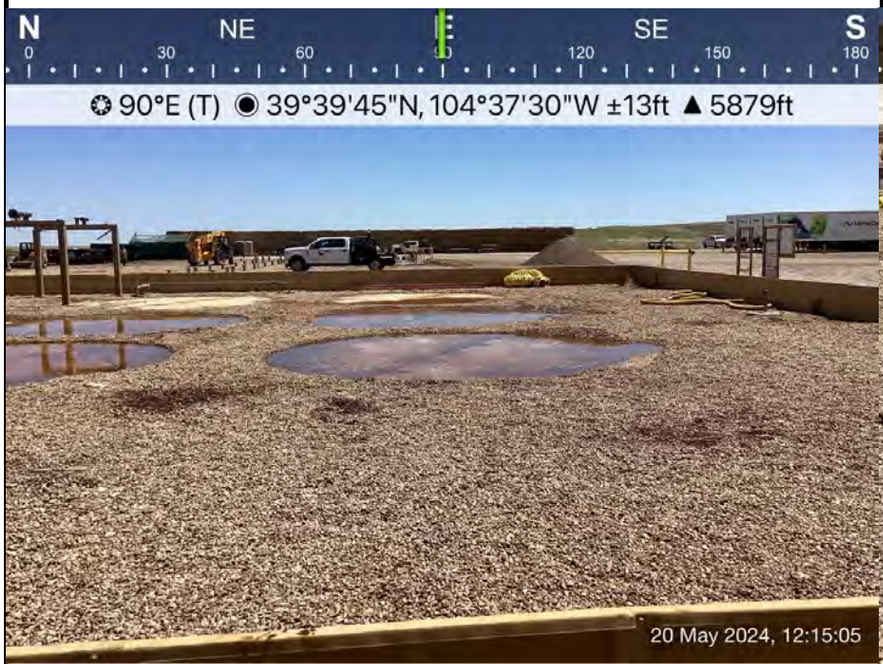
Photographic Log



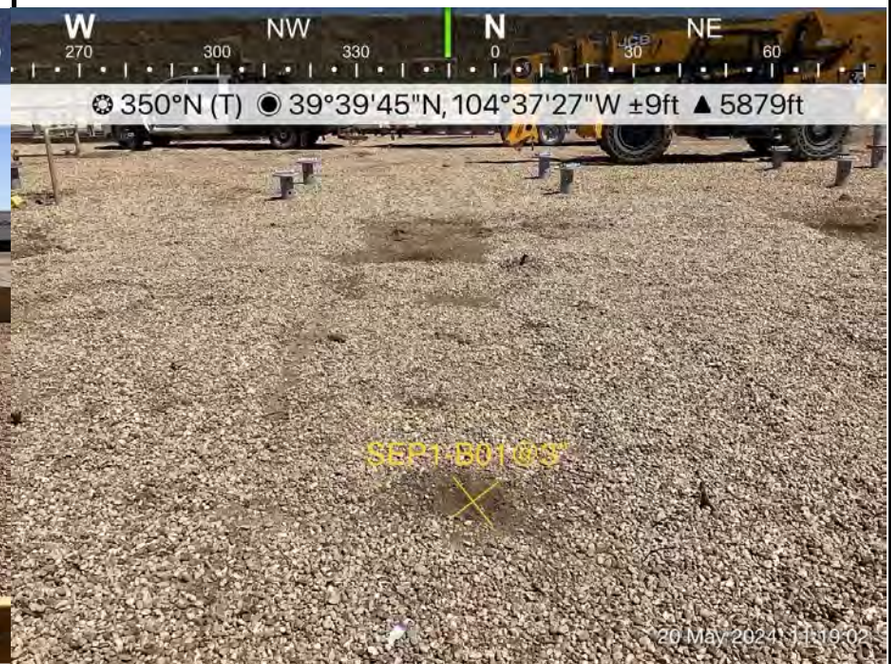
Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: LACT Liner Integrity, Northeast corner, facing E		

Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: AST Liner Integrity, Northern row, facing E		

Photographic Log



Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: AST Liner Integrity, Southern row, facing E		



Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Soil sampling location, facing N		

Photographic Log

Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Soil sampling location, facing S		

Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Soil sampling location, facing N		

Photographic Log

Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Soil sampling location, facing S		

Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Soil sampling location, facing N		

Photographic Log

Equipment ID:	Equipment Type:		Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:	Material:	Volume:	Contents:
Notes/Conditions: Soil sampling location, facing S			Notes/Conditions: Soil sampling location, facing N		

TASMAN

Photographic Log

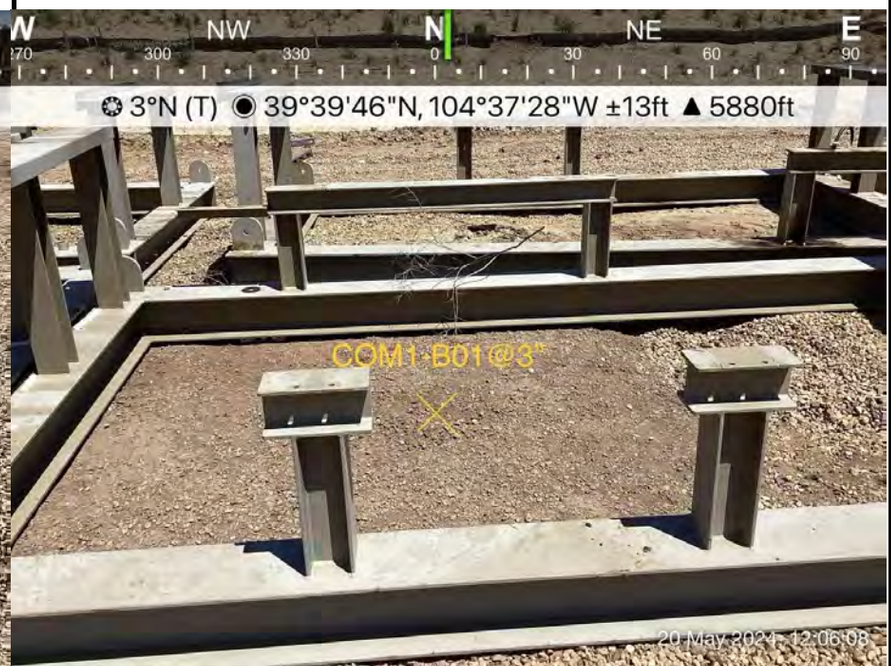
Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Soil sampling location, facing S		

Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Soil sampling location, facing N		

TASMAN

Photographic Log

Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Soil sampling location, facing S		



Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Soil sampling location, facing N		

Photographic Log

Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Soil sampling location, facing NE		

Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Soil sampling location, facing S		

TASMAN

Photographic Log

Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Soil sampling location, facing S		

Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Soil sampling location, facing S		

TASMAN

Photographic Log

Equipment ID:	Equipment Type:		Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:	Material:	Volume:	Contents:
Notes/Conditions: Soil sampling location, facing NW			Notes/Conditions: Soil sampling location, facing S		

Photographic Log

Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Soil sampling location, facing S		

Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Soil sampling location, facing SE		

TASMAN

Photographic Log

Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Soil sampling location, facing E		

Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Soil sampling location, facing SE		

TASMAN

Photographic Log

Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Soil sampling location, facing S		

Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions: Background soil sampling location, Northeast of the pad, facing S		

TASMAN

Photographic Log

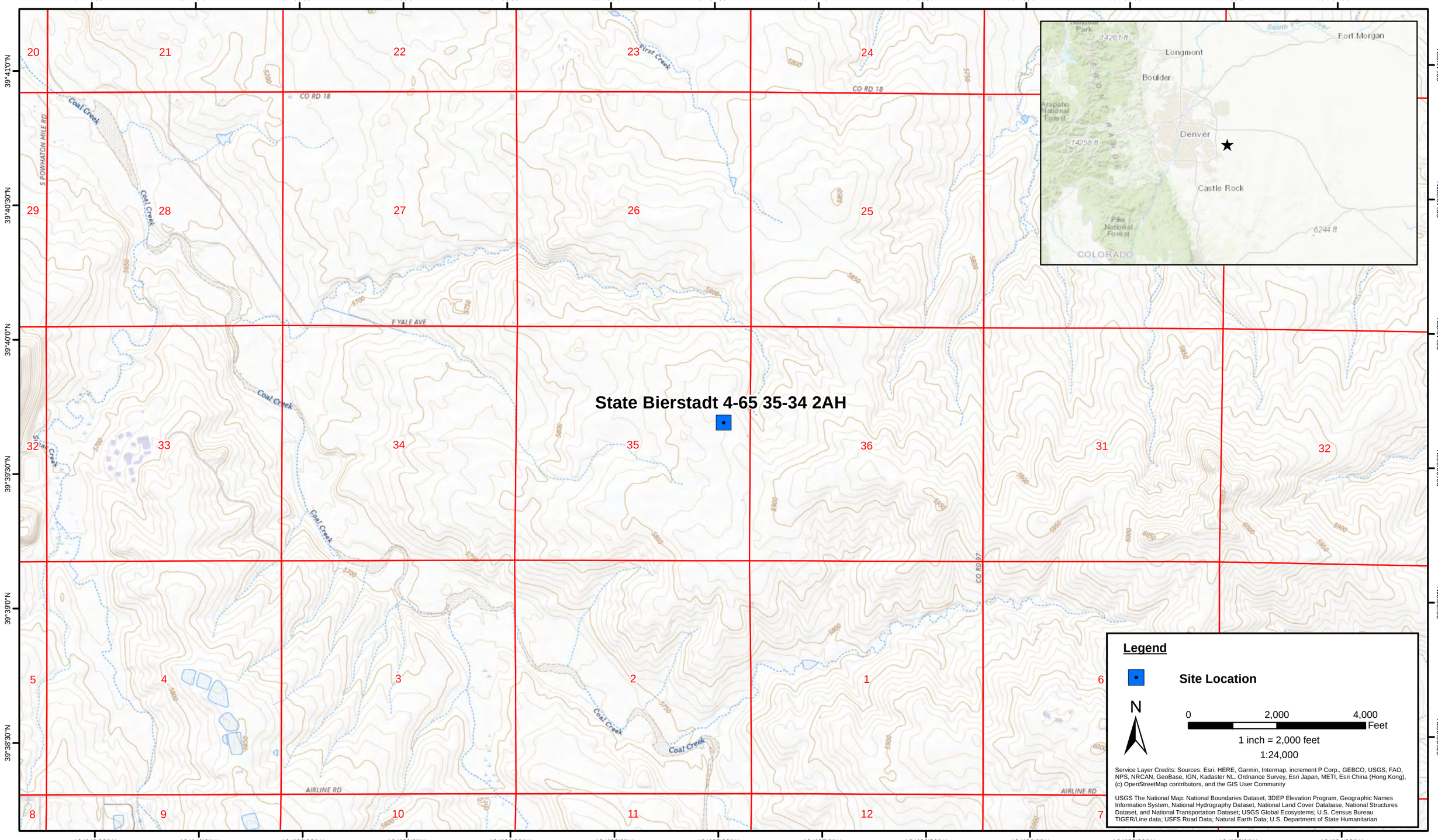
Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions:	Background soil sampling location, North of the pad, facing SE	

Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:
Notes/Conditions:	Background soil sampling location, Northwest of the pad, facing E	

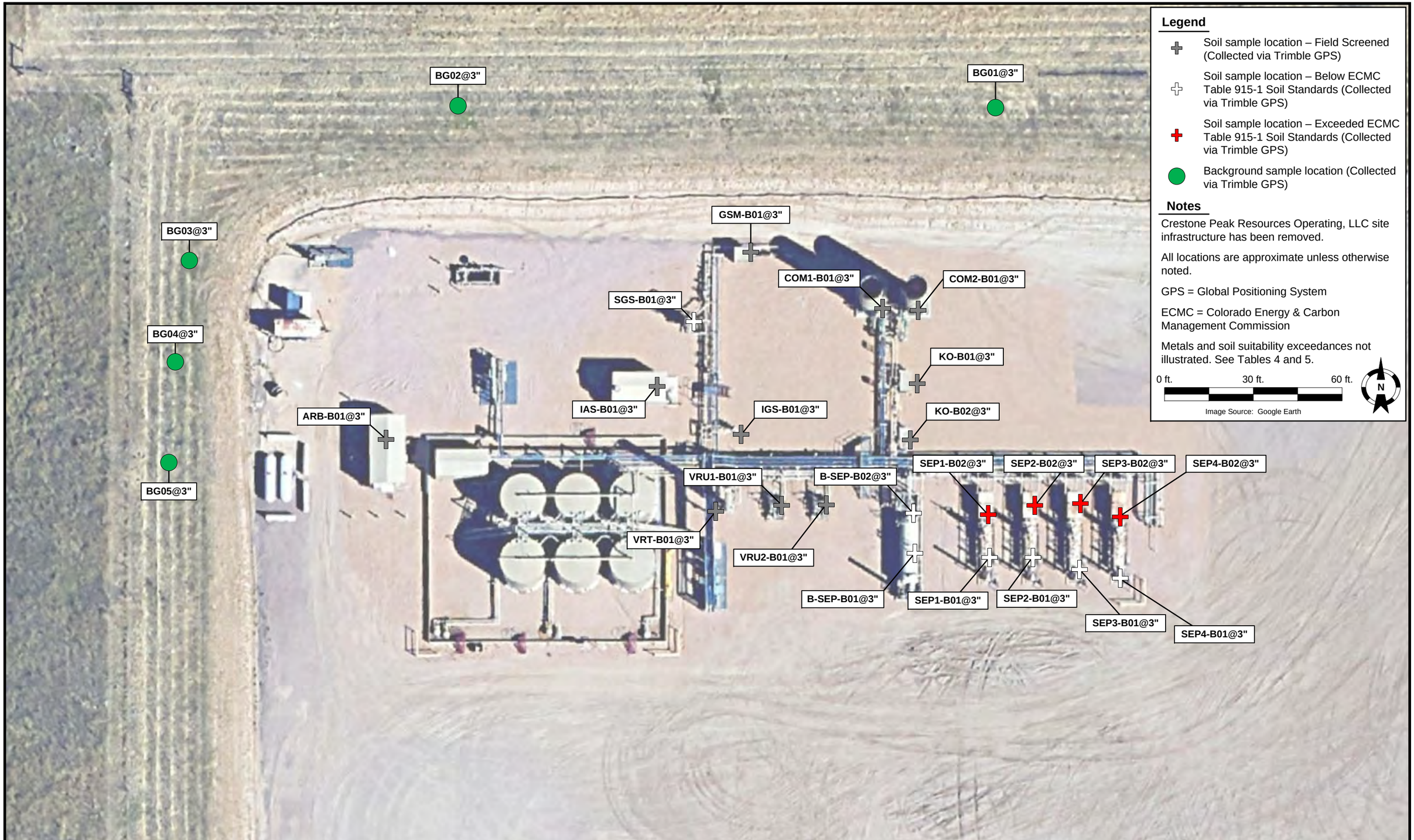
Photographic Log

Equipment ID:	Equipment Type:		Equipment ID:	Equipment Type:	
Material:	Volume:	Contents:	Material:	Volume:	Contents:
Notes/Conditions: Background soil sampling location, West of the pad, facing SE			Notes/Conditions: Background soil sampling location, West of the pad, facing SE		

FIGURES



DATE: June 2024 DESIGNED BY: S. Vogt DRAWN BY: L. Reed	TASMAN	**Tasman, Inc.** **6855 W. 119th Ave** **Broomfield, CO 80020**	**Crestone Peak Resources Operating LLC** **State Bierstadt 4-65 35-34 2AH** SENE Sec. 35-T4S-R65W Arapahoe County, Colorado	Site Location Map	Figure 1



DATE: June 12, 2024 DESIGNED BY: S. Vogt DRAWN BY: L. Molson	TASMAN **Tasman, Inc.** **6855 W119th Ave.** **Broomfield, CO 80020**	**Crestone Peak Resources Operating, LLC** **State Bierstadt 4-65 35-34 2AH** SENE Sec. 35-T4S-R65W Arapahoe County, Colorado	Soil Sample Location Map (05/20/2024)	Figure 2

TABLES

TABLE 1
STATE BIERSTADT 4-65 35-34 2AH
SOIL SAMPLE LOCATIONS
CRESTONE PEAK RESOURCES OPERATING, LLC

Soil Sample Location	Depth	Date	PID Reading (ppm)	Latitude	Longitude	GPS PDOP Value	Lab (Y/N)
SEP1-B01@3”	3"	05/20/2024	1.2	39.662584	-104.624355	0.9	Y
SEP1-B02@3”	3"	05/20/2024	2.7	39.662625	-104.624355	0.9	Y
SEP2-B01@3”	3"	05/20/2024	0.9	39.662585	-104.624299	0.8	Y
SEP2-B02@3”	3"	05/20/2024	4.5	39.662634	-104.624305	0.8	Y
SEP3-B01@3”	3"	05/20/2024	0.5	39.662575	-104.624252	0.8	Y
SEP3-B02@3”	3"	05/20/2024	0.3	39.662634	-104.624251	0.8	Y
SEP4-B01@3”	3"	05/20/2024	0.9	39.662565	-104.624195	0.8	Y
SEP4-B02@3”	3"	05/20/2024	0.6	39.662623	-104.624195	0.8	Y
B-SEP-B01@3”	3"	05/20/2024	0.3	39.662590	-104.624449	0.9	Y
B-SEP-B02@3”	3"	05/20/2024	0.4	39.662626	-104.624450	1.1	Y
COM1-B01@3”	3"	05/20/2024	0.2	39.662817	-104.624487	0.8	N
COM2-B01@3”	3"	05/20/2024	0.7	39.662815	-104.624446	0.8	N
GSM-B01@3”	3"	05/20/2024	1.1	39.662868	-104.624647	0.8	N
SGS-B01@3”	3"	05/20/2024	0.0	39.662806	-104.624714	0.8	Y
IGS-B01@3”	3"	05/20/2024	1.1	39.662700	-104.624658	0.8	N
VRT-B01@3”	3"	05/20/2024	0.9	39.662630	-104.624690	0.8	N
VRU1-B01@3”	3"	05/20/2024	1.1	39.662635	-104.624612	0.9	N
VRU2-B01@3”	3"	05/20/2024	1.3	39.662634	-104.624558	0.9	N
ARB-B01@3”	3"	05/20/2024	0.1	39.662698	-104.625085	0.8	N
IAS-B01@3”	3"	05/20/2024	0.4	39.662744	-104.624759	0.9	N
KO-B01@3”	3"	05/20/2024	0.9	39.662747	-104.624446	0.9	N
KO-B02@3”	3"	05/20/2024	0.7	39.662695	-104.624455	0.9	N
BACKGROUND							
BG01@3”	3"	05/20/2024	0.3	39.663002	-104.624352	0.9	Y
BG02@3”	3"	05/20/2024	0.3	39.663006	-104.624998	0.9	Y
BG03@3”	3"	05/20/2024	0.2	39.662864	-104.625322	0.9	Y
BG04@3”	3"	05/20/2024	0.1	39.662768	-104.625336	1	Y
BG05@3”	3"	05/20/2024	0.1	39.662677	-104.625346	0.9	Y

Notes:
PID = Photoionization Detector
ppm = parts per million
GPS = Global Positioning System
PDOP = Position Dilution of Precision

TABLE 2
STATE BIERSTADT 4-65 35-34 2AH
SOIL ANALYTICAL DATA - VOCs
CRESTONE PEAK RESOURCES OPERATING, LLC

Soil Sample Location	Depth	Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	TVPH-GRO (mg/kg)	TEPH-DRO (mg/kg)	TEPH-ORO (mg/kg)	1,2,4-TMB (mg/kg)	1,3,5-TMB (mg/kg)
ECMC Organic Compounds in Soils - GSSL [1]			**0.0026**	**0.69**	**0.78**	**9.9**	**0.0038**	**500**			**0.0081**	**0.0087**
ECMC Organic Compounds in Soils - RSL [2]			**1.2**	**490**	**5.8**	**58**	**2**	**500**			**30**	**27**
SEP1-B01@3"	3"	05/20/2024	<0.000467	<0.00130	<0.000737	<0.000880	*<0.00408*	0.0242	23.7	48.6	<0.00158	<0.00200
SEP1-B02@3"	3"	05/20/2024	<0.00374	<0.0104	<0.00590	<0.00704	**0.0447**	**0.17**	**13,200**	**13,500**	**0.014**	*<0.0160*
SEP2-B01@3"	3"	05/20/2024	<0.000467	<0.00130	<0.000737	<0.000880	*<0.00408*	0.0289	31.5	49.8	<0.00158	<0.00200
SEP2-B02@3"	3"	05/20/2024	**0.016**	0.054	<0.0147	0.106	*<0.00408*	**0.149**	**16,200**	**16,000**	**0.038**	*<0.0400*
SEP3-B01@3"	3"	05/20/2024	<0.000467	<0.00130	<0.000737	<0.000880	*<0.00408*	0.0285	79.5	96.4	<0.00158	<0.00200
SEP3-B02@3"	3"	05/20/2024	<0.00374	<0.0104	<0.00590	<0.00704	*<0.00408*	**0.0617**	**4,530**	**5,870**	<0.0126	*<0.0160*
SEP4-B01@3"	3"	05/20/2024	<0.000467	<0.00130	<0.000737	<0.000880	*<0.00408*	0.0292	107	225	<0.00158	<0.00200
SEP4-B02@3"	3"	05/20/2024	<0.000467	0.00205	<0.000737	0.00218	**0.0168**	**0.107**	**13,300**	**15,200**	0.00176	<0.00200
B-SEP-B01@3"	3"	05/20/2024	<0.000467	<0.00130	<0.000737	<0.000880	*<0.00408*	0.0384	13.5	27.5	<0.00158	<0.00200
B-SEP-B02@3"	3"	05/20/2024	<0.000467	<0.00130	<0.000737	<0.000880	*<0.00408*	0.0415	37.4	78.4	<0.00158	<0.00200
SGS-B01@3"	3"	05/20/2024	<0.000467	<0.00130	<0.000737	<0.000880	*<0.00408*	0.0342	15.2	52.6	0.0025	<0.00200

Notes:

VOCs = Volatile Organic Compounds

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

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

ECMC = Colorado Energy & Carbon Management Commission

GSSL = Protection of Groundwater Screening Level

RSL = Residential Soil Screening Level

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

mg/kg = milligrams per kilogram

TVPH - GRO = Total Volatile Petroleum Hydrocarbons - Gasoline Range Organics

TEPH - DRO = Total Extractable Petroleum Hydrocarbons - Diesel Range Organics

TEPH - ORO = Total Extractable Petroleum Hydrocarbons - Oil Range Organics

1,2,4 - TMB = 1,2,4 - Trimethylbenzene

1,3,5 - TMB = 1,3,5 - Trimethylbenzene

BOLD = Analytical result is in exceedance of ECMC Table 915-1: Organic Compounds in Soils - Protection of Groundwater Soil Screening Level Concentrations

BOLD = Analytical result is in exceedance of ECMC Table 915-1: Organic Compounds in Soils - Residential Soil Screening Level Concentrations

Italics = Laboratory minimum detection limit exceeds the ECMC Table 915-1 standard

TABLE 3
STATE BIERSTADT 4-65 35-34 2AH
SOIL ANALYTICAL DATA - PAHs
CRESTONE PEAK RESOURCES OPERATING, LLC

Soil Sample Location	Depth	Date	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo(a)A (mg/kg)	Benzo(b)F (mg/kg)	Benzo(k)F (mg/kg)	Benzo(a)P (mg/kg)	Chrysene (mg/kg)	D (a,h) A (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	1-M (mg/kg)	2-M (mg/kg)	Pyrene (mg/kg)
ECMC Organic Compounds in Soils - GSSL [1]			**0.55**	**5.8**	**0.011**	**0.3**	**2.9**	**0.24**	**9**	**0.96**	**8.9**	**0.54**	**0.98**	**0.006**	**0.019**	**1.3**
ECMC Organic Compounds in Soils - RSL [2]			**360**	**1,800**	**1.1**	**1.1**	**11**	**0.11**	**110**	**0.11**	**240**	**240**	**1.1**	**18**	**24**	**180**
SEP1-B01@3”	3"	05/20/2024	<0.00209	<0.00230	<0.00173	<0.00153	<0.00215	<0.00179	<0.00232	<0.00172	<0.00227	<0.00205	<0.00181	<0.00449	<0.00427	<0.00200
SEP1-B02@3”	3"	05/20/2024	<0.00209	<0.00230	<0.00173	0.0745	<0.00215	0.0282	<0.00232	0.0244	<0.00227	0.479	<0.00181	**0.682**	**0.495**	0.333
SEP2-B01@3”	3"	05/20/2024	<0.00209	<0.00230	<0.00173	<0.00153	<0.00215	<0.00179	<0.00232	<0.00172	<0.00227	<0.00205	<0.00181	<0.00449	<0.00427	<0.00200
SEP2-B02@3”	3"	05/20/2024	<0.00209	<0.00230	<0.00173	0.143	<0.00215	0.0583	<0.00232	0.0484	<0.00227	**0.798**	<0.00181	**1.78**	**0.647**	0.520
SEP3-B01@3”	3"	05/20/2024	<0.00209	<0.00230	<0.00173	<0.00153	<0.00215	<0.00179	<0.00232	<0.00172	<0.00227	<0.00205	<0.00181	<0.00449	<0.00427	<0.00200
SEP3-B02@3”	3"	05/20/2024	<0.00209	<0.00230	<0.00173	0.0401	0.00475	0.0141	<0.00232	0.0133	<0.00227	0.0455	<0.00181	**0.00992**	0.00581	0.120
SEP4-B01@3”	3"	05/20/2024	<0.00209	<0.00230	<0.00173	<0.00153	<0.00215	<0.00179	<0.00232	<0.00172	<0.00227	<0.00205	<0.00181	<0.00449	<0.00427	0.00269
SEP4-B02@3”	3"	05/20/2024	<0.00209	<0.00230	<0.00173	0.135	<0.00215	0.0585	<0.00232	0.0426	<0.00227	0.182	<0.00181	**0.230**	**0.153**	0.485
B-SEP-B01@3”	3"	05/20/2024	<0.00209	<0.00230	<0.00173	<0.00153	<0.00215	<0.00179	<0.00232	<0.00172	<0.00227	<0.00205	<0.00181	<0.00449	<0.00427	<0.00200
B-SEP-B02@3”	3"	05/20/2024	<0.00209	<0.00230	<0.00173	<0.00153	<0.00215	<0.00179	<0.00232	<0.00172	<0.00227	<0.00205	<0.00181	<0.00449	<0.00427	0.00213
SGS-B01@3”	3"	05/20/2024	<0.00209	<0.00230	<0.00173	<0.00153	<0.00215	<0.00179	<0.00232	<0.00172	<0.00227	<0.00205	<0.00181	<0.00449	<0.00427	<0.00200

Notes:

PAHs = Polycyclic Aromatic Hydrocarbons

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

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

ECMC = Colorado Energy & Carbon Management Commission

GSSL = Protection of Groundwater Screening Level

RSL = Residential Soil Screening Level

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

mg/kg = milligrams per kilogram

Benzo(a)A = Benzo(a)Anthracene

Benzo(b)F = Benzo(b)Fluoranthene

Benzo(k)F = Benzo(k)Fluoranthene

Benzo(a)P = Benzo(a)Pyrene

D (a,h) A = Dibenz(a,h)Anthracene

1,2,3-CD = Indeno(1,2,3-cd)Pyrene

1-M = 1-Methylnaphthalene

2-M = 2-Methylnaphthalene

BOLD = Analytical result is in exceedance of ECMC Table 915-1: Organic Compounds in Soils - Protection of Groundwater Soil Screening Level Concentrations

BOLD = Analytical result is in exceedance of ECMC Table 915-1: Organic Compounds in Soils - Residential Soil Screening Level Concentrations

TABLE 4
STATE BIERSTADT 4-65 35-34 2AH
SOIL ANALYTICAL DATA - METALS
CRESTONE PEAK RESOURCES OPERATING, LLC

Soil Sample Location	Depth	Date	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
ECMC Metals in Soils - GSSL [1]			**0.29**	**82**	**0.38**	**0.00067**	**46**	**14**	**26**	**0.26**	**0.8**	**370**
ECMC Metals in Soils - RSL [2]			**0.68**	**15,000**	**71**	**0.3**	**3,100**	**400**	**1,500**	**390**	**390**	**23,000**
SEP1-B01@3”	3"	05/20/2024	2.02*	**189**	<0.0855	*<0.255*	29.8	4.38	11.8	**0.962**	<0.0865	83.8
SEP1-B02@3”	3"	05/20/2024	1.97*	**434**	0.130	*<0.255*	30.4	4.59	13.4	**1.08**	<0.0865	104
SEP2-B01@3”	3"	05/20/2024	2.04*	**208**	0.206	*<0.255*	29.5	4.13	18.6	**0.918**	<0.0865	85.5
SEP2-B02@3”	3"	05/20/2024	1.98*	**178**	0.0958	*<0.255*	28.8	4.52	10.6	**1.21**	<0.0865	87.3
SEP3-B01@3”	3"	05/20/2024	2.63*	**300**	<0.0855	*<0.255*	26.7	3.84	9.82	**0.981**	<0.0865	72.1
SEP3-B02@3”	3"	05/20/2024	2.19*	**265**	0.132	*<0.255*	29.8	4.11	9.97	**1.03**	<0.0865	79.4
SEP4-B01@3”	3"	05/20/2024	2.01*	**342**	0.105	**0.496**	25.3	4.96	12.6	**0.971**	<0.0865	87.6
SEP4-B02@3”	3"	05/20/2024	1.97*	**442**	0.104	*<0.255*	42.0	4.89	13.2	**1.16**	<0.0865	152
B-SEP-B01@3”	3"	05/20/2024	2.19*	124*	<0.0855	*<0.255*	29.2	3.57	8.81	**1.52**	<0.0865	65.8
B-SEP-B02@3”	3"	05/20/2024	1.81*	**203**	0.116	*<0.255*	26.5	3.67	9.26	0.428*	<0.0865	68.1
SGS-B01@3”	3"	05/20/2024	1.76*	50.3	<0.0855	*<0.255*	27.3	3.83	7.53	0.260*	<0.0865	56.0
BACKGROUND												
BG01@3”	3"	05/20/2024	3.11	95.8	0.302	<0.255	9.12	14.5	8.13	1.07**	<0.0865	33.6
BG02@3”	3"	05/20/2024	**3.47**	**107**	**0.327**	<0.255	**10.6**	**14.8**	**9.58**	**0.381**	<0.0865	**38.4**
BG03@3”	3"	05/20/2024	2.44	83.9	0.295	<0.255	8.11	13.7	6.28	0.302	<0.0865	32.2
BG04@3”	3"	05/20/2024	2.79	82.2	0.247	<0.255	9.15	13.5	6.73	0.363	<0.0865	31.9
BG05@3”	3"	05/20/2024	2.29	86.4	0.285	**0.315**	8.40	13.0	6.03	0.291	<0.0865	30.5
Highest Background @ 3" x1.25 (SM)			**4.34**	**133**	**0.409**	**0.394**	**13.5**	**18.5**	**11.9**	**0.476**	-	**48.0**

Notes:

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

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

ECMC = Colorado Energy & Carbon Management Commission

GSSL = Protection of Groundwater Screening Level

RSL = Residential Soil Screening Level

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

mg/kg = milligrams per kilogram

TABLE 4
STATE BIERSTADT 4-65 35-34 2AH
SOIL ANALYTICAL DATA - METALS
CRESTONE PEAK RESOURCES OPERATING, LLC

Soil Sample Location	Depth	Date	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
ECMC Metals in Soils - GSSL [1]			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
ECMC Metals in Soils - RSL [2]			0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000

BOLD = Analytical result is in exceedance of ECMC Table 915-1: Metals in Soils - Protection of Groundwater Soil Screening Level Concentrations

BOLD = Analytical result is in exceedance of ECMC Table 915-1: Metals in Soils - Residential Soil Screening Level Concentrations

Highest background concentration x1.25

Italics = Laboratory minimum detection limit exceeds the ECMC Table 915-1 Standard

* Result exceeded the ECMC Table 915-1 standard, but was within site-specific 1.25x background multiplier levels

**Result is considered anomalously high and not considered for site-specific background concentration

TABLE 5
STATE BIERSTADT 4-65 35-34 2AH
SOIL ANALYTICAL DATA - SOIL RECLAMATION
CRESTONE PEAK RESOURCES OPERATING, LLC

Soil Sample Location	Depth	Date	pH	SAR	EC (mmhos/cm)	Boron (mg/L)
ECMC Soil Suitability for Reclamation[(1)]			**6 - 8.3**	**< 6**	**< 4**	**2**
SEP1-B01@3”	3"	05/20/2024	**8.91**	4.26	0.262	0.114
SEP1-B02@3”	3"	05/20/2024	7.50	5.07	3.15	1.66
SEP2-B01@3”	3"	05/20/2024	**9.02**	**8.16**	0.488	0.0741
SEP2-B02@3”	3"	05/20/2024	7.72	1.13	0.472	0.324
SEP3-B01@3”	3"	05/20/2024	**8.39**	3.53	0.476	0.0713
SEP3-B02@3”	3"	05/20/2024	7.39	2.52	**4.55**	0.165
SEP4-B01@3”	3"	05/20/2024	**8.72**	3.90	0.268	0.139
SEP4-B02@3”	3"	05/20/2024	8.02	**38.4**	**6.67**	**6.61**
B-SEP-B01@3”	3"	05/20/2024	**8.43**	0.989	0.188	0.0773
B-SEP-B02@3”	3"	05/20/2024	8.05	0.273	0.241	0.120
SGS-B01@3”	3"	05/20/2024	**8.40**	1.54	0.194	0.265
BACKGROUND						
BG01@3”	3"	05/20/2024	7.02	0.116	0.0885	0.142
BG02@3”	3"	05/20/2024	6.81	0.0638	0.0761	0.206
BG03@3”	3"	05/20/2024	6.20	0.0907	0.0807	0.143
BG04@3”	3"	05/20/2024	6.70	0.0541	0.104	0.149
BG05@3”	3"	05/20/2024	6.84	0.0595	0.107	0.153
Highest Background @ 3" (SM)			**7.02**	**0.116**	**0.107**	**0.206**

Notes:
(1) Standards for soil are taken from ECMC Table 915-1: Soil Suitability for Reclamation (Effective January 15, 2021)
ECMC = Colorado Energy & Carbon Management Commission
(<) = Analytical result is less than the indicated laboratory reporting limit
mmhos/cm = millimhos per centimeter
mg/L = milligrams per liter
pH = Potential of Hydrogen
SAR = Sodium Adsorption Ratio
EC = Electrical Conductivity
BOLD = Analytical result is in exceedance of ECMC Table 915-1: Soil Suitability for Reclamation Concentrations
Highest background concentration

LABORATORY ANALYTICAL DATA

ANALYTICAL REPORT

June 12, 2024

Civitas - CO

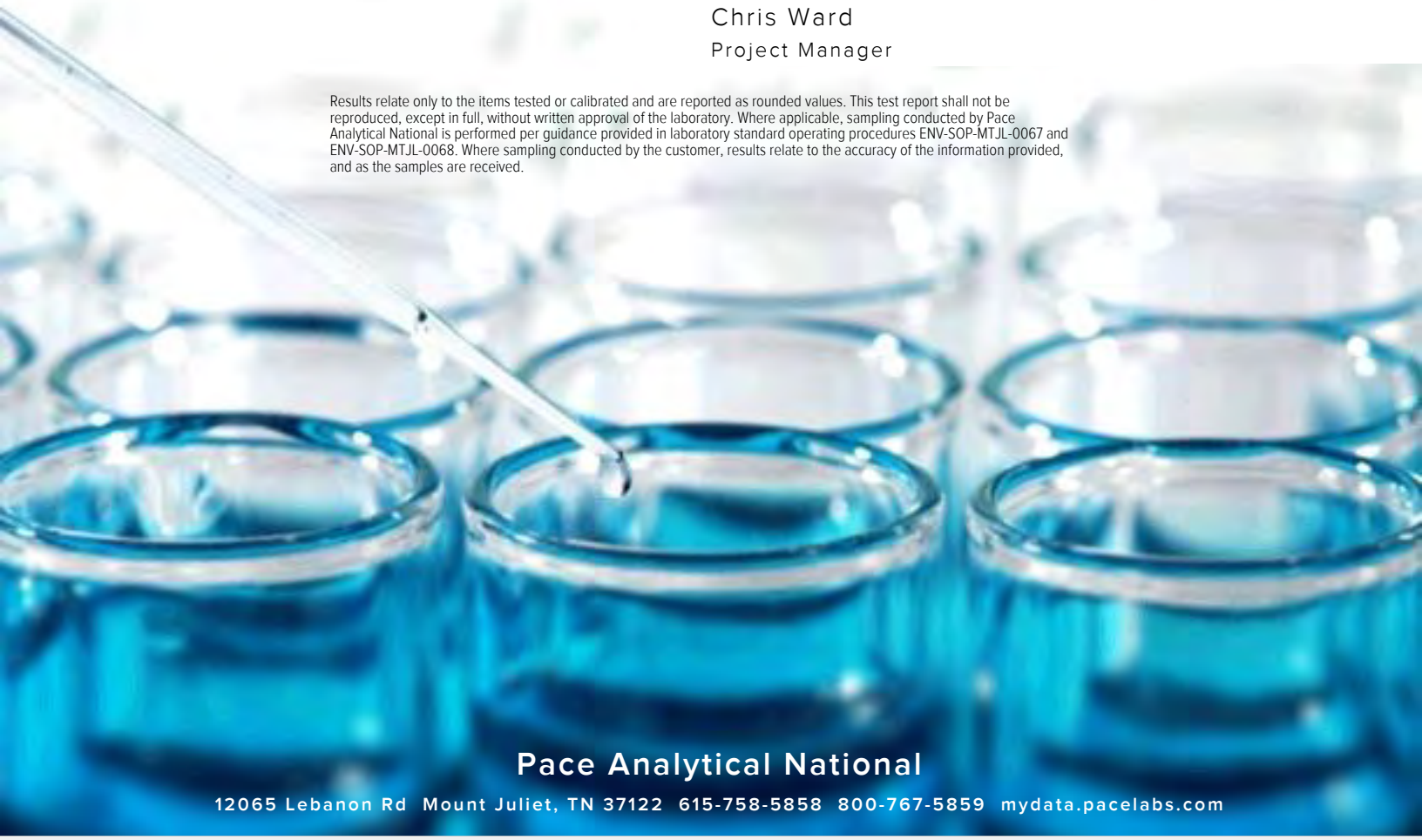
Sample Delivery Group:	L1739188
Samples Received:	05/22/2024
Project Number:	P1672CD
Description:	State Bierstadt 4-65 35-34 2AH

Report To: Sam Vogt / Jacob Evans
6855 W. 118th Ave
Broomfield, CO 80020

Entire Report Reviewed By: Chris Ward

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 mydata.pacelabs.com

TABLE OF CONTENTS

SEP1-B01@3" L1739188-01 Solid

Collected by: LB/AK | Collected date/time: 05/20/24 10:00 | Received date/time: 05/22/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2293909	1	06/01/24 19:54	06/01/24 19:54	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2291911	1	05/29/24 07:55	05/29/24 23:43	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2296542	1	05/31/24 21:32	05/31/24 22:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2296552	1	05/31/24 23:42	06/01/24 00:30	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2293911	1	05/31/24 10:13	06/01/24 21:08	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2292568	5	05/30/24 22:50	06/06/24 21:13	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2293482	1	05/25/24 10:37	05/26/24 04:42	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2293637	1	05/25/24 10:37	05/27/24 05:24	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2294869	1	05/31/24 21:19	06/01/24 11:10	KKS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2295611	1	05/30/24 18:06	05/31/24 04:48	JCH	Mt. Juliet, TN

SEP1-B02@3" L1739188-02 Solid

Collected by: LB/AK | Collected date/time: 05/20/24 10:02 | Received date/time: 05/22/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2293909	1	06/01/24 19:57	06/01/24 19:57	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2291911	1	05/29/24 07:55	05/29/24 23:51	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2296542	1	05/31/24 21:32	05/31/24 22:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2296552	1	05/31/24 23:42	06/01/24 00:30	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2293911	1	05/31/24 10:13	06/01/24 21:11	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2292568	5	05/30/24 22:50	06/06/24 21:16	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2295209	1	05/25/24 10:37	05/30/24 03:10	WHS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2293637	8	05/25/24 10:37	05/27/24 10:23	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2294869	500	05/31/24 21:19	06/01/24 12:00	KKS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2295611	1	05/30/24 18:06	05/31/24 08:19	JCH	Mt. Juliet, TN

SEP2-B01@3" L1739188-03 Solid

Collected by: LB/AK | Collected date/time: 05/20/24 10:04 | Received date/time: 05/22/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2293909	1	06/01/24 19:59	06/01/24 19:59	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2291911	1	05/29/24 07:55	05/29/24 23:59	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2296542	1	05/31/24 21:32	05/31/24 22:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2296552	1	05/31/24 23:42	06/01/24 00:30	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2293911	1	05/31/24 10:13	06/01/24 21:13	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2292568	5	05/30/24 22:50	06/06/24 21:42	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2293482	1	05/25/24 10:37	05/26/24 05:04	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2293637	1	05/25/24 10:37	05/27/24 05:43	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2294869	1	05/31/24 21:19	06/01/24 10:58	KKS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2295611	1	05/30/24 18:06	05/31/24 05:05	JCH	Mt. Juliet, TN

SEP2-B02@3" L1739188-04 Solid

Collected by: LB/AK | Collected date/time: 05/20/24 10:06 | Received date/time: 05/22/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2293909	1	06/01/24 20:02	06/01/24 20:02	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2291911	1	05/29/24 07:55	05/30/24 00:07	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2296542	1	05/31/24 21:32	05/31/24 22:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2296552	1	05/31/24 23:42	06/01/24 00:30	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2293911	1	05/31/24 10:13	06/01/24 21:16	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2292568	5	05/30/24 22:50	06/06/24 21:45	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2295209	1	05/25/24 10:37	05/30/24 03:30	WHS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2293637	20	05/25/24 10:37	05/27/24 10:42	JBE	Mt. Juliet, TN

SEP2-B02@3" L1739188-04 Solid

Collected by: LB/AK | Collected date/time: 05/20/24 10:06 | Received date/time: 05/22/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2294869	500	05/31/24 21:19	06/01/24 12:12	KKS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2295611	1	05/30/24 18:06	05/31/24 09:29	JCH	Mt. Juliet, TN

SEP3-B01@3" L1739188-05 Solid

Collected by: LB/AK | Collected date/time: 05/20/24 10:08 | Received date/time: 05/22/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2293909	1	06/01/24 20:05	06/01/24 20:05	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2291911	1	05/29/24 07:55	05/30/24 00:15	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2296542	1	05/31/24 21:32	05/31/24 22:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2296552	1	05/31/24 23:42	06/01/24 00:30	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2293911	1	05/31/24 10:13	06/01/24 21:19	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2292568	5	05/30/24 22:50	06/06/24 21:49	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2293482	1	05/25/24 10:37	05/26/24 05:25	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2293637	1	05/25/24 10:37	05/27/24 06:02	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2294869	1	05/31/24 21:19	06/01/24 11:23	KKS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2295611	1	05/30/24 18:06	05/31/24 05:23	JCH	Mt. Juliet, TN

SEP3-B02@3" L1739188-06 Solid

Collected by: LB/AK | Collected date/time: 05/20/24 10:10 | Received date/time: 05/22/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2293909	1	06/01/24 20:08	06/01/24 20:08	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2291911	1	05/29/24 07:55	05/30/24 00:23	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2296542	1	05/31/24 21:32	05/31/24 22:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2296552	1	05/31/24 23:42	06/01/24 00:30	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2293911	1	05/31/24 10:13	06/01/24 21:22	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2292568	5	05/30/24 22:50	06/06/24 21:52	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2295209	1	05/25/24 10:37	05/30/24 03:49	WHS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2293637	8	05/25/24 10:37	05/27/24 11:01	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2294869	100	05/31/24 21:19	06/01/24 12:37	KKS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2295611	1	05/30/24 18:06	05/31/24 08:36	JCH	Mt. Juliet, TN

SEP4-B01@3" L1739188-07 Solid

Collected by: LB/AK | Collected date/time: 05/20/24 10:12 | Received date/time: 05/22/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2293909	1	06/01/24 20:11	06/01/24 20:11	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2291911	1	05/29/24 07:55	05/30/24 00:31	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2296542	1	05/31/24 21:32	05/31/24 22:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2296552	1	05/31/24 23:42	06/01/24 00:30	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2293911	1	05/31/24 10:13	06/01/24 21:25	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2292568	5	05/30/24 22:50	06/06/24 21:55	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2293482	1	05/25/24 10:37	05/26/24 05:47	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2293637	1	05/25/24 10:37	05/27/24 06:21	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2294869	1	05/31/24 21:19	06/01/24 11:23	KKS	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2294869	5	05/31/24 21:19	06/01/24 13:25	KKS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2295611	1	05/30/24 18:06	05/31/24 04:30	JCH	Mt. Juliet, TN

SEP4-B02@3" L1739188-08 Solid

Collected by: LB/AK | Collected date/time: 05/20/24 10:14 | Received date/time: 05/22/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2293909	1	06/01/24 20:14	06/01/24 20:14	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2291911	1	05/29/24 07:55	05/30/24 00:39	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2296542	1	05/31/24 21:32	05/31/24 22:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2296552	1	05/31/24 23:42	06/01/24 00:30	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2293911	1	05/31/24 10:13	06/01/24 21:33	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2292568	5	05/30/24 22:50	06/06/24 21:59	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2295209	1	05/25/24 10:37	05/30/24 04:08	WHS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2293637	1	05/25/24 10:37	05/27/24 06:40	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2294869	500	05/31/24 21:19	06/01/24 12:25	KKS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2295611	1	05/30/24 18:06	05/31/24 09:12	JCH	Mt. Juliet, TN

B-SEP-B01@3" L1739188-09 Solid

Collected by: LB/AK | Collected date/time: 05/20/24 10:16 | Received date/time: 05/22/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2293909	1	06/01/24 20:17	06/01/24 20:17	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2291911	1	05/29/24 07:55	05/30/24 01:03	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2296542	1	05/31/24 21:32	05/31/24 22:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2296552	1	05/31/24 23:42	06/01/24 00:30	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2293911	1	05/31/24 10:13	06/01/24 21:36	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2292568	5	05/30/24 22:50	06/06/24 22:02	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2293482	1	05/25/24 10:37	05/26/24 06:08	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2293637	1	05/25/24 10:37	05/27/24 07:00	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2294869	1	05/31/24 21:19	06/01/24 10:58	KKS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2295611	1	05/30/24 18:06	05/31/24 04:13	JCH	Mt. Juliet, TN

B-SEP-B02@3" L1739188-10 Solid

Collected by: LB/AK | Collected date/time: 05/20/24 10:18 | Received date/time: 05/22/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2293909	1	06/01/24 20:25	06/01/24 20:25	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2291911	1	05/29/24 07:55	05/30/24 01:11	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2296542	1	05/31/24 21:32	05/31/24 22:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2296552	1	05/31/24 23:42	06/01/24 00:30	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2293911	1	05/31/24 10:13	06/01/24 21:39	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2292575	5	05/29/24 17:18	06/06/24 00:58	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2300155	5	06/11/24 12:30	06/12/24 03:02	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2293482	1	05/25/24 10:37	05/26/24 06:30	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2293637	1	05/25/24 10:37	05/27/24 07:19	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2294869	2	05/31/24 21:19	06/01/24 13:37	KKS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2296038	1	05/31/24 09:39	06/01/24 12:52	DSH	Mt. Juliet, TN

SGS-B01@3" L1739188-11 Solid

Collected by: LB/AK | Collected date/time: 05/20/24 11:44 | Received date/time: 05/22/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2293914	1	05/30/24 22:37	05/30/24 22:37	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2291911	1	05/29/24 07:55	05/30/24 01:27	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2295736	1	05/30/24 16:34	05/30/24 20:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2295750	1	05/30/24 16:33	05/30/24 16:50	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2293915	1	05/30/24 12:14	05/31/24 09:24	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2292575	5	05/29/24 17:18	06/06/24 01:02	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2300155	5	06/11/24 12:30	06/12/24 03:05	SJM	Mt. Juliet, TN

SGS-B01@3" L1739188-11 Solid

Collected by: LB/AK | Collected date/time: 05/20/24 11:44 | Received date/time: 05/22/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2293482	1	05/25/24 10:37	05/26/24 06:51	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2293637	1	05/25/24 10:37	05/27/24 07:38	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2294869	1	05/31/24 21:19	06/01/24 11:10	KKS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2296038	1	05/31/24 09:39	06/01/24 13:51	DSH	Mt. Juliet, TN

BG01@3" L1739188-12 Solid

Collected by: LB/AK | Collected date/time: 05/20/24 13:20 | Received date/time: 05/22/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2293909	1	06/01/24 20:28	06/01/24 20:28	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2291911	1	05/29/24 07:55	05/30/24 01:35	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2296544	1	05/31/24 21:33	05/31/24 22:45	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2296554	1	05/31/24 23:44	06/01/24 00:10	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2293911	1	05/31/24 10:13	06/01/24 21:42	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2292568	5	05/30/24 22:50	06/06/24 20:15	LD	Mt. Juliet, TN

BG02@3" L1739188-13 Solid

Collected by: LB/AK | Collected date/time: 05/20/24 13:25 | Received date/time: 05/22/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2293909	1	06/01/24 20:31	06/01/24 20:31	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2291911	1	05/29/24 07:55	05/30/24 01:43	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2296544	1	05/31/24 21:33	05/31/24 22:45	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2296554	1	05/31/24 23:44	06/01/24 00:10	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2293911	1	05/31/24 10:13	06/01/24 21:45	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2292575	5	05/29/24 17:18	06/06/24 01:11	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2300155	5	06/11/24 12:30	06/12/24 03:15	SJM	Mt. Juliet, TN

BG03@3" L1739188-14 Solid

Collected by: LB/AK | Collected date/time: 05/20/24 13:30 | Received date/time: 05/22/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2293909	1	06/01/24 20:34	06/01/24 20:34	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2291911	1	05/29/24 07:55	05/30/24 01:59	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2296544	1	05/31/24 21:33	05/31/24 22:45	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2296554	1	05/31/24 23:44	06/01/24 00:10	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2293911	1	05/31/24 10:13	06/01/24 21:47	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2292575	5	05/29/24 17:18	06/06/24 01:15	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2300155	5	06/11/24 12:30	06/12/24 03:18	SJM	Mt. Juliet, TN

BG04@3" L1739188-15 Solid

Collected by: LB/AK | Collected date/time: 05/20/24 13:35 | Received date/time: 05/22/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2293909	1	06/01/24 20:36	06/01/24 20:36	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2291911	1	05/29/24 07:55	05/30/24 02:07	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2296544	1	05/31/24 21:33	05/31/24 22:45	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2296554	1	05/31/24 23:44	06/01/24 00:10	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2293911	1	05/31/24 10:13	06/01/24 21:50	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2292575	5	05/29/24 17:18	06/06/24 01:18	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2300155	5	06/11/24 12:30	06/12/24 03:22	SJM	Mt. Juliet, TN

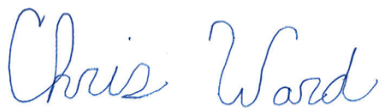
BG05@3" L1739188-16 Solid

Collected by: LB/AK
Collected date/time: 05/20/24 13:40
Received date/time: 05/22/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2293909	1	06/01/24 20:39	06/01/24 20:39	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2291911	1	05/29/24 07:55	05/30/24 02:15	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2296544	1	05/31/24 21:33	05/31/24 22:45	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2296554	1	05/31/24 23:44	06/01/24 00:10	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2293911	1	05/31/24 10:13	06/01/24 21:53	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2292575	5	05/29/24 17:18	06/06/24 01:21	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2300155	5	06/11/24 12:30	06/12/24 03:25	SJM	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	4.26		1	06/01/2024 19:54	WG2293909

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	05/29/2024 23:43	WG2291911

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.91	T8	1	05/31/2024 22:10	WG2296542

Sample Narrative:

L1739188-01 WG2296542: 8.91 at 22.3C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	262		10.0	1	06/01/2024 00:30	WG2296552

Sample Narrative:

L1739188-01 WG2296552: at 25C

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	0.114	J	0.0167	0.200	1	06/01/2024 21:08	WG2293911

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.02		0.100	1.00	5	06/06/2024 21:13	WG2292568
Barium	189		0.152	2.50	5	06/06/2024 21:13	WG2292568
Cadmium	U		0.0855	1.00	5	06/06/2024 21:13	WG2292568
Copper	29.8		0.132	5.00	5	06/06/2024 21:13	WG2292568
Lead	4.38		0.0990	2.00	5	06/06/2024 21:13	WG2292568
Nickel	11.8		0.197	2.50	5	06/06/2024 21:13	WG2292568
Selenium	0.962	J	0.180	2.50	5	06/06/2024 21:13	WG2292568
Silver	U		0.0865	0.500	5	06/06/2024 21:13	WG2292568
Zinc	83.8		0.740	25.0	5	06/06/2024 21:13	WG2292568

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	0.0242	J	0.0217	0.100	1	05/26/2024 04:42	WG2293482
(S) a,a,a-Trifluorotoluene(FID)	*98.4*			*77.0-120*		*05/26/2024 04:42*	WG2293482

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	05/27/2024 05:24	WG2293637
Toluene	U		0.00130	0.00500	1	05/27/2024 05:24	WG2293637
Ethylbenzene	U		0.000737	0.00250	1	05/27/2024 05:24	WG2293637
Xylenes, Total	U		0.000880	0.00650	1	05/27/2024 05:24	WG2293637
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/27/2024 05:24	WG2293637
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/27/2024 05:24	WG2293637
(S) Toluene-d8	*101*			*75.0-131*		*05/27/2024 05:24*	WG2293637
(S) 4-Bromofluorobenzene	*109*			*67.0-138*		*05/27/2024 05:24*	WG2293637
(S) 1,2-Dichloroethane-d4	*94.2*			*70.0-130*		*05/27/2024 05:24*	WG2293637

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	23.7		1.61	4.00	1	06/01/2024 11:10	WG2294869
C28-C36 Motor Oil Range	48.6		0.274	4.00	1	06/01/2024 11:10	WG2294869
(S) o-Terphenyl	*56.2*			*18.0-148*		*06/01/2024 11:10*	WG2294869

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
Acenaphthene	U		0.00209	0.00600	1	05/31/2024 04:48	WG2295611
Anthracene	U		0.00230	0.00600	1	05/31/2024 04:48	WG2295611
Benzo(a)anthracene	U		0.00173	0.00600	1	05/31/2024 04:48	WG2295611
Benzo(b)fluoranthene	U		0.00153	0.00600	1	05/31/2024 04:48	WG2295611
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/31/2024 04:48	WG2295611
Benzo(a)pyrene	U		0.00179	0.00600	1	05/31/2024 04:48	WG2295611
Chrysene	U		0.00232	0.00600	1	05/31/2024 04:48	WG2295611
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/31/2024 04:48	WG2295611
Fluoranthene	U		0.00227	0.00600	1	05/31/2024 04:48	WG2295611
Fluorene	U		0.00205	0.00600	1	05/31/2024 04:48	WG2295611
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/31/2024 04:48	WG2295611
1-Methylnaphthalene	U		0.00449	0.0200	1	05/31/2024 04:48	WG2295611
2-Methylnaphthalene	U		0.00427	0.0200	1	05/31/2024 04:48	WG2295611
Naphthalene	U		0.00408	0.0200	1	05/31/2024 04:48	WG2295611
Pyrene	U		0.00200	0.00600	1	05/31/2024 04:48	WG2295611
(S) p-Terphenyl-d14	*79.8*			*23.0-120*		*05/31/2024 04:48*	WG2295611
(S) Nitrobenzene-d5	*74.1*			*14.0-149*		*05/31/2024 04:48*	WG2295611
(S) 2-Fluorobiphenyl	*78.3*			*34.0-125*		*05/31/2024 04:48*	WG2295611

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.07		1	06/01/2024 19:57	WG2293909

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	05/29/2024 23:51	WG2291911

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.50	T8	1	05/31/2024 22:10	WG2296542

Sample Narrative:

L1739188-02 WG2296542: 7.5 at 22.4C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	3150		10.0	1	06/01/2024 00:30	WG2296552

Sample Narrative:

L1739188-02 WG2296552: at 25C

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	1.66		0.0167	0.200	1	06/01/2024 21:11	WG2293911

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.97		0.100	1.00	5	06/06/2024 21:16	WG2292568
Barium	434		0.152	2.50	5	06/06/2024 21:16	WG2292568
Cadmium	0.130	J	0.0855	1.00	5	06/06/2024 21:16	WG2292568
Copper	30.4		0.132	5.00	5	06/06/2024 21:16	WG2292568
Lead	4.59		0.0990	2.00	5	06/06/2024 21:16	WG2292568
Nickel	13.4		0.197	2.50	5	06/06/2024 21:16	WG2292568
Selenium	1.08	J	0.180	2.50	5	06/06/2024 21:16	WG2292568
Silver	U		0.0865	0.500	5	06/06/2024 21:16	WG2292568
Zinc	104		0.740	25.0	5	06/06/2024 21:16	WG2292568

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	0.170		0.0217	0.100	1	05/30/2024 03:10	WG2295209
(S) a,a,a-Trifluorotoluene(FID)	*89.5*			*77.0-120*		*05/30/2024 03:10*	WG2295209

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		0.00374	0.00800	8	05/27/2024 10:23	WG2293637
Toluene	U		0.0104	0.0400	8	05/27/2024 10:23	WG2293637
Ethylbenzene	U		0.00590	0.0200	8	05/27/2024 10:23	WG2293637
Xylenes, Total	U		0.00704	0.0520	8	05/27/2024 10:23	WG2293637
1,2,4-Trimethylbenzene	0.0140	J	0.0126	0.0400	8	05/27/2024 10:23	WG2293637
1,3,5-Trimethylbenzene	U		0.0160	0.0400	8	05/27/2024 10:23	WG2293637
(S) Toluene-d8	*99.5*			*75.0-131*		*05/27/2024 10:23*	WG2293637
(S) 4-Bromofluorobenzene	*106*			*67.0-138*		*05/27/2024 10:23*	WG2293637
(S) 1,2-Dichloroethane-d4	*95.4*			*70.0-130*		*05/27/2024 10:23*	WG2293637

Sample Narrative:

L1739188-02 WG2293637: Lowest possible dilution due to sample foaming.

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	13200	J3 V	805	2000	500	06/01/2024 12:00	WG2294869
C28-C36 Motor Oil Range	13500		137	2000	500	06/01/2024 12:00	WG2294869
(S) o-Terphenyl	*0.000*	J7		*18.0-148*		*06/01/2024 12:00*	WG2294869

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
Acenaphthene	U		0.00209	0.00600	1	05/31/2024 08:19	WG2295611
Anthracene	U		0.00230	0.00600	1	05/31/2024 08:19	WG2295611
Benzo(a)anthracene	U		0.00173	0.00600	1	05/31/2024 08:19	WG2295611
Benzo(b)fluoranthene	0.0745		0.00153	0.00600	1	05/31/2024 08:19	WG2295611
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/31/2024 08:19	WG2295611
Benzo(a)pyrene	0.0282		0.00179	0.00600	1	05/31/2024 08:19	WG2295611
Chrysene	U		0.00232	0.00600	1	05/31/2024 08:19	WG2295611
Dibenz(a,h)anthracene	0.0244		0.00172	0.00600	1	05/31/2024 08:19	WG2295611
Fluoranthene	U		0.00227	0.00600	1	05/31/2024 08:19	WG2295611
Fluorene	0.479		0.00205	0.00600	1	05/31/2024 08:19	WG2295611
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/31/2024 08:19	WG2295611
1-Methylnaphthalene	0.682		0.00449	0.0200	1	05/31/2024 08:19	WG2295611
2-Methylnaphthalene	0.495		0.00427	0.0200	1	05/31/2024 08:19	WG2295611
Naphthalene	0.0447		0.00408	0.0200	1	05/31/2024 08:19	WG2295611
Pyrene	0.333		0.00200	0.00600	1	05/31/2024 08:19	WG2295611
(S) p-Terphenyl-d14	*85.3*			*23.0-120*		*05/31/2024 08:19*	WG2295611
(S) Nitrobenzene-d5	*64.5*			*14.0-149*		*05/31/2024 08:19*	WG2295611
(S) 2-Fluorobiphenyl	*51.6*			*34.0-125*		*05/31/2024 08:19*	WG2295611

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	8.16		1	06/01/2024 19:59	WG2293909

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	05/29/2024 23:59	WG2291911

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	9.02	T8	1	05/31/2024 22:10	WG2296542

Sample Narrative:

L1739188-03 WG2296542: 9.02 at 22.3C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	488		10.0	1	06/01/2024 00:30	WG2296552

Sample Narrative:

L1739188-03 WG2296552: at 25C

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	0.0741	J	0.0167	0.200	1	06/01/2024 21:13	WG2293911

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.04		0.100	1.00	5	06/06/2024 21:42	WG2292568
Barium	208		0.152	2.50	5	06/06/2024 21:42	WG2292568
Cadmium	0.206	J	0.0855	1.00	5	06/06/2024 21:42	WG2292568
Copper	29.5		0.132	5.00	5	06/06/2024 21:42	WG2292568
Lead	4.13		0.0990	2.00	5	06/06/2024 21:42	WG2292568
Nickel	18.6		0.197	2.50	5	06/06/2024 21:42	WG2292568
Selenium	0.918	J	0.180	2.50	5	06/06/2024 21:42	WG2292568
Silver	U		0.0865	0.500	5	06/06/2024 21:42	WG2292568
Zinc	85.5		0.740	25.0	5	06/06/2024 21:42	WG2292568

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	0.0289	J	0.0217	0.100	1	05/26/2024 05:04	WG2293482
(S) a,a,a-Trifluorotoluene(FID)	*98.3*			*77.0-120*		*05/26/2024 05:04*	WG2293482

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	05/27/2024 05:43	WG2293637
Toluene	U		0.00130	0.00500	1	05/27/2024 05:43	WG2293637
Ethylbenzene	U		0.000737	0.00250	1	05/27/2024 05:43	WG2293637
Xylenes, Total	U		0.000880	0.00650	1	05/27/2024 05:43	WG2293637
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/27/2024 05:43	WG2293637
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/27/2024 05:43	WG2293637
(S) Toluene-d8	*101*			*75.0-131*		*05/27/2024 05:43*	WG2293637
(S) 4-Bromofluorobenzene	*106*			*67.0-138*		*05/27/2024 05:43*	WG2293637
(S) 1,2-Dichloroethane-d4	*97.4*			*70.0-130*		*05/27/2024 05:43*	WG2293637

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	31.5		1.61	4.00	1	06/01/2024 10:58	WG2294869
C28-C36 Motor Oil Range	49.8		0.274	4.00	1	06/01/2024 10:58	WG2294869
(S) o-Terphenyl	*47.8*			*18.0-148*		*06/01/2024 10:58*	WG2294869

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
Acenaphthene	U		0.00209	0.00600	1	05/31/2024 05:05	WG2295611
Anthracene	U		0.00230	0.00600	1	05/31/2024 05:05	WG2295611
Benzo(a)anthracene	U		0.00173	0.00600	1	05/31/2024 05:05	WG2295611
Benzo(b)fluoranthene	U		0.00153	0.00600	1	05/31/2024 05:05	WG2295611
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/31/2024 05:05	WG2295611
Benzo(a)pyrene	U		0.00179	0.00600	1	05/31/2024 05:05	WG2295611
Chrysene	U		0.00232	0.00600	1	05/31/2024 05:05	WG2295611
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/31/2024 05:05	WG2295611
Fluoranthene	U		0.00227	0.00600	1	05/31/2024 05:05	WG2295611
Fluorene	U		0.00205	0.00600	1	05/31/2024 05:05	WG2295611
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/31/2024 05:05	WG2295611
1-Methylnaphthalene	U		0.00449	0.0200	1	05/31/2024 05:05	WG2295611
2-Methylnaphthalene	U		0.00427	0.0200	1	05/31/2024 05:05	WG2295611
Naphthalene	U		0.00408	0.0200	1	05/31/2024 05:05	WG2295611
Pyrene	U		0.00200	0.00600	1	05/31/2024 05:05	WG2295611
(S) p-Terphenyl-d14	*80.2*			*23.0-120*		*05/31/2024 05:05*	WG2295611
(S) Nitrobenzene-d5	*77.4*			*14.0-149*		*05/31/2024 05:05*	WG2295611
(S) 2-Fluorobiphenyl	*79.8*			*34.0-125*		*05/31/2024 05:05*	WG2295611

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.13		1	06/01/2024 20:02	WG2293909

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	05/30/2024 00:07	WG2291911

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.72	T8	1	05/31/2024 22:10	WG2296542

Sample Narrative:

L1739188-04 WG2296542: 7.72 at 22.5C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	472		10.0	1	06/01/2024 00:30	WG2296552

Sample Narrative:

L1739188-04 WG2296552: at 25C

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	0.324		0.0167	0.200	1	06/01/2024 21:16	WG2293911

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.98		0.100	1.00	5	06/06/2024 21:45	WG2292568
Barium	178		0.152	2.50	5	06/06/2024 21:45	WG2292568
Cadmium	0.0958	J	0.0855	1.00	5	06/06/2024 21:45	WG2292568
Copper	28.8		0.132	5.00	5	06/06/2024 21:45	WG2292568
Lead	4.52		0.0990	2.00	5	06/06/2024 21:45	WG2292568
Nickel	10.6		0.197	2.50	5	06/06/2024 21:45	WG2292568
Selenium	1.21	J	0.180	2.50	5	06/06/2024 21:45	WG2292568
Silver	U		0.0865	0.500	5	06/06/2024 21:45	WG2292568
Zinc	87.3		0.740	25.0	5	06/06/2024 21:45	WG2292568

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	0.149		0.0217	0.100	1	05/30/2024 03:30	WG2295209
(S) a,a,a-Trifluorotoluene(FID)	*89.3*			*77.0-120*		*05/30/2024 03:30*	WG2295209

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	0.0160	J	0.00934	0.0200	20	05/27/2024 10:42	WG2293637
Toluene	0.0540	J	0.0260	0.100	20	05/27/2024 10:42	WG2293637
Ethylbenzene	U		0.0147	0.0500	20	05/27/2024 10:42	WG2293637
Xylenes, Total	0.106	J	0.0176	0.130	20	05/27/2024 10:42	WG2293637
1,2,4-Trimethylbenzene	0.0380	J	0.0316	0.100	20	05/27/2024 10:42	WG2293637
1,3,5-Trimethylbenzene	U		0.0400	0.100	20	05/27/2024 10:42	WG2293637
(S) Toluene-d8	*98.0*			*75.0-131*		*05/27/2024 10:42*	WG2293637
(S) 4-Bromofluorobenzene	*108*			*67.0-138*		*05/27/2024 10:42*	WG2293637
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*05/27/2024 10:42*	WG2293637

Sample Narrative:

L1739188-04 WG2293637: Lowest possible dilution due to sample foaming.

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	16200		805	2000	500	06/01/2024 12:12	WG2294869
C28-C36 Motor Oil Range	16000		137	2000	500	06/01/2024 12:12	WG2294869
(S) o-Terphenyl	*0.000*	J7		*18.0-148*		*06/01/2024 12:12*	WG2294869

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
Acenaphthene	U		0.00209	0.00600	1	05/31/2024 09:29	WG2295611
Anthracene	U		0.00230	0.00600	1	05/31/2024 09:29	WG2295611
Benzo(a)anthracene	U		0.00173	0.00600	1	05/31/2024 09:29	WG2295611
Benzo(b)fluoranthene	0.143		0.00153	0.00600	1	05/31/2024 09:29	WG2295611
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/31/2024 09:29	WG2295611
Benzo(a)pyrene	0.0583		0.00179	0.00600	1	05/31/2024 09:29	WG2295611
Chrysene	U		0.00232	0.00600	1	05/31/2024 09:29	WG2295611
Dibenz(a,h)anthracene	0.0484		0.00172	0.00600	1	05/31/2024 09:29	WG2295611
Fluoranthene	U		0.00227	0.00600	1	05/31/2024 09:29	WG2295611
Fluorene	0.798		0.00205	0.00600	1	05/31/2024 09:29	WG2295611
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/31/2024 09:29	WG2295611
1-Methylnaphthalene	1.78		0.00449	0.0200	1	05/31/2024 09:29	WG2295611
2-Methylnaphthalene	0.647		0.00427	0.0200	1	05/31/2024 09:29	WG2295611
Naphthalene	U		0.00408	0.0200	1	05/31/2024 09:29	WG2295611
Pyrene	0.520		0.00200	0.00600	1	05/31/2024 09:29	WG2295611
(S) p-Terphenyl-d14	*80.2*			*23.0-120*		*05/31/2024 09:29*	WG2295611
(S) Nitrobenzene-d5	*61.0*			*14.0-149*		*05/31/2024 09:29*	WG2295611
(S) 2-Fluorobiphenyl	*43.4*			*34.0-125*		*05/31/2024 09:29*	WG2295611

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.53		1	06/01/2024 20:05	WG2293909

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	05/30/2024 00:15	WG2291911

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.39	T8	1	05/31/2024 22:10	WG2296542

Sample Narrative:

L1739188-05 WG2296542: 8.39 at 22.2C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	479		10.0	1	06/01/2024 00:30	WG2296552

Sample Narrative:

L1739188-05 WG2296552: at 25C

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	0.0713	J	0.0167	0.200	1	06/01/2024 21:19	WG2293911

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.63		0.100	1.00	5	06/06/2024 21:49	WG2292568
Barium	300		0.152	2.50	5	06/06/2024 21:49	WG2292568
Cadmium	U		0.0855	1.00	5	06/06/2024 21:49	WG2292568
Copper	26.7		0.132	5.00	5	06/06/2024 21:49	WG2292568
Lead	3.84		0.0990	2.00	5	06/06/2024 21:49	WG2292568
Nickel	9.82		0.197	2.50	5	06/06/2024 21:49	WG2292568
Selenium	0.981	J	0.180	2.50	5	06/06/2024 21:49	WG2292568
Silver	U		0.0865	0.500	5	06/06/2024 21:49	WG2292568
Zinc	72.1		0.740	25.0	5	06/06/2024 21:49	WG2292568

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	0.0285	J	0.0217	0.100	1	05/26/2024 05:25	WG2293482
(S) a,a,a-Trifluorotoluene(FID)	*98.4*			*77.0-120*		*05/26/2024 05:25*	WG2293482

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	05/27/2024 06:02	WG2293637
Toluene	U		0.00130	0.00500	1	05/27/2024 06:02	WG2293637
Ethylbenzene	U		0.000737	0.00250	1	05/27/2024 06:02	WG2293637
Xylenes, Total	U		0.000880	0.00650	1	05/27/2024 06:02	WG2293637
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/27/2024 06:02	WG2293637
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/27/2024 06:02	WG2293637
(S) Toluene-d8	*100*			*75.0-131*		*05/27/2024 06:02*	WG2293637
(S) 4-Bromofluorobenzene	*107*			*67.0-138*		*05/27/2024 06:02*	WG2293637
(S) 1,2-Dichloroethane-d4	*97.1*			*70.0-130*		*05/27/2024 06:02*	WG2293637

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	79.5		1.61	4.00	1	06/01/2024 11:23	WG2294869
C28-C36 Motor Oil Range	96.4		0.274	4.00	1	06/01/2024 11:23	WG2294869
(S) o-Terphenyl	*52.8*			*18.0-148*		*06/01/2024 11:23*	WG2294869

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
Acenaphthene	U		0.00209	0.00600	1	05/31/2024 05:23	WG2295611
Anthracene	U		0.00230	0.00600	1	05/31/2024 05:23	WG2295611
Benzo(a)anthracene	U		0.00173	0.00600	1	05/31/2024 05:23	WG2295611
Benzo(b)fluoranthene	U		0.00153	0.00600	1	05/31/2024 05:23	WG2295611
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/31/2024 05:23	WG2295611
Benzo(a)pyrene	U		0.00179	0.00600	1	05/31/2024 05:23	WG2295611
Chrysene	U		0.00232	0.00600	1	05/31/2024 05:23	WG2295611
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/31/2024 05:23	WG2295611
Fluoranthene	U		0.00227	0.00600	1	05/31/2024 05:23	WG2295611
Fluorene	U		0.00205	0.00600	1	05/31/2024 05:23	WG2295611
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/31/2024 05:23	WG2295611
1-Methylnaphthalene	U		0.00449	0.0200	1	05/31/2024 05:23	WG2295611
2-Methylnaphthalene	U		0.00427	0.0200	1	05/31/2024 05:23	WG2295611
Naphthalene	U		0.00408	0.0200	1	05/31/2024 05:23	WG2295611
Pyrene	U		0.00200	0.00600	1	05/31/2024 05:23	WG2295611
(S) p-Terphenyl-d14	*72.3*			*23.0-120*		*05/31/2024 05:23*	WG2295611
(S) Nitrobenzene-d5	*71.5*			*14.0-149*		*05/31/2024 05:23*	WG2295611
(S) 2-Fluorobiphenyl	*74.7*			*34.0-125*		*05/31/2024 05:23*	WG2295611

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.52		1	06/01/2024 20:08	WG2293909

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	05/30/2024 00:23	WG2291911

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.39	T8	1	05/31/2024 22:10	WG2296542

Sample Narrative:

L1739188-06 WG2296542: 7.39 at 22.2C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	4550		10.0	1	06/01/2024 00:30	WG2296552

Sample Narrative:

L1739188-06 WG2296552: at 25C

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	0.165	J	0.0167	0.200	1	06/01/2024 21:22	WG2293911

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.19		0.100	1.00	5	06/06/2024 21:52	WG2292568
Barium	265		0.152	2.50	5	06/06/2024 21:52	WG2292568
Cadmium	0.132	J	0.0855	1.00	5	06/06/2024 21:52	WG2292568
Copper	29.8		0.132	5.00	5	06/06/2024 21:52	WG2292568
Lead	4.11		0.0990	2.00	5	06/06/2024 21:52	WG2292568
Nickel	9.97		0.197	2.50	5	06/06/2024 21:52	WG2292568
Selenium	1.03	J	0.180	2.50	5	06/06/2024 21:52	WG2292568
Silver	U		0.0865	0.500	5	06/06/2024 21:52	WG2292568
Zinc	79.4		0.740	25.0	5	06/06/2024 21:52	WG2292568

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	0.0617	J	0.0217	0.100	1	05/30/2024 03:49	WG2295209
(S) a,a,a-Trifluorotoluene(FID)	*88.7*			*77.0-120*		*05/30/2024 03:49*	WG2295209

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		0.00374	0.00800	8	05/27/2024 11:01	WG2293637
Toluene	U		0.0104	0.0400	8	05/27/2024 11:01	WG2293637
Ethylbenzene	U		0.00590	0.0200	8	05/27/2024 11:01	WG2293637
Xylenes, Total	U		0.00704	0.0520	8	05/27/2024 11:01	WG2293637
1,2,4-Trimethylbenzene	U		0.0126	0.0400	8	05/27/2024 11:01	WG2293637
1,3,5-Trimethylbenzene	U		0.0160	0.0400	8	05/27/2024 11:01	WG2293637
(S) Toluene-d8	*99.6*			*75.0-131*		*05/27/2024 11:01*	WG2293637
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*05/27/2024 11:01*	WG2293637
(S) 1,2-Dichloroethane-d4	*96.4*			*70.0-130*		*05/27/2024 11:01*	WG2293637

Sample Narrative:

L1739188-06 WG2293637: Lowest possible dilution due to sample foaming.

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	4530		161	400	100	06/01/2024 12:37	WG2294869
C28-C36 Motor Oil Range	5870		27.4	400	100	06/01/2024 12:37	WG2294869
(S) o-Terphenyl	*296*	J7		*18.0-148*		*06/01/2024 12:37*	WG2294869

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
Acenaphthene	U		0.00209	0.00600	1	05/31/2024 08:36	WG2295611
Anthracene	U		0.00230	0.00600	1	05/31/2024 08:36	WG2295611
Benzo(a)anthracene	U		0.00173	0.00600	1	05/31/2024 08:36	WG2295611
Benzo(b)fluoranthene	0.0401		0.00153	0.00600	1	05/31/2024 08:36	WG2295611
Benzo(k)fluoranthene	0.00475	J	0.00215	0.00600	1	05/31/2024 08:36	WG2295611
Benzo(a)pyrene	0.0141		0.00179	0.00600	1	05/31/2024 08:36	WG2295611
Chrysene	U		0.00232	0.00600	1	05/31/2024 08:36	WG2295611
Dibenz(a,h)anthracene	0.0133		0.00172	0.00600	1	05/31/2024 08:36	WG2295611
Fluoranthene	U		0.00227	0.00600	1	05/31/2024 08:36	WG2295611
Fluorene	0.0455		0.00205	0.00600	1	05/31/2024 08:36	WG2295611
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/31/2024 08:36	WG2295611
1-Methylnaphthalene	0.00992	J	0.00449	0.0200	1	05/31/2024 08:36	WG2295611
2-Methylnaphthalene	0.00581	J	0.00427	0.0200	1	05/31/2024 08:36	WG2295611
Naphthalene	U		0.00408	0.0200	1	05/31/2024 08:36	WG2295611
Pyrene	0.120		0.00200	0.00600	1	05/31/2024 08:36	WG2295611
(S) p-Terphenyl-d14	*82.9*			*23.0-120*		*05/31/2024 08:36*	WG2295611
(S) Nitrobenzene-d5	*73.4*			*14.0-149*		*05/31/2024 08:36*	WG2295611
(S) 2-Fluorobiphenyl	*79.4*			*34.0-125*		*05/31/2024 08:36*	WG2295611

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.90		1	06/01/2024 20:11	WG2293909

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.496	J	0.255	1.00	1	05/30/2024 00:31	WG2291911

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.72	T8	1	05/31/2024 22:10	WG2296542

Sample Narrative:

L1739188-07 WG2296542: 8.72 at 22.3C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	268		10.0	1	06/01/2024 00:30	WG2296552

Sample Narrative:

L1739188-07 WG2296552: at 25C

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	0.139	J	0.0167	0.200	1	06/01/2024 21:25	WG2293911

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.01		0.100	1.00	5	06/06/2024 21:55	WG2292568
Barium	342		0.152	2.50	5	06/06/2024 21:55	WG2292568
Cadmium	0.105	J	0.0855	1.00	5	06/06/2024 21:55	WG2292568
Copper	25.3		0.132	5.00	5	06/06/2024 21:55	WG2292568
Lead	4.96		0.0990	2.00	5	06/06/2024 21:55	WG2292568
Nickel	12.6		0.197	2.50	5	06/06/2024 21:55	WG2292568
Selenium	0.971	J	0.180	2.50	5	06/06/2024 21:55	WG2292568
Silver	U		0.0865	0.500	5	06/06/2024 21:55	WG2292568
Zinc	87.6		0.740	25.0	5	06/06/2024 21:55	WG2292568

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	0.0292	J	0.0217	0.100	1	05/26/2024 05:47	WG2293482
(S) a,a,a-Trifluorotoluene(FID)	*97.7*			*77.0-120*		*05/26/2024 05:47*	WG2293482

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	05/27/2024 06:21	WG2293637
Toluene	U		0.00130	0.00500	1	05/27/2024 06:21	WG2293637
Ethylbenzene	U		0.000737	0.00250	1	05/27/2024 06:21	WG2293637
Xylenes, Total	U		0.000880	0.00650	1	05/27/2024 06:21	WG2293637
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/27/2024 06:21	WG2293637
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/27/2024 06:21	WG2293637
(S) Toluene-d8	*99.4*			*75.0-131*		*05/27/2024 06:21*	WG2293637
(S) 4-Bromofluorobenzene	*105*			*67.0-138*		*05/27/2024 06:21*	WG2293637
(S) 1,2-Dichloroethane-d4	*95.8*			*70.0-130*		*05/27/2024 06:21*	WG2293637

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	107		1.61	4.00	1	06/01/2024 11:23	WG2294869
C28-C36 Motor Oil Range	225		1.37	20.0	5	06/01/2024 13:25	WG2294869
(S) o-Terphenyl	*65.6*			*18.0-148*		*06/01/2024 13:25*	WG2294869
(S) o-Terphenyl	*64.6*			*18.0-148*		*06/01/2024 11:23*	WG2294869

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
Acenaphthene	U		0.00209	0.00600	1	05/31/2024 04:30	WG2295611
Anthracene	U		0.00230	0.00600	1	05/31/2024 04:30	WG2295611
Benzo(a)anthracene	U		0.00173	0.00600	1	05/31/2024 04:30	WG2295611
Benzo(b)fluoranthene	U		0.00153	0.00600	1	05/31/2024 04:30	WG2295611
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/31/2024 04:30	WG2295611
Benzo(a)pyrene	U		0.00179	0.00600	1	05/31/2024 04:30	WG2295611
Chrysene	U		0.00232	0.00600	1	05/31/2024 04:30	WG2295611
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/31/2024 04:30	WG2295611
Fluoranthene	U		0.00227	0.00600	1	05/31/2024 04:30	WG2295611
Fluorene	U		0.00205	0.00600	1	05/31/2024 04:30	WG2295611
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/31/2024 04:30	WG2295611
1-Methylnaphthalene	U		0.00449	0.0200	1	05/31/2024 04:30	WG2295611
2-Methylnaphthalene	U		0.00427	0.0200	1	05/31/2024 04:30	WG2295611
Naphthalene	U		0.00408	0.0200	1	05/31/2024 04:30	WG2295611
Pyrene	0.00269	J	0.00200	0.00600	1	05/31/2024 04:30	WG2295611
(S) p-Terphenyl-d14	*72.2*			*23.0-120*		*05/31/2024 04:30*	WG2295611
(S) Nitrobenzene-d5	*68.8*			*14.0-149*		*05/31/2024 04:30*	WG2295611
(S) 2-Fluorobiphenyl	*73.6*			*34.0-125*		*05/31/2024 04:30*	WG2295611

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	38.4		1	06/01/2024 20:14	WG2293909

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	05/30/2024 00:39	WG2291911

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.02	T8	1	05/31/2024 22:10	WG2296542

Sample Narrative:

L1739188-08 WG2296542: 8.02 at 22.3C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	6670		10.0	1	06/01/2024 00:30	WG2296552

Sample Narrative:

L1739188-08 WG2296552: at 25C

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	6.61		0.0167	0.200	1	06/01/2024 21:33	WG2293911

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.97		0.100	1.00	5	06/06/2024 21:59	WG2292568
Barium	442		0.152	2.50	5	06/06/2024 21:59	WG2292568
Cadmium	0.104	J	0.0855	1.00	5	06/06/2024 21:59	WG2292568
Copper	42.0		0.132	5.00	5	06/06/2024 21:59	WG2292568
Lead	4.89		0.0990	2.00	5	06/06/2024 21:59	WG2292568
Nickel	13.2		0.197	2.50	5	06/06/2024 21:59	WG2292568
Selenium	1.16	J	0.180	2.50	5	06/06/2024 21:59	WG2292568
Silver	U		0.0865	0.500	5	06/06/2024 21:59	WG2292568
Zinc	152		0.740	25.0	5	06/06/2024 21:59	WG2292568

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	0.107		0.0217	0.100	1	05/30/2024 04:08	WG2295209
(S) a,a,a-Trifluorotoluene(FID)	*89.1*			*77.0-120*		*05/30/2024 04:08*	WG2295209

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	05/27/2024 06:40	WG2293637
Toluene	0.00205	J	0.00130	0.00500	1	05/27/2024 06:40	WG2293637
Ethylbenzene	U		0.000737	0.00250	1	05/27/2024 06:40	WG2293637
Xylenes, Total	0.00218	J	0.000880	0.00650	1	05/27/2024 06:40	WG2293637
1,2,4-Trimethylbenzene	0.00176	J	0.00158	0.00500	1	05/27/2024 06:40	WG2293637
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/27/2024 06:40	WG2293637
(S) Toluene-d8	*98.3*			*75.0-131*		*05/27/2024 06:40*	WG2293637
(S) 4-Bromofluorobenzene	*109*			*67.0-138*		*05/27/2024 06:40*	WG2293637
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*05/27/2024 06:40*	WG2293637

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	13300		805	2000	500	06/01/2024 12:25	WG2294869
C28-C36 Motor Oil Range	15200		137	2000	500	06/01/2024 12:25	WG2294869
(S) o-Terphenyl	*0.000*	J7		*18.0-148*		*06/01/2024 12:25*	WG2294869

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
Acenaphthene	U		0.00209	0.00600	1	05/31/2024 09:12	WG2295611
Anthracene	U		0.00230	0.00600	1	05/31/2024 09:12	WG2295611
Benzo(a)anthracene	U		0.00173	0.00600	1	05/31/2024 09:12	WG2295611
Benzo(b)fluoranthene	0.135		0.00153	0.00600	1	05/31/2024 09:12	WG2295611
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/31/2024 09:12	WG2295611
Benzo(a)pyrene	0.0585		0.00179	0.00600	1	05/31/2024 09:12	WG2295611
Chrysene	U		0.00232	0.00600	1	05/31/2024 09:12	WG2295611
Dibenz(a,h)anthracene	0.0426		0.00172	0.00600	1	05/31/2024 09:12	WG2295611
Fluoranthene	U		0.00227	0.00600	1	05/31/2024 09:12	WG2295611
Fluorene	0.182		0.00205	0.00600	1	05/31/2024 09:12	WG2295611
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/31/2024 09:12	WG2295611
1-Methylnaphthalene	0.230		0.00449	0.0200	1	05/31/2024 09:12	WG2295611
2-Methylnaphthalene	0.153		0.00427	0.0200	1	05/31/2024 09:12	WG2295611
Naphthalene	0.0168	J	0.00408	0.0200	1	05/31/2024 09:12	WG2295611
Pyrene	0.485		0.00200	0.00600	1	05/31/2024 09:12	WG2295611
(S) p-Terphenyl-d14	*81.8*			*23.0-120*		*05/31/2024 09:12*	WG2295611
(S) Nitrobenzene-d5	*82.3*			*14.0-149*		*05/31/2024 09:12*	WG2295611
(S) 2-Fluorobiphenyl	*57.8*			*34.0-125*		*05/31/2024 09:12*	WG2295611

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.989		1	06/01/2024 20:17	WG2293909

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	05/30/2024 01:03	WG2291911

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.43	T8	1	05/31/2024 22:10	WG2296542

Sample Narrative:

L1739188-09 WG2296542: 8.43 at 22.2C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	188		10.0	1	06/01/2024 00:30	WG2296552

Sample Narrative:

L1739188-09 WG2296552: at 25C

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	0.0773	J	0.0167	0.200	1	06/01/2024 21:36	WG2293911

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.19		0.100	1.00	5	06/06/2024 22:02	WG2292568
Barium	124		0.152	2.50	5	06/06/2024 22:02	WG2292568
Cadmium	U		0.0855	1.00	5	06/06/2024 22:02	WG2292568
Copper	29.2		0.132	5.00	5	06/06/2024 22:02	WG2292568
Lead	3.57		0.0990	2.00	5	06/06/2024 22:02	WG2292568
Nickel	8.81		0.197	2.50	5	06/06/2024 22:02	WG2292568
Selenium	1.52	J	0.180	2.50	5	06/06/2024 22:02	WG2292568
Silver	U		0.0865	0.500	5	06/06/2024 22:02	WG2292568
Zinc	65.8		0.740	25.0	5	06/06/2024 22:02	WG2292568

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	0.0384	J	0.0217	0.100	1	05/26/2024 06:08	WG2293482
(S) a,a,a-Trifluorotoluene(FID)	*98.5*			*77.0-120*		*05/26/2024 06:08*	WG2293482

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	05/27/2024 07:00	WG2293637
Toluene	U		0.00130	0.00500	1	05/27/2024 07:00	WG2293637
Ethylbenzene	U		0.000737	0.00250	1	05/27/2024 07:00	WG2293637
Xylenes, Total	U		0.000880	0.00650	1	05/27/2024 07:00	WG2293637
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/27/2024 07:00	WG2293637
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/27/2024 07:00	WG2293637
(S) Toluene-d8	*101*			*75.0-131*		*05/27/2024 07:00*	WG2293637
(S) 4-Bromofluorobenzene	*105*			*67.0-138*		*05/27/2024 07:00*	WG2293637
(S) 1,2-Dichloroethane-d4	*90.0*			*70.0-130*		*05/27/2024 07:00*	WG2293637

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	13.5		1.61	4.00	1	06/01/2024 10:58	WG2294869
C28-C36 Motor Oil Range	27.5		0.274	4.00	1	06/01/2024 10:58	WG2294869
(S) o-Terphenyl	*50.5*			*18.0-148*		*06/01/2024 10:58*	WG2294869

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
Acenaphthene	U		0.00209	0.00600	1	05/31/2024 04:13	WG2295611
Anthracene	U		0.00230	0.00600	1	05/31/2024 04:13	WG2295611
Benzo(a)anthracene	U		0.00173	0.00600	1	05/31/2024 04:13	WG2295611
Benzo(b)fluoranthene	U		0.00153	0.00600	1	05/31/2024 04:13	WG2295611
Benzo(k)fluoranthene	U		0.00215	0.00600	1	05/31/2024 04:13	WG2295611
Benzo(a)pyrene	U		0.00179	0.00600	1	05/31/2024 04:13	WG2295611
Chrysene	U		0.00232	0.00600	1	05/31/2024 04:13	WG2295611
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	05/31/2024 04:13	WG2295611
Fluoranthene	U		0.00227	0.00600	1	05/31/2024 04:13	WG2295611
Fluorene	U		0.00205	0.00600	1	05/31/2024 04:13	WG2295611
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	05/31/2024 04:13	WG2295611
1-Methylnaphthalene	U		0.00449	0.0200	1	05/31/2024 04:13	WG2295611
2-Methylnaphthalene	U		0.00427	0.0200	1	05/31/2024 04:13	WG2295611
Naphthalene	U		0.00408	0.0200	1	05/31/2024 04:13	WG2295611
Pyrene	U		0.00200	0.00600	1	05/31/2024 04:13	WG2295611
(S) p-Terphenyl-d14	*74.2*			*23.0-120*		*05/31/2024 04:13*	WG2295611
(S) Nitrobenzene-d5	*74.5*			*14.0-149*		*05/31/2024 04:13*	WG2295611
(S) 2-Fluorobiphenyl	*75.0*			*34.0-125*		*05/31/2024 04:13*	WG2295611

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.273		1	06/01/2024 20:25	WG2293909

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	05/30/2024 01:11	WG2291911

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.05	T8	1	05/31/2024 22:10	WG2296542

Sample Narrative:

L1739188-10 WG2296542: 8.05 at 22.1C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	241		10.0	1	06/01/2024 00:30	WG2296552

Sample Narrative:

L1739188-10 WG2296552: at 25C

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	0.120	J	0.0167	0.200	1	06/01/2024 21:39	WG2293911

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.81		0.100	1.00	5	06/06/2024 00:58	WG2292575
Barium	203		0.152	2.50	5	06/12/2024 03:02	WG2300155
Cadmium	0.116	J	0.0855	1.00	5	06/06/2024 00:58	WG2292575
Copper	26.5		0.132	5.00	5	06/06/2024 00:58	WG2292575
Lead	3.67		0.0990	2.00	5	06/06/2024 00:58	WG2292575
Nickel	9.26		0.197	2.50	5	06/06/2024 00:58	WG2292575
Selenium	0.428	J	0.180	2.50	5	06/06/2024 00:58	WG2292575
Silver	U		0.0865	0.500	5	06/06/2024 00:58	WG2292575
Zinc	68.1		0.740	25.0	5	06/06/2024 00:58	WG2292575

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	0.0415	J	0.0217	0.100	1	05/26/2024 06:30	WG2293482
(S) a,a,a-Trifluorotoluene(FID)	*97.6*			*77.0-120*		*05/26/2024 06:30*	WG2293482

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	05/27/2024 07:19	WG2293637
Toluene	U		0.00130	0.00500	1	05/27/2024 07:19	WG2293637
Ethylbenzene	U		0.000737	0.00250	1	05/27/2024 07:19	WG2293637
Xylenes, Total	U		0.000880	0.00650	1	05/27/2024 07:19	WG2293637
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	05/27/2024 07:19	WG2293637
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/27/2024 07:19	WG2293637
(S) Toluene-d8	*101*			*75.0-131*		*05/27/2024 07:19*	WG2293637
(S) 4-Bromofluorobenzene	*109*			*67.0-138*		*05/27/2024 07:19*	WG2293637
(S) 1,2-Dichloroethane-d4	*97.6*			*70.0-130*		*05/27/2024 07:19*	WG2293637

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	37.4		3.22	8.00	2	06/01/2024 13:37	WG2294869
C28-C36 Motor Oil Range	78.4		0.548	8.00	2	06/01/2024 13:37	WG2294869
(S) o-Terphenyl	*59.4*			*18.0-148*		*06/01/2024 13:37*	WG2294869

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
Acenaphthene	U		0.00209	0.00600	1	06/01/2024 12:52	WG2296038
Anthracene	U		0.00230	0.00600	1	06/01/2024 12:52	WG2296038
Benzo(a)anthracene	U		0.00173	0.00600	1	06/01/2024 12:52	WG2296038
Benzo(b)fluoranthene	U		0.00153	0.00600	1	06/01/2024 12:52	WG2296038
Benzo(k)fluoranthene	U		0.00215	0.00600	1	06/01/2024 12:52	WG2296038
Benzo(a)pyrene	U		0.00179	0.00600	1	06/01/2024 12:52	WG2296038
Chrysene	U		0.00232	0.00600	1	06/01/2024 12:52	WG2296038
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	06/01/2024 12:52	WG2296038
Fluoranthene	U		0.00227	0.00600	1	06/01/2024 12:52	WG2296038
Fluorene	U		0.00205	0.00600	1	06/01/2024 12:52	WG2296038
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	06/01/2024 12:52	WG2296038
1-Methylnaphthalene	U		0.00449	0.0200	1	06/01/2024 12:52	WG2296038
2-Methylnaphthalene	U		0.00427	0.0200	1	06/01/2024 12:52	WG2296038
Naphthalene	U		0.00408	0.0200	1	06/01/2024 12:52	WG2296038
Pyrene	0.00213	J	0.00200	0.00600	1	06/01/2024 12:52	WG2296038
(S) p-Terphenyl-d14	*84.2*			*23.0-120*		*06/01/2024 12:52*	WG2296038
(S) Nitrobenzene-d5	*78.7*			*14.0-149*		*06/01/2024 12:52*	WG2296038
(S) 2-Fluorobiphenyl	*84.1*			*34.0-125*		*06/01/2024 12:52*	WG2296038

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.54		1	05/30/2024 22:37	WG2293914

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	05/30/2024 01:27	WG2291911

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.40	T8	1	05/30/2024 20:10	WG2295736

Sample Narrative:

L1739188-11 WG2295736: 8.4 at 22.8C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	194		10.0	1	05/30/2024 16:50	WG2295750

Sample Narrative:

L1739188-11 WG2295750: at 25C

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	0.265		0.0167	0.200	1	05/31/2024 09:24	WG2293915

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.76		0.100	1.00	5	06/06/2024 01:02	WG2292575
Barium	50.3		0.152	2.50	5	06/12/2024 03:05	WG2300155
Cadmium	U		0.0855	1.00	5	06/06/2024 01:02	WG2292575
Copper	27.3		0.132	5.00	5	06/06/2024 01:02	WG2292575
Lead	3.83		0.0990	2.00	5	06/06/2024 01:02	WG2292575
Nickel	7.53		0.197	2.50	5	06/06/2024 01:02	WG2292575
Selenium	0.260	J	0.180	2.50	5	06/06/2024 01:02	WG2292575
Silver	U		0.0865	0.500	5	06/06/2024 01:02	WG2292575
Zinc	56.0		0.740	25.0	5	06/06/2024 01:02	WG2292575

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	0.0342	J	0.0217	0.100	1	05/26/2024 06:51	WG2293482
(S) a,a,a-Trifluorotoluene(FID)	*98.3*			*77.0-120*		*05/26/2024 06:51*	WG2293482

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	05/27/2024 07:38	WG2293637
Toluene	U		0.00130	0.00500	1	05/27/2024 07:38	WG2293637
Ethylbenzene	U		0.000737	0.00250	1	05/27/2024 07:38	WG2293637
Xylenes, Total	U		0.000880	0.00650	1	05/27/2024 07:38	WG2293637
1,2,4-Trimethylbenzene	0.00250	J	0.00158	0.00500	1	05/27/2024 07:38	WG2293637
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	05/27/2024 07:38	WG2293637
(S) Toluene-d8	*101*			*75.0-131*		*05/27/2024 07:38*	WG2293637
(S) 4-Bromofluorobenzene	*106*			*67.0-138*		*05/27/2024 07:38*	WG2293637
(S) 1,2-Dichloroethane-d4	*95.9*			*70.0-130*		*05/27/2024 07:38*	WG2293637

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	15.2		1.61	4.00	1	06/01/2024 11:10	WG2294869
C28-C36 Motor Oil Range	52.6		0.274	4.00	1	06/01/2024 11:10	WG2294869
(S) o-Terphenyl	*55.2*			*18.0-148*		*06/01/2024 11:10*	WG2294869

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
Acenaphthene	U		0.00209	0.00600	1	06/01/2024 13:51	WG2296038
Anthracene	U		0.00230	0.00600	1	06/01/2024 13:51	WG2296038
Benzo(a)anthracene	U		0.00173	0.00600	1	06/01/2024 13:51	WG2296038
Benzo(b)fluoranthene	U		0.00153	0.00600	1	06/01/2024 13:51	WG2296038
Benzo(k)fluoranthene	U		0.00215	0.00600	1	06/01/2024 13:51	WG2296038
Benzo(a)pyrene	U		0.00179	0.00600	1	06/01/2024 13:51	WG2296038
Chrysene	U		0.00232	0.00600	1	06/01/2024 13:51	WG2296038
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	06/01/2024 13:51	WG2296038
Fluoranthene	U		0.00227	0.00600	1	06/01/2024 13:51	WG2296038
Fluorene	U		0.00205	0.00600	1	06/01/2024 13:51	WG2296038
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	06/01/2024 13:51	WG2296038
1-Methylnaphthalene	U		0.00449	0.0200	1	06/01/2024 13:51	WG2296038
2-Methylnaphthalene	U		0.00427	0.0200	1	06/01/2024 13:51	WG2296038
Naphthalene	U		0.00408	0.0200	1	06/01/2024 13:51	WG2296038
Pyrene	U		0.00200	0.00600	1	06/01/2024 13:51	WG2296038
(S) p-Terphenyl-d14	*81.6*			*23.0-120*		*06/01/2024 13:51*	WG2296038
(S) Nitrobenzene-d5	*74.3*			*14.0-149*		*06/01/2024 13:51*	WG2296038
(S) 2-Fluorobiphenyl	*79.7*			*34.0-125*		*06/01/2024 13:51*	WG2296038

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.116		1	06/01/2024 20:28	WG2293909

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	05/30/2024 01:35	WG2291911

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.02	T8	1	05/31/2024 22:45	WG2296544

Sample Narrative:

L1739188-12 WG2296544: 7.02 at 22C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	88.5		10.0	1	06/01/2024 00:10	WG2296554

Sample Narrative:

L1739188-12 WG2296554: at 25C

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	0.142	J	0.0167	0.200	1	06/01/2024 21:42	WG2293911

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.11		0.100	1.00	5	06/06/2024 20:15	WG2292568
Barium	95.8		0.152	2.50	5	06/06/2024 20:15	WG2292568
Cadmium	0.302	J	0.0855	1.00	5	06/06/2024 20:15	WG2292568
Copper	9.12		0.132	5.00	5	06/06/2024 20:15	WG2292568
Lead	14.5		0.0990	2.00	5	06/06/2024 20:15	WG2292568
Nickel	8.13		0.197	2.50	5	06/06/2024 20:15	WG2292568
Selenium	1.07	J	0.180	2.50	5	06/06/2024 20:15	WG2292568
Silver	U		0.0865	0.500	5	06/06/2024 20:15	WG2292568
Zinc	33.6		0.740	25.0	5	06/06/2024 20:15	WG2292568

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.0638		1	06/01/2024 20:31	WG2293909

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	05/30/2024 01:43	WG2291911

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	6.81	T8	1	05/31/2024 22:45	WG2296544

Sample Narrative:

L1739188-13 WG2296544: 6.81 at 22.2C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	76.1		10.0	1	06/01/2024 00:10	WG2296554

Sample Narrative:

L1739188-13 WG2296554: at 25C

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	0.206		0.0167	0.200	1	06/01/2024 21:45	WG2293911

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.47		0.100	1.00	5	06/06/2024 01:11	WG2292575
Barium	107		0.152	2.50	5	06/12/2024 03:15	WG2300155
Cadmium	0.327	J	0.0855	1.00	5	06/06/2024 01:11	WG2292575
Copper	10.6		0.132	5.00	5	06/06/2024 01:11	WG2292575
Lead	14.8		0.0990	2.00	5	06/06/2024 01:11	WG2292575
Nickel	9.58		0.197	2.50	5	06/06/2024 01:11	WG2292575
Selenium	0.381	J	0.180	2.50	5	06/06/2024 01:11	WG2292575
Silver	U		0.0865	0.500	5	06/06/2024 01:11	WG2292575
Zinc	38.4		0.740	25.0	5	06/06/2024 01:11	WG2292575

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.0907		1	06/01/2024 20:34	WG2293909

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	05/30/2024 01:59	WG2291911

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	6.20	T8	1	05/31/2024 22:45	WG2296544

Sample Narrative:

L1739188-14 WG2296544: 6.2 at 22.1C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	80.7		10.0	1	06/01/2024 00:10	WG2296554

Sample Narrative:

L1739188-14 WG2296554: at 25C

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	0.143	J	0.0167	0.200	1	06/01/2024 21:47	WG2293911

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.44		0.100	1.00	5	06/06/2024 01:15	WG2292575
Barium	83.9		0.152	2.50	5	06/12/2024 03:18	WG2300155
Cadmium	0.295	J	0.0855	1.00	5	06/06/2024 01:15	WG2292575
Copper	8.11		0.132	5.00	5	06/06/2024 01:15	WG2292575
Lead	13.7		0.0990	2.00	5	06/06/2024 01:15	WG2292575
Nickel	6.28		0.197	2.50	5	06/06/2024 01:15	WG2292575
Selenium	0.302	J	0.180	2.50	5	06/06/2024 01:15	WG2292575
Silver	U		0.0865	0.500	5	06/06/2024 01:15	WG2292575
Zinc	32.2		0.740	25.0	5	06/06/2024 01:15	WG2292575

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.0541		1	06/01/2024 20:36	WG2293909

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	05/30/2024 02:07	WG2291911

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	6.70	T8	1	05/31/2024 22:45	WG2296544

Sample Narrative:

L1739188-15 WG2296544: 6.7 at 22C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	104		10.0	1	06/01/2024 00:10	WG2296554

Sample Narrative:

L1739188-15 WG2296554: at 25C

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	0.149	J	0.0167	0.200	1	06/01/2024 21:50	WG2293911

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.79		0.100	1.00	5	06/06/2024 01:18	WG2292575
Barium	82.2		0.152	2.50	5	06/12/2024 03:22	WG2300155
Cadmium	0.247	J	0.0855	1.00	5	06/06/2024 01:18	WG2292575
Copper	9.15		0.132	5.00	5	06/06/2024 01:18	WG2292575
Lead	13.5		0.0990	2.00	5	06/06/2024 01:18	WG2292575
Nickel	6.73		0.197	2.50	5	06/06/2024 01:18	WG2292575
Selenium	0.363	J	0.180	2.50	5	06/06/2024 01:18	WG2292575
Silver	U		0.0865	0.500	5	06/06/2024 01:18	WG2292575
Zinc	31.9		0.740	25.0	5	06/06/2024 01:18	WG2292575

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.0595		1	06/01/2024 20:39	WG2293909

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.315	J J6	0.255	1.00	1	05/30/2024 02:15	WG2291911

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	6.84	T8	1	05/31/2024 22:45	WG2296544

Sample Narrative:

L1739188-16 WG2296544: 6.84 at 21.9C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	107		10.0	1	06/01/2024 00:10	WG2296554

Sample Narrative:

L1739188-16 WG2296554: at 25C

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	0.153	J	0.0167	0.200	1	06/01/2024 21:53	WG2293911

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.29		0.100	1.00	5	06/06/2024 01:21	WG2292575
Barium	86.4		0.152	2.50	5	06/12/2024 03:25	WG2300155
Cadmium	0.285	J	0.0855	1.00	5	06/06/2024 01:21	WG2292575
Copper	8.40		0.132	5.00	5	06/06/2024 01:21	WG2292575
Lead	13.0		0.0990	2.00	5	06/06/2024 01:21	WG2292575
Nickel	6.03		0.197	2.50	5	06/06/2024 01:21	WG2292575
Selenium	0.291	J	0.180	2.50	5	06/06/2024 01:21	WG2292575
Silver	U		0.0865	0.500	5	06/06/2024 01:21	WG2292575
Zinc	30.5		0.740	25.0	5	06/06/2024 01:21	WG2292575

Method Blank (MB)

(MB) R4075149-1 05/29/24 23:28

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

L1739188-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1739188-10 05/30/24 01:11 • (DUP) R4075149-3 05/30/24 01:19

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

L1739188-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1739188-13 05/30/24 01:43 • (DUP) R4075149-4 05/30/24 01:51

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

Laboratory Control Sample (LCS)

(LCS) R4075149-2 05/29/24 23:35

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	10.9	109	80.0-120	

L1739188-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1739188-16 05/30/24 02:15 • (MS) R4075149-6 05/30/24 02:47 • (MSD) R4075149-7 05/30/24 02:55

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 %
Hexavalent Chromium	20.0	0.315	15.1	12.5	73.9	60.9	1	75.0-125	J6	J6	18.8	20

L1739207-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1739207-04 05/30/24 03:35 • (MS) R4075149-10 05/30/24 03:51 • (MSD) R4075149-11 05/30/24 04:15

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	20.0	U	17.5	16.2	87.6	80.8	1	75.0-125			8.02	20

L1739188-16 Original Sample (OS) • Matrix Spike (MS)

(OS) L1739188-16 05/30/24 02:15 • (MS) R4075149-8 05/30/24 03:03

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	641	0.315	686	107	50	75.0-125	

L1739207-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1739207-04 05/30/24 03:35 • (MS) R4075149-12 05/30/24 04:23

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	654	U	771	118	50	75.0-125	

L1739239-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1739239-06 05/30/24 20:10 • (DUP) R4075532-2 05/30/24 20:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	7.38	7.33	1	0.680		1

Sample Narrative:

OS: 7.38 at 22.6C

DUP: 7.33 at 22.7C

L1740045-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1740045-01 05/30/24 20:10 • (DUP) R4075532-3 05/30/24 20:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.88	7.90	1	0.253		1

Sample Narrative:

OS: 7.88 at 21.9C

DUP: 7.9 at 21.8C

Laboratory Control Sample (LCS)

(LCS) R4075532-1 05/30/24 20:10

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

Sample Narrative:

LCS: 10 at 22.1C

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

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

(LCS) R4075971-1 05/31/24 22:10 • (LCSD) R4075971-2 05/31/24 22:10

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	su	su	su	%	%	%			%	%
pH	10.0	9.99	9.99	99.9	99.9	99.0-101			0.000	1

Sample Narrative:

LCS: 9.99 at 21.2C

LCSD: 9.99 at 21.2C

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

(LCS) R4075975-1 05/31/24 22:45 • (LCSD) R4075975-2 05/31/24 22:45

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	su	su	su	%	%	%			%	%
pH	10.0	9.99	10.0	99.9	100	99.0-101			0.100	1

Sample Narrative:

LCS: 9.99 at 21.1C

LCSD: 10 at 21.2C

Method Blank (MB)

(MB) R4075502-1 05/30/24 16:50

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

L1739239-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1739239-06 05/30/24 16:50 • (DUP) R4075502-3 05/30/24 16:50

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	50.4	50.3	1	0.199		20

Sample Narrative:
OS: at 25C
DUP: at 25C

L1740045-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1740045-01 05/30/24 16:50 • (DUP) R4075502-4 05/30/24 16:50

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	8880	8890	1	0.113		20

Sample Narrative:
OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4075502-2 05/30/24 16:50

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	733	741	101	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R4075986-1 06/01/24 00:30

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

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

(LCS) R4075986-2 06/01/24 00:30 • (LCSD) R4075986-3 06/01/24 00:30

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCSD Result umhos/cm	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Specific Conductance	733	755	749	103	102	85.0-115			0.798	20

Sample Narrative:

LCS: at 25C

LCSD: at 25C

Method Blank (MB)

(MB) R4075985-1 06/01/24 00:10

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

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

(LCS) R4075985-2 06/01/24 00:10 • (LCSD) R4075985-3 06/01/24 00:10

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCSD Result umhos/cm	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Specific Conductance	733	754	750	103	102	85.0-115			0.532	20

Sample Narrative:

LCS: at 25C

LCSD: at 25C

Method Blank (MB)

(MB) R4076246-1 06/01/24 21:00

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) R4076246-2 06/01/24 21:02 • (LCSD) R4076246-3 06/01/24 21:05

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.03	1.02	103	102	80.0-120			0.350	20

Method Blank (MB)

(MB) R4075819-1 05/31/24 09:16

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) R4075819-2 05/31/24 09:19 • (LCSD) R4075819-3 05/31/24 09:22

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	1.06	1.09	106	109	80.0-120			2.82	20

QUALITY CONTROL SUMMARY

L1739188-01,02,03,04,05,06,07,08,09,12

Method Blank (MB)

(MB) R4078376-1 06/06/24 20:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Copper	U		0.133	5.00
Lead	U		0.0990	2.00
Nickel	U		0.197	2.50
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	0.910	J	0.740	25.0

Laboratory Control Sample (LCS)

(LCS) R4078376-2 06/06/24 20:12

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	106	106	80.0-120	
Barium	100	105	105	80.0-120	
Cadmium	100	110	110	80.0-120	
Copper	100	105	105	80.0-120	
Lead	100	108	108	80.0-120	
Nickel	100	110	110	80.0-120	
Selenium	100	104	104	80.0-120	
Silver	20.0	22.5	113	80.0-120	
Zinc	100	103	103	80.0-120	

L1739188-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1739188-12 06/06/24 20:15 • (MS) R4078376-5 06/06/24 20:25 • (MSD) R4078376-6 06/06/24 20:28

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 %
Arsenic	100	3.11	95.9	94.2	92.8	91.1	5	75.0-125			1.80	20
Barium	100	95.8	200	188	104	92.0	5	75.0-125			6.35	20
Cadmium	100	0.302	100	100	99.9	99.7	5	75.0-125			0.129	20
Copper	100	9.12	103	102	93.9	92.8	5	75.0-125			1.08	20
Lead	100	14.5	112	111	97.5	96.9	5	75.0-125			0.485	20
Nickel	100	8.13	105	105	96.9	96.7	5	75.0-125			0.155	20
Selenium	100	1.07	95.9	96.2	94.8	95.2	5	75.0-125			0.393	20
Silver	20.0	U	20.5	19.8	103	99.2	5	75.0-125			3.29	20
Zinc	100	33.6	124	124	90.7	90.1	5	75.0-125			0.451	20

Method Blank (MB)

(MB) R4077939-1 06/06/24 00:31

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

Laboratory Control Sample (LCS)

(LCS) R4077939-2 06/06/24 00:35

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	91.7	91.7	80.0-120	
Cadmium	100	101	101	80.0-120	
Copper	100	95.8	95.8	80.0-120	
Lead	100	96.7	96.7	80.0-120	
Nickel	100	96.1	96.1	80.0-120	
Selenium	100	98.7	98.7	80.0-120	
Silver	20.0	18.6	92.9	80.0-120	
Zinc	100	91.3	91.3	80.0-120	

L1739268-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1739268-02 06/06/24 00:38 • (MS) R4077939-5 06/06/24 00:48 • (MSD) R4077939-6 06/06/24 00:52

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	99.7	1.49	86.7	87.0	85.2	85.5	5	75.0-125			0.278	20
Cadmium	99.7	0.207	94.3	98.9	94.1	98.7	5	75.0-125			4.79	20
Copper	99.7	8.38	99.8	103	91.4	94.2	5	75.0-125			2.74	20
Lead	99.7	12.8	106	103	92.7	90.4	5	75.0-125			2.20	20
Nickel	99.7	3.12	97.5	95.4	94.4	92.2	5	75.0-125			2.23	20
Selenium	99.7	0.242	90.1	91.7	89.9	91.4	5	75.0-125			1.73	20
Silver	20.0	U	18.1	18.1	90.4	90.4	5	75.0-125			0.0134	20
Zinc	99.7	32.2	120	121	87.8	88.7	5	75.0-125			0.814	20

Method Blank (MB)

(MB) R4080468-1 06/12/24 02:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Barium	3.61		0.152	2.50

Laboratory Control Sample (LCS)

(LCS) R4080468-2 06/12/24 02:39

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	92.9	92.9	80.0-120	

L1739367-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1739367-19 06/12/24 02:42 • (MS) R4080468-5 06/12/24 02:52 • (MSD) R4080468-6 06/12/24 02:55

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 %
Barium	100	58.6	178	173	119	114	5	75.0-125			2.57	20

Method Blank (MB)

(MB) R4074819-2 05/26/24 02:12

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)	*101*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R4074819-1 05/26/24 00:45

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.00	5.06	101	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*107*	*77.0-120*	

Method Blank (MB)

(MB) R4075914-2 05/30/24 02:20

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)	*95.6*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R4075914-1 05/30/24 00:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.00	5.21	104	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*101*	*77.0-120*	

Method Blank (MB)

(MB) R4075073-3 05/27/24 04:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	*98.4*			*75.0-131*
(S) 4-Bromofluorobenzene	*105*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*98.8*			*70.0-130*

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

(LCS) R4075073-1 05/27/24 02:52 • (LCSD) R4075073-2 05/27/24 03:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.107	0.106	85.6	84.8	70.0-123			0.939	20
Toluene	0.125	0.109	0.108	87.2	86.4	75.0-121			0.922	20
Ethylbenzene	0.125	0.113	0.112	90.4	89.6	74.0-126			0.889	20
Xylenes, Total	0.375	0.338	0.339	90.1	90.4	72.0-127			0.295	20
1,2,4-Trimethylbenzene	0.125	0.108	0.108	86.4	86.4	70.0-126			0.000	20
1,3,5-Trimethylbenzene	0.125	0.109	0.107	87.2	85.6	73.0-127			1.85	20
(S) Toluene-d8				*99.9*	*99.6*	*75.0-131*				
(S) 4-Bromofluorobenzene				*105*	*104*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*95.4*	*96.7*	*70.0-130*				

Method Blank (MB)

(MB) R4076173-1 06/01/24 10:21

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	*71.6*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R4076173-2 06/01/24 10:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	39.0	78.0	50.0-150	
(S) o-Terphenyl			*77.3*	*18.0-148*	

L1739188-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1739188-02 06/01/24 12:00 • (MS) R4076173-3 06/01/24 12:12 • (MSD) R4076173-4 06/01/24 12:25

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	48.5	13200	10500	13300	0.000	206	500	50.0-150	V	J3 V	23.5	20
(S) o-Terphenyl					*0.000*	*0.000*		*18.0-148*	J7	J7		

Method Blank (MB)

(MB) R4075657-2 05/31/24 01:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00209	0.00600
Anthracene	U		0.00230	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Benzo(a)pyrene	U		0.00179	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
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
Naphthalene	U		0.00408	0.0200
Pyrene	U		0.00200	0.00600
(S) p-Terphenyl-d14	*93.0*			*23.0-120*
(S) Nitrobenzene-d5	*83.6*			*14.0-149*
(S) 2-Fluorobiphenyl	*91.5*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R4075657-1 05/31/24 01:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0730	91.3	50.0-120	
Anthracene	0.0800	0.0774	96.8	50.0-126	
Benzo(a)anthracene	0.0800	0.0729	91.1	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0771	96.4	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0768	96.0	49.0-125	
Benzo(a)pyrene	0.0800	0.0709	88.6	42.0-120	
Chrysene	0.0800	0.0827	103	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0734	91.8	47.0-125	
Fluoranthene	0.0800	0.0839	105	49.0-129	
Fluorene	0.0800	0.0831	104	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0703	87.9	46.0-125	
1-Methylnaphthalene	0.0800	0.0781	97.6	51.0-121	
2-Methylnaphthalene	0.0800	0.0722	90.3	50.0-120	
Naphthalene	0.0800	0.0716	89.5	50.0-120	
Pyrene	0.0800	0.0807	101	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R4075657-1 05/31/24 01:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			*88.5*	*23.0-120*	
(S) Nitrobenzene-d5			*86.6*	*14.0-149*	
(S) 2-Fluorobiphenyl			*91.6*	*34.0-125*	

Method Blank (MB)

(MB) R4076628-2 06/01/24 12:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00209	0.00600
Anthracene	U		0.00230	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Benzo(a)pyrene	U		0.00179	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
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
Naphthalene	U		0.00408	0.0200
Pyrene	U		0.00200	0.00600
(S) p-Terphenyl-d14	*89.4*			*23.0-120*
(S) Nitrobenzene-d5	*79.3*			*14.0-149*
(S) 2-Fluorobiphenyl	*85.6*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R4076628-1 06/01/24 12:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0672	84.0	50.0-120	
Anthracene	0.0800	0.0634	79.3	50.0-126	
Benzo(a)anthracene	0.0800	0.0671	83.9	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0762	95.3	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0732	91.5	49.0-125	
Benzo(a)pyrene	0.0800	0.0612	76.5	42.0-120	
Chrysene	0.0800	0.0653	81.6	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0730	91.3	47.0-125	
Fluoranthene	0.0800	0.0731	91.4	49.0-129	
Fluorene	0.0800	0.0738	92.3	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0680	85.0	46.0-125	
1-Methylnaphthalene	0.0800	0.0728	91.0	51.0-121	
2-Methylnaphthalene	0.0800	0.0710	88.8	50.0-120	
Naphthalene	0.0800	0.0692	86.5	50.0-120	
Pyrene	0.0800	0.0765	95.6	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R4076628-1 06/01/24 12:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			*97.2*	*23.0-120*	
(S) Nitrobenzene-d5			*89.1*	*14.0-149*	
(S) 2-Fluorobiphenyl			*92.8*	*34.0-125*	

L1739188-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1739188-10 06/01/24 12:52 • (MS) R4076628-3 06/01/24 13:12 • (MSD) R4076628-4 06/01/24 13:31

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0784	U	0.0652	0.0599	83.2	76.8	1	14.0-127			8.47	27
Anthracene	0.0784	U	0.0623	0.0569	79.5	72.9	1	10.0-145			9.06	30
Benzo(a)anthracene	0.0784	U	0.0665	0.0593	84.8	76.0	1	10.0-139			11.4	30
Benzo(b)fluoranthene	0.0784	U	0.0707	0.0622	90.2	79.7	1	10.0-140			12.8	36
Benzo(k)fluoranthene	0.0784	U	0.0665	0.0591	84.8	75.8	1	10.0-137			11.8	31
Benzo(a)pyrene	0.0784	U	0.0657	0.0584	83.8	74.9	1	10.0-141			11.8	31
Chrysene	0.0784	U	0.0653	0.0573	83.3	73.5	1	10.0-145			13.1	30
Dibenz(a,h)anthracene	0.0784	U	0.0689	0.0607	87.9	77.8	1	10.0-132			12.7	31
Fluoranthene	0.0784	U	0.0726	0.0660	92.6	84.6	1	10.0-153			9.52	33
Fluorene	0.0784	U	0.0739	0.0664	94.3	85.1	1	11.0-130			10.7	29
Indeno(1,2,3-cd)pyrene	0.0784	U	0.0677	0.0597	86.4	76.5	1	10.0-137			12.6	32
1-Methylnaphthalene	0.0784	U	0.0713	0.0646	90.9	82.8	1	10.0-142			9.86	28
2-Methylnaphthalene	0.0784	U	0.0685	0.0628	87.4	80.5	1	10.0-137			8.68	28
Naphthalene	0.0784	U	0.0663	0.0602	84.6	77.2	1	10.0-135			9.64	27
Pyrene	0.0784	0.00213	0.0729	0.0661	90.3	82.0	1	10.0-148			9.78	35
(S) p-Terphenyl-d14					*83.8*	*75.0*		*23.0-120*				
(S) Nitrobenzene-d5					*85.3*	*77.2*		*14.0-149*				
(S) 2-Fluorobiphenyl					*87.0*	*78.5*		*34.0-125*				

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
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
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 [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

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

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

Company Name/Address:
Civitas/Tasman - CO
6855 W. 118th Ave
Broomfield, CO 80020

Billing Information:
Accounts Payable
650 Southgate Dr.
Windsor, CO 80550

Pres Chk

Project Manager:
Sam Vogt / Jacob Evans

Email: **svogt@tasman-geo.com; jevans@civitasresources.com**

Project Name: State Bierstadt 4-65 35-34 2AH

Please Circle: PT (MT) CT ET

Phone: **610-405-9078**

Lab Project #:

AFE# or C/C: P1672CD

Collected by (print): Lennon Bakel, Angela Kinyo

Site/Facility ID #:

Billing Code #: 8311.542

Collected by (signature):

Immediately Packed on Ice N___ Y X

Rush? (Lab MUST Be Notified)
___Same Day ___Five Day
___Next Day ___5 Day (Rad Only)
___Two Day ___10 Day (Rad Only)
___Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	# of Containers	Full TABLE915 8ozClr-NoPres	Background TABLE915 8ozClr-NoPres	V8260 (GW TABLE915) 40mL Amb-HCl	Chloride, Sulfate 125mL HDPE-NoPres	TDS 1L-HDPE-NoPres					Remarks	Sample # (lab only)
SEP1-BD1@3"	Grab	SS	3"	5/20/24	1000	2	X										-01
SEP1-BD2@3"					1002												-02
SEP2-BD1@3"					1004												-03
SEP2-BD2@3"					1006												-04
SEP3-BD1@3"					1008												-05
SEP3-BD2@3"					1010												-06
SEP4-BD1@3"					1012												-07
SEP4-BD2@3"					1014												-08
B-SEP-BD1@3"					1016												-09
B-SEP-BD2@3"	↓	↓	↓	↓	1018	↓	↓										-10

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard- terms.pdf

SDG # 173918

F175

Acctnum: **CIVTASBCO**
Template: **T250702**
Prelogin: **P1068185**
PM: **824 - Chris Ward**
PB:
Shipped Via: **FedEX Ground**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
pH, EC, SAR by saturated paste preparation method
Boron by hot water soluble preparation method
Table 915-1 Metals - As, Ba, Cd, Cu, Pb, Ni, Se, Ag, Zn, Cr VI

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP X Y __N
COC Signed/Accurate: X Y __N
Bottles arrive intact: X Y __N
Correct bottles used: X Y __N
Sufficient volume sent: X Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y X N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	5/20/24	1530	Sage Carving		
Relinquished by : (Signature) Sage Carving	5/21/24	1800	FEDEX	Temp: °C Bottles Received: 32	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Charles Stevenson	Date: 5-22-24 Time: 9:09	Hold: Condition: NCF / OK

Company Name/Address:	Billing Information:	Pres Chk
Civitas/Tasman - CO 6855 W. 118th Ave Broomfield, CO 80020	**Accounts Payable** 650 Southgate Dr. Windsor, CO 80550	
Project Manager: **Sam Vogt / Jacob Evans**	Email: **svogt@tasman-geo.com; jevans@civitasresources.com**	
Project Name: State Bierstadt 4-65 35-34 2AH		Please Circle: PT (MT) CT ET
Phone: **610-405-9078**	Lab Project #:	AFE# or C/C: P1672CD
Collected by (print): Lennon Bakel, Angela Vinyl	Site/Facility ID #:	Billing Code #: 8311.542
Collected by (signature):	***Rush?*** (Lab MUST Be Notified) ___Same Day ___Five Day ___Next Day ___5 Day (Rad Only) ___Two Day ___10 Day (Rad Only) ___Three Day	**Quote #** Date Results Needed
Immediately Packed on Ice N___ Y X		

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	# of Containers	Full TABLE915 8ozClr-NoPres	Background TABLE915 8ozClr-NoPres	V8260 (GW TABLE915) 40mL Amb-HCl	Chloride, Sulfate 125mL HDPE-NoPres	TDS 1L-HDPE-NoPres	Remarks	Sample # (lab only)
SGS-BG01@3"	Grab	SS	3"	5/20/24	1144	2	X						-11
BG01@3"	↓	↓	↓	↓	1320	↓		X					-12
BG02@3"					1325			↓					-13
BG03@3"					1330								-14
BG04@3"					1335								-15
BG05@3"	↓	↓	↓	↓	1340	↓		↓					-16

Chain of Custody Page 2 of 2

Pace PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # 173988

Table #

Acctnum: **CIVTASBCO**
Template: **T250702**
Prelogin: **P1068185**
PM: **824 - Chris Ward**
PB:

Shipped Via: **FedEX Ground**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
pH, EC, SAR by saturated paste preparation method
Boron by hot water soluble preparation method
Table 915-1 Metals - As, Ba, Cd, Cu, Pb, Ni, Se, Ag, Zn, Cr VI

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y __N
COC Signed/Accurate: Y __N
Bottles arrive intact: Y __N
Correct bottles used: Y __N
Sufficient volume sent: Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: Y __N
RAD Screen <0.5 mR/hr: Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
	5/20/24	1530	Gabe Cannino		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
Gabe Cannino	5/21/24	1800	FedEx	32	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK
			Charles Stevenson	5-22-24 9:01	

L1739188

Tracking Numbers	Temperature
7315 3194 7318	1.2+0.1=1.3 EDA6
7315 3144 3307	0.5+0.1=0.6 EDA6

Charles Stevenson
Name

5-22-24
Date