Ms. Karen Cahill
New York State Department of Environmental Conservation
5786 Widewaters Parkway
Syracuse, New York 13214-1867

Date: July 16, 2025
Subject: March 2025 Quarterly ERD Performance Monitoring Status Update
Krutulis Property Site
State Superfund Program Site No. 727009
848 Marsh Mill Road, Kirkville, New York

Arcadis of New York, Inc.
One Lincoln Center
110 West Fayette Street
Suite 300
Syracuse, NY 13202
United States
Phone: 315 446 9120
Fax: 315 449 0017
www.arcadis.com

Dear Ms. Cahill,

On behalf of Bristol Myers Squibb Company (BMS), Arcadis of New York, Inc. (Arcadis) has prepared this memorandum summarizing the field activities and results from the first quarterly post-injection groundwater monitoring event completed at the Krutulis Property Site (Site) located at 848 Marsh Mill Road in Kirkville, New York (**Figure 1**). Groundwater monitoring is a component of the injection-based enhanced reductive dechlorination (ERD) remedy to address chlorinated volatile organic compounds (CVOCs) impacts in groundwater beneath the southern portion of the Site. The ERD remedy, which included injection of an organic carbon substrate (ABC-Olé), was implemented between September 19 and December 4, 2024. The ERD injection remedy area and performance monitoring network are shown in **Figure 2**. The ERD injection point locations and volumes achieved (as a percentage of the design volume) for each injection point are shown on **Attachment 1**. The first quarterly post-injection monitoring event was completed in March 2025 in accordance with the final ERD injection remedy design, which is detailed in the *Pre-Design Investigation Report,* dated July 29, 2024. A summary of the injection event is provided in the *2024 Annual Sampling and Site Summary Report*, dated February 26, 2025.

Field Activities

The following activities were completed during the first quarterly performance monitoring event on March 26 and 27, 2025.

- Groundwater depth was measured at all Site monitoring wells and piezometers.
- Groundwater samples were collected from the ERD remedy performance monitoring network, which includes four piezometers (PZ-1, PZ-2, PZ-3, and PZ-4) and three monitoring wells (MW-3S, MW-3D, and MW-7).

Well construction details are included in **Table 1** and the ERD injection remedy performance monitoring program is provided as **Table 2** for reference.

Groundwater samples were collected using low-flow sampling methods. Groundwater quality field parameters (pH, oxidation-reduction potential, dissolved oxygen, turbidity, temperature, and specific conductance) were measured and recorded at each location during purging, and samples were collected once field parameters had stabilized. Groundwater samples from each well were shipped on ice under chain-of-custody protocol to Eurofins Buffalo located in Amherst, New York, a New York State Department of Health Environmental Laboratory Approval Program certified laboratory and analyzed for the following:

- Site-specific list of volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C
- Total organic carbon (TOC) by USEPA Method 9060A
- Dissolved iron by USEPA Method 6010C (collected with a 0.45-micron field filter)
- Sulfate by USEPA Method 300.0
- Dissolved gases (methane, ethane, and ethene) by USEPA Method RSK-175

Drummed soil and groundwater investigation-derived waste (IDW) from the 2024 annual site-wide and ERD injection baseline groundwater monitoring event, supplemental pre-design investigation, and March 2025 quarterly groundwater monitoring event were removed from the Site by Clean Harbors Environmental Services on May 12, 2025, and transported to licensed facility for disposal as non-hazardous waste.

Performance Monitoring Results

Analytical results from the baseline (September 2024) and first post-injection quarterly (March 2024) monitoring events are presented in **Table 3** and on **Figure 3**. Groundwater sampling forms and copies of the laboratory analytical and data validation reports for the March 2025 monitoring event are provided in **Attachments 2** and **3**, respectively. The laboratory mistakenly reported data from the March 2025 sampling event using the older site-specific list of 12 VOCs instead of the current revised list of 9 VOCs (see *2024 Annual Sampling and Site Summary Report* for reference). The three additional VOCs (4-methyl-2-pentanone, acetone, and xylenes) are included in the laboratory and data validation reports but, since they are no longer constituents of concern, are not included in **Table 3**. These three additional VOCs were not detected above laboratory reporting limits in March 2025.

Charts showing concentration trends for CVOCs and other biogeochemical parameters that are key indicators of ERD remedy performance are provided in **Attachment 4**. The March 2025 groundwater monitoring event was conducted approximately three months after the completion of ERD injection activities (September to December 2024). A summary of the groundwater monitoring data is provided below. As a reminder, six of the seven performance monitoring locations (MW-3S, MW-3D, and PZ-1 through PZ-4) are located within the ERD treatment zone, while well MW-7 is located outside of the treatment zone on the periphery of the CVOC groundwater plume.

- Prior to injection (September 2024), trichloroethene (TCE) was detected above the New York State Department of Environmental Conservation (NYSDEC) groundwater quality standard of 5 micrograms per liter (µg/L) at PZ-1 through PZ-3. During the March 2025 monitoring event, TCE decreased substantially at PZ-1 (950 µg/L to 8.3 µg/L, -99%) and PZ-2 (1,800 µg/L to 92 µg/L, -95%), while a slight decrease was observed at PZ-3 (500 µg/L to 450 µg/L, -10%). These results indicate that enhanced degradation of TCE is occurring within the ERD treatment zone.
- Concentrations of dechlorination daughter products cis-1,2-dichloroethene (cis-1,2-DCE) and vinyl chloride (VC) increased substantially in many wells. Prior to injections, cis-1,2-DCE was detected at a maximum concentration of 1,100 µg/L; in March 2025, cis-1,2-DCE was detected at a maximum concentration of 3,500 µg/L, with concentrations of greater than 1,000 µg/L detected in three wells. Similarly, VC was detected in two monitoring locations at 12 and 370 µg/L during baseline sampling; in March 2025, VC was detected in four monitoring locations at concentrations between 32 and 1,600 µg/L. These results indicate that ERD of dissolved and sorbed-phase TCE is occurring within the injection zone.
- Prior to injection, ethene was detected at one monitoring well at a concentration of 86 µg/L (MW-3S) and ethane was detected at four monitoring wells at concentrations up to 16 µg/L (PZ-1). In March 2025, ethene

was detected at four treatment zone monitoring locations at concentrations up to 220 µg/L (MW-3S) and ethane was detected at five treatment zone monitoring locations at concentrations up to 29 µg/L(PZ-1). The increase in the distribution and concentration of innocuous end products ethene and ethane indicate that the microbes required for complete dechlorination are present and active within the ERD treatment zone.

- TOC was only detected in two of seven monitoring locations during baseline sampling, at a maximum concentration of 1.2 milligrams per liter (mg/L). As discussed in the *2024 Annual Sampling and Site Summary Report*, elevated concentrations of TOC were observed at PZ-1 (1,160 mg/L), PZ-4 (88.3 mg/L), and MW-3S (81.6 mg/L) during the injection event. In March 2025, TOC was still detected at concentrations above 20 mg/L at PZ-1 (23.0 mg/L), PZ-2 (23.8 mg/L), and MW-3S (32.4 mg/L). These results indicate the injected organic carbon substrate is being utilized in the microbial degradation of CVOCs.
- Biogeochemical data from the March 2025 monitoring event indicates that Site groundwater has become more reducing within the treatment zone, particularly in wells with observed increases in TOC. The strongly reducing conditions required for efficient ERD are present, including: dissolved oxygen concentrations below 0.5 mg/L at six of the seven monitoring points; sulfate concentrations are below 10 mg/L at the six injection zone monitoring locations; and methane concentrations in treatment zone wells of between 840 µg/L and 28,000 µg/L.

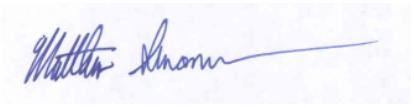
Upcoming Schedule

Post-injection performance monitoring will continue in accordance with the ERD Remedy Implementation Schedule that was included in the *2024 Annual Sampling and Site Summary Report*. Three additional quarterly monitoring events will be performed in June, September, and December of 2025. Performance monitoring results will be provided to NYSDEC in a summary memo after each event. A more detailed assessment of the ERD remedy progress will be provided in the *2025 Annual Sampling and Site Summary Report*.

As discussed in the *2024 Annual Sampling and Site Summary Report*, restoration of the ERD injection work area was postponed until Spring of 2025 due to snow cover and winter conditions. This work is completed between May 12 and 14, 2025.

If you have any questions, please feel free to contact Mr. Richard Mator of Bristol-Myers Squibb Company at 609-252-4273 or myself at 724-934-9514.

Sincerely,
Arcadis of New York, Inc.



Matthew Swensson
Principal Environmental Engineering Specialist
Email: matthew.swensson@arcadis.com
Direct Line: 724-934-9514

CC. Joshua Cook – NYSDEC
Harolyn Hood – New York State Department of Health
Richard Mator – BMS
William Pufko, Esq. – BMS

Enclosures:
Tables: 1, 2, and 3
Figures: 1, 2, and 3
Attachments: 1, 2, 3, and 4

TABLES

Table 1
Well Construction Details
Krutulis Property Site
State Superfund Program Site No. 727009
848 Marshall Mill Road, Kirkville, NY

Well ID	Ground Elevation (ft amsl)	Well Diameter (inches)	Top of PVC Casing Elevation (ft amsl)	Total Well Depth (ft btoc)	Total Well Depth (ft bgs)	Screen Interval (ft bgs)
PZ-1	387.90	1.00	389.92	28.54	26.52	16.52 - 26.52
PZ-2	386.56	1.00	388.53	28.15	26.18	16.18 - 26.18
PZ-3	386.62	1.00	388.66	28.10	26.06	16.06 - 26.06
PZ-4	385.46	1.00	387.90	28.78	26.34	16.34 - 26.34
MW-2	393.66	2.00	395.35	18.69	17.00	7.00 - 17.00
MW-3S	382.15	2.00	383.65	18.50	17.00	7.00 - 17.00
MW-3D	384.28	2.00	386.57	31.29	29.00	19.00 - 29.00
MW-6S	389.89	2.00	392.52	24.63	22.00	12.00 - 22.00
MW-6D	389.75	2.00	392.10	36.35	34.00	24.00 - 34.00
MW-7	385.16	2.00	387.16	25.34	23.34	13.34 - 23.34

Notes

a - Monitoring wells: MW-2, MW-3D, MW-6S, MW-6D were resurveyed to NY Central State Plain, NAD83, NAVD88 on 9/9/24.

b - Monitoring wells and piezometers: MW-3S, MW-7, PZ-1, PZ-2, PZ-3, PZ-4 were resurveyed to NY Central State Plain, NAD83, NAVD88 on 11/20/24.

Acronyms and Abbreviations:

ft = feet

ft amsl = feet above mean sea level

ft bgs = feet below ground surface

btoc = feet below top of polyvinyl chloride casing

Table 2
ERD Performance Monitoring Program
Krutulis Property Site
State Superfund Program Site No. 727009
848 Marshall Mill Road, Kirkville, NY

Well	Post-Injection Monitoring Frequency [a]	Analysis/Parameter											
		COCs	Biogeochemical Parameters				Field Parameters						
		VOCs (EPA Method 8260C) [b]	Total Organic Carbon (EPA Method 9060A)	Sulfate (EPA Method 300)	Dissolved Iron (EPA Method 6010C) [c]	Methane, Ethane, Ethene (EPA Method RSK-175)	Groundwater Elevation	pH	Oxidation Reduction Potentia	Dissolved Oxygen	Turbidity	Temperature	Specific Conductance
MW-3S	Quarterly - Year 1	L	L	L	L	L	F	F	F	F	F	F	F
MW-3D		L	L	L	L	L	F	F	F	F	F	F	F
MW-7		L	L	L	L	L	F	F	F	F	F	F	F
PZ-1		L	L	L	L	L	F	F	F	F	F	F	F
PZ-2	Semi-annually - Year 2	L	L	L	L	L	F	F	F	F	F	F	F
PZ-3		L	L	L	L	L	F	F	F	F	F	F	F
PZ-4		L	L	L	L	L	F	F	F	F	F	F	F

Notes

a - The monitoring frequency may be adjusted based on performance monitoring data. All wells were sampled in September 2024 prior to injection to establish baseline conditions.

b - VOCs include only 9 site-specific COCs - 1,1-dichloroethene, benzene, chloroform, cis-1,2-dichloroethene, tetrachloroethene, toluene, trans-1,2-dichloroethene, trichloroethene, and vinyl chloride.

c - Samples for dissolved iron analysis are field filtered during collection.

Acronyms and Abbreviations:

COC = constituent of concern
VOC = volatile organic compound
EPA = United States Environmental Protection Agency
F = field analysis using a water quality or water level meter
L = laboratory analysis

Table 3
Groundwater Analytical Results
Krutulis Property Site
State Superfund Program Site No. 727009
848 Marshall Mill Road, Kirkville, NY

Analyte	NYSDEC Groundwater Quality Standards and Guidance Values [a]	Location ID Date / Units	MW-3D 9/12/2024	MW-3D 3/27/2025	MW-3S 9/12/2024	MW-3S 3/27/2025	MW-7 9/13/2024	MW-7 3/27/2025	PZ-1 9/13/2024
VOCs									
1,1-Dichloroethene	5	µg/L	< 1.0	< 4.0	< 4.0	< 50	< 1.0	< 1.0	< 20
Benzene	1	µg/L	< 1.0	< 4.0	**3.0 J**	< 50	< 1.0	< 1.0	< 20
Chloroform	7	µg/L	< 1.0	< 4.0	< 4.0	< 50	1.7	< 1.0	< 20
cis-1,2-Dichloroethene	5	µg/L	**65**	**84**	**180**	**2400**	0.82 J	0.82 J	**16 J**
Tetrachloroethene	5	µg/L	< 1.0	< 4.0	< 4.0	< 50	< 1.0	< 1.0	< 20
Toluene	5	µg/L	< 1.0	< 4.0	< 4.0	< 50	< 1.0	< 1.0	< 20
trans-1,2-Dichloroethene	5	µg/L	**24**	**17**	**110**	**84**	< 1.0	< 1.0	**24**
Trichloroethene	5	µg/L	< 1.0	< 4.0	< 4.0	< 50	4.2	2.0	**950**
Vinyl chloride	2	µg/L	**12**	**32**	**370**	**1600**	< 1.0	< 1.0	< 20
Biogeochemical Parameters									
Dissolved Iron [b]	0.3	mg/L	0.24 J	0.17	0.25 J	2.2	< 0.050 J	< 0.050	0.15 J
Sulfate	250	mg/L	4.6 J	6.4	< 5.0	5.0	11.7	10.8	15.9
Total Organic Carbon	--	mg/L	< 1.0	1.1	1.2	32.4	0.44 J	0.60 J	< 1.0
Ethane	--	µg/L	3.1 J	3.8 J	4.9 J	6.5 J	< 7.5	< 7.5	16
Ethene	--	µg/L	< 7.0	2.0 J	86	220	< 7.0	< 7.0	< 7.0
Methane	--	µg/L	7400	6400	5500	6600	130	73	18000
Field Parameters									
Conductivity	--	mS/cm	0.202	0.297	0.219	0.496	0.254	0.297	0.261
Dissolved Oxygen	--	mg/L	0.04	0.28	0.02	0.77	0.46	3.51	0.04
Oxidation Reduction Potential	--	mV	-94.7	-163	-173.9	-228	-95.8	-27	-116.3
pH	--	pH units	8.01	7.48	7.77	6.62	8.07	7.13	8.07
Temperature	--	C	15.9	7.85	23.09	4.81	14.06	7.85	13.31
Turbidity	--	NTU	2.74	29.4	5.01	9.8	37.2	29	27.1

Notes:
a - Results that exceed the NYSDEC groundwater quality standards are shaded.
b - Dissolved iron is used as biogeochemical indicator parameter; therefore, results are not screened against NYSDEC groundwater quality standard.
< = The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
< J = The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
J = The analyte was positively identified; however, the associated numerical value is an estimated concentration only.

Acronyms and Abbreviations:
-- = no standard
C = degree Celsius
µg/L = microgram per liter
mg/L = milligram per liter
mS/cm = milliSiemen per centimeter
mV = millivolt
NTU = Nephelometric Turbidity Unit
NYSDEC = New York State Department of Environmental Conservation
VOC =volatile organic compound

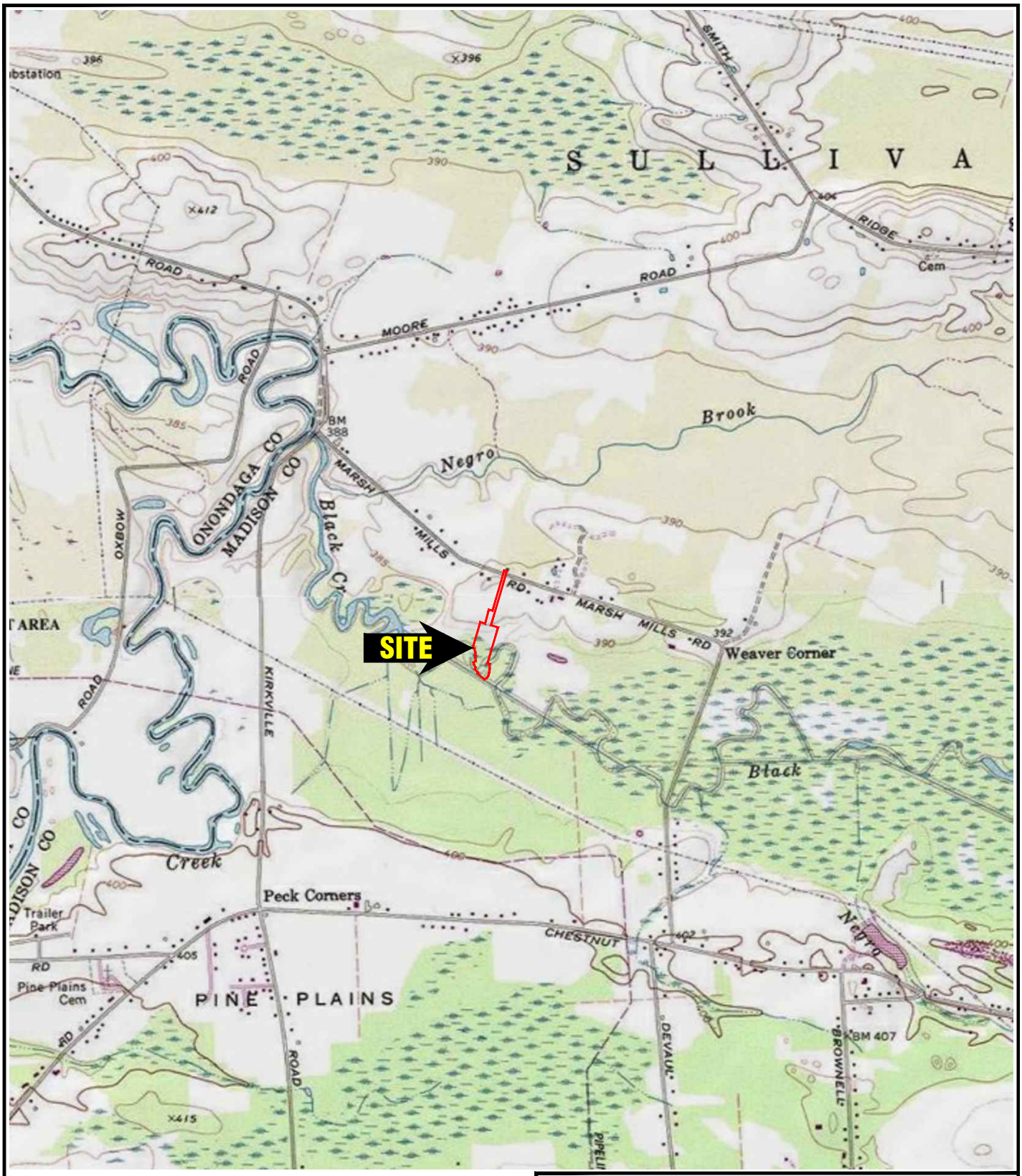
Table 3
Groundwater Analytical Results
Krutulis Property Site
State Superfund Program Site No. 727009
848 Marshall Mill Road, Kirkville, NY

Analyte	NYSDEC Groundwater Quality Standards and Guidance Values [a]	PZ-1 3/26/2025	PZ-2 9/13/2024	PZ-2 3/26/2025	PZ-3 9/13/2024	PZ-3 3/26/2025	PZ-4 9/13/2024	PZ-4 3/26/2025
VOCs								
1,1-Dichloroethene	5	< 1.0	< 40	< 100	< 10	< 10	< 20	< 20
Benzene	1	< 1.0	< 40	< 100	< 10	< 10	< 20	< 20
Chloroform	7	< 1.0	< 40	< 100	< 10	< 10	< 20	< 20
cis-1,2-Dichloroethene	5	**58**	**740**	**3500**	**24**	**100**	**1100**	**1200**
Tetrachloroethene	5	< 1.0	< 40	< 100	< 10	< 10	< 20	< 20
Toluene	5	< 1.0	**48**	< 100	< 10	< 10	< 20	**18 J**
trans-1,2-Dichloroethene	5	2.9	**430**	**290**	**53**	**69**	**180**	**270**
Trichloroethene	5	**8.3**	**1800**	**92 J**	**500**	**450**	< 20	< 20
Vinyl chloride	2	< 1.0	< 40	**100**	< 10	< 10	< 20	**73**
Biogeochemical Parameters								
Dissolved Iron [b]	0.3	0.81	0.66 J	0.80	0.21 J	0.18	0.25 J	0.92
Sulfate	250	7.2	10.5	5.7	8.9	9.1	3.3 J	4.2
Total Organic Carbon	--	23.0	< 1.0	23.8	< 1.0	0.52 J	< 1.0	4.6
Ethane	--	29	< 7.5	< 7.5	2.6 J	3.0 J	< 7.5	1.7 J
Ethene	--	< 7.0	< 7.0	2.5 J	< 7.0	< 7.0	< 7.0	1.5 J
Methane	--	28000	1100	3800	4000	6600	600	840
Field Parameters								
Conductivity	--	0.384	0.329	0.46	0.219	0.325	0.32	0.306
Dissolved Oxygen	--	0.65	0.41	1.37	0.03	0.84	0.49	0.05
Oxidation Reduction Potential	--	-266	-113.9	-168	-146.1	-151	-119.4	-177
pH	--	6.99	7.92	6.87	8.11	6.7	7.92	6.82
Temperature	--	7.78	13.01	9.01	15.14	8.68	12.87	9.76
Turbidity	--	19	4.09	35.8	47.7	40	16	44.2

Notes:
a - Results that exceed the NYSDEC groundwater quality standards are shaded.
b - Dissolved iron is used as biogeochemical indicator parameter; therefore, results are not screened against NYSDEC groundwater quality standard.
< = The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
< J = The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
J = The analyte was positively identified; however, the associated numerical value is an estimated concentration only.

Acronyms and Abbreviations:
-- = no standard
C = degree Celsius
µg/L = microgram per liter
mg/L = milligram per liter
mS/cm = milliSiemen per centimeter
mV = millivolt
NTU = Nephelometric Turbidity Unit
NYSDEC = New York State Department of Environmental Conservation
VOC =volatile organic compound

FIGURES



SOURCE: USGS Topo Maps (Map Service) - Copyright:© 2013 National Geographic Society, i-cubed

0 2000' 4000'

GRAPHIC SCALE

KRUTULIS PROPERTY SITE
STATE SUPERFUND PROGRAM SITE NO. 727009
848 MARSH MILL ROAD, KIRKVILLE, NY

MARCH 2025 QUARTERLY ERD PERFORMANCE MONITORING STATUS UPDATE

SITE LOCATION MAP

ARCADIS

FIGURE
1

IMAGES:
X-TOPO.jpg

C:\Users\LPOSENAUER\DCVACCDocs\Arcadis ACC USVAUS-99999999-BRISTOL_727009_KIRKVILLE_NY\Project Files\10_WIP\10T_ARC_ENV\2025\01-DWG\ERD1QGW-F01-USGS SLM.dwg LAYOUT: 1 SAVED: 4/30/2025 4:18 PM ACADVER: 24.3S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ----
PLOTTED: 5/2/2025 2:57 PM BY: POSENAUER, LISA

LEGEND:

- 200 — EXISTING ELEVATION CONTOUR
- FIELD DELINEATED WETLAND
- MONITORING WELL LOCATION
- ACCESS ROAD CENTERLINE
- NYSDEC REGULATED FRESHWATER WETLAND ADJACENT AREA
- LOD — LIMITS OF DISTURBANCE FOR FULL-SCALE ERD APPLICATION
- GROUNDWATER FLOW DIRECTION ARROW
- TEMPORARY PIEZOMETER LOCATION
- ERD INJECTION AREA

NOTES:

1. ERD = ENHANCED REDUCTIVE DECHLORINATION
2. LOD = LIMITS OF DISTURBANCE
3. NYSDEC = NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
4. MONITORING WELL MW-3D, WAS RESURVEYED TO NY CENTRAL STATE PLAIN, NAD83, NAVD88 ON SEPTEMBER 9, 2024.
5. MONITORING WELLS AND PIEZOMETERS: MW-3S, MW-7, PZ-1, PZ-2, PZ-3, AND PZ-4 WERE RESURVEYED TO NY CENTRAL STATE PLAIN, NAD83, NAVD88 ON NOVEMBER 20, 2024. LOCATION OF WELL MW-3S WAS SLIGHTLY OFF ON HISTORICAL SITE FIGURES AND HAS BEEN UPDATED BASED ON THE SURVEY DATA.

AERIAL SOURCE: © 2022 MICROSOFT CORPORATION
© 2022 MAXAR © CNES (2022).

0 15' 30'
GRAPHIC SCALE

KRUTULIS PROPERTY SITE
STATE SUPERFUND PROGRAM SITE NO. 727009
848 MARSH MILL ROAD, KIRKVILLE, NY

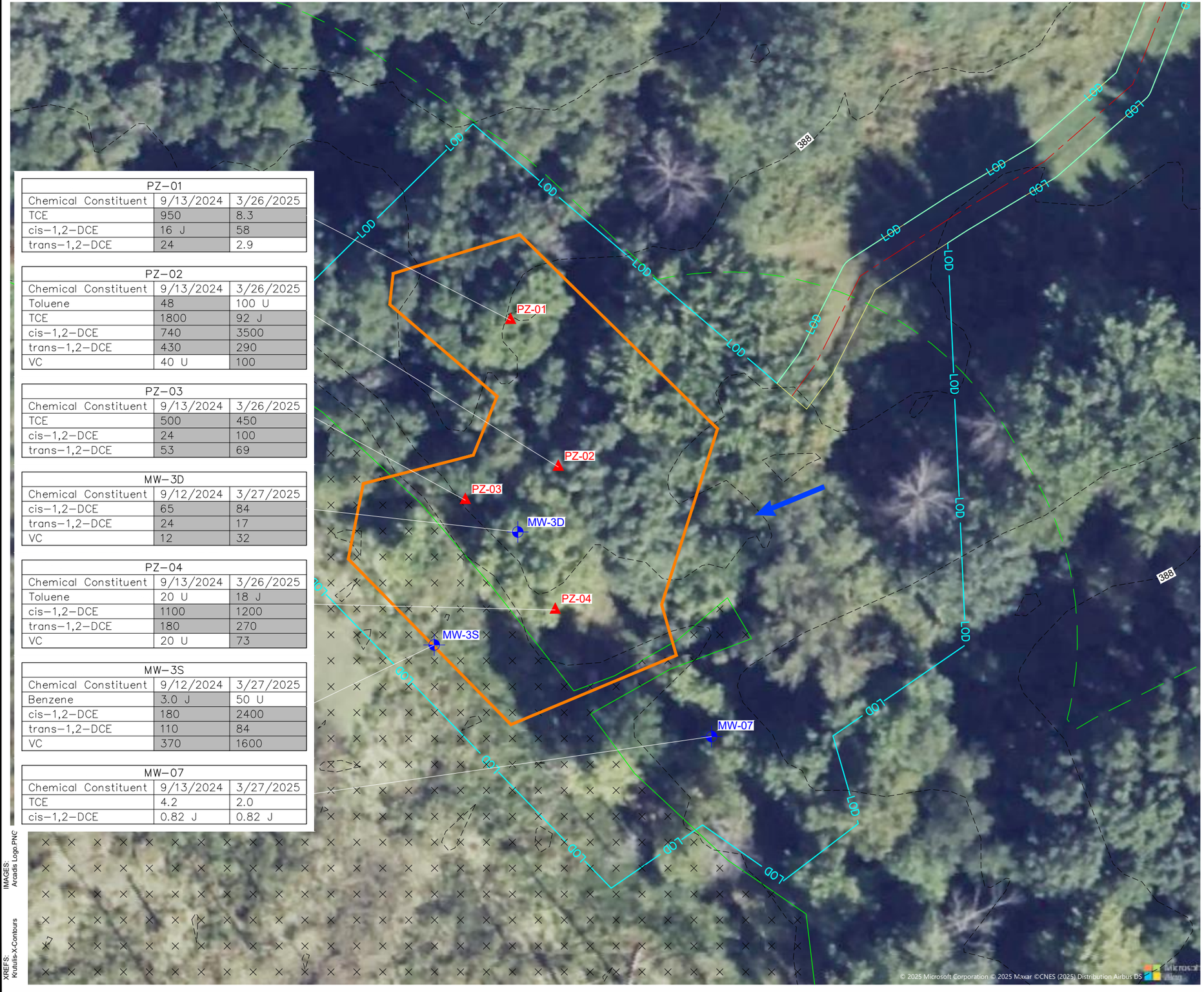
MARCH 2025 QUARTERLY ERD PERFORMANCE MONITORING STATUS UPDATE

ERD INJECTION AREA AND PERFORMANCE MONITORING NETWORK

ARCADIS

FIGURE
2

C:\Users\POSENAUER\D\ACCDocs\Arcadis ACC US\AUS-99999999-BRISTOL_727009_KIRKVILLE_NY\Project Files\10_WIP\10T_ARC_ENV\2025\01-DWG\ERD1QGW-F02-INV AREA SITE PLAN.dwg LAYOUT: 2 SAVED: 5/2/2025 2:57 PM ACADVER: 24.3S (LMS TECH) PAGESETUP: ----
PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 5/2/2025 3:16 PM BY: POSENAUER, LISA
XREFS:
Krutulis-X-Contours



PZ-01		
Chemical Constituent	9/13/2024	3/26/2025
TCE	950	8.3
cis-1,2-DCE	16 J	58
trans-1,2-DCE	24	2.9

PZ-02		
Chemical Constituent	9/13/2024	3/26/2025
Toluene	48	100 U
TCE	1800	92 J
cis-1,2-DCE	740	3500
trans-1,2-DCE	430	290
VC	40 U	100

PZ-03		
Chemical Constituent	9/13/2024	3/26/2025
TCE	500	450
cis-1,2-DCE	24	100
trans-1,2-DCE	53	69

MW-3D		
Chemical Constituent	9/12/2024	3/27/2025
cis-1,2-DCE	65	84
trans-1,2-DCE	24	17
VC	12	32

PZ-04		
Chemical Constituent	9/13/2024	3/26/2025
Toluene	20 U	18 J
cis-1,2-DCE	1100	1200
trans-1,2-DCE	180	270
VC	20 U	73

MW-3S		
Chemical Constituent	9/12/2024	3/27/2025
Benzene	3.0 J	50 U
cis-1,2-DCE	180	2400
trans-1,2-DCE	110	84
VC	370	1600

MW-07		
Chemical Constituent	9/13/2024	3/27/2025
TCE	4.2	2.0
cis-1,2-DCE	0.82 J	0.82 J

LEGEND:

- 200 — EXISTING ELEVATION CONTOUR
- FIELD DELINEATED WETLAND
- MONITORING WELL LOCATION
- ACCESS ROAD CENTERLINE
- NYSDEC REGULATED FRESHWATER WETLAND ADJACENT AREA
- LOD — LIMITS OF DISTURBANCE FOR FULL-SCALE ERD APPLICATION
- GROUNDWATER FLOW DIRECTION ARROW
- TEMPORARY PIEZOMETER LOCATION
- ERD INJECTION AREA

NOTES:

1. COC = CONSTITUENT OF CONCERN
2. DCE = DICHLOROETHENE
3. ERD = ENHANCED REDUCTIVE DECHLORINATION
4. J = RESULT IS LESS THAN THE REPORTED DETECTION LIMIT (RDL) BUT GREATER THAN OR EQUAL TO THE METHOD DETECTION LIMIT (MDL) AND THE CONCENTARTION IS AN ESTIMATED VALUE
5. LOD = LIMITS OF DISTURBANCE
6. NYSDEC = NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
7. TCE = TRICHLOROETHENE
8. U = ANALYTE NOT DETECTED ABOVE ACCOMPANYING LABORATORY QUANTITATION LIMIT.
9. VC = VINYL CHLORIDE.
10. VOC = VOLATILE ORGANIC COMPOUND
11. GROUNDWATER ANALYTICAL DATA PRESENTED IN UNITS OF ug/L
12. ug/L = MICROGRAM PER LITER
13. SHADED VALUES EXCEED NYSDEC GROUNDWATER QUALITY STANDARD

COC	NYSDEC Groundwater Quality Standard (ug/L)
Benzene	1
Toluene	5
TCE	5
cis-1,2-DCE	5
trans-1,2-DCE	5
VC	2

0 15' 30'
GRAPHIC SCALE

KRUTULIS PROPERTY SITE
STATE SUPERFUND PROGRAM SITE NO. 727009
848 MARSH MILL ROAD, KIRKVILLE, NY
ERD FIRST QUARTERLY GROUNDWATER MONITORING STATUS UPDATE

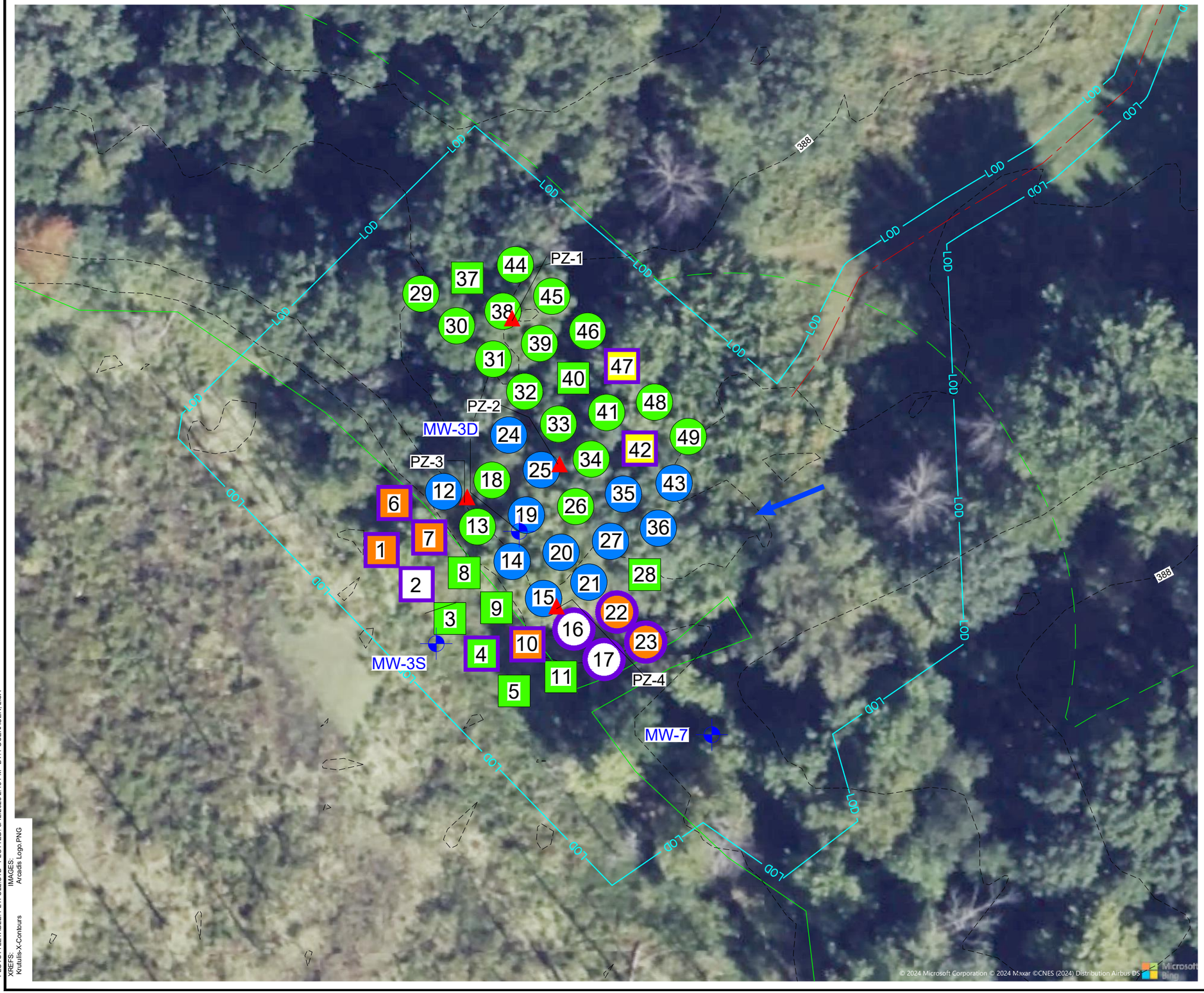
VOCs DETECTED IN GROUNDWATER

ARCADIS

FIGURE
3

ATTACHMENTS

ATTACHMENT 1



LEGEND:

- EXISTING ELEVATION CONTOUR (200)
- FIELD DELINEATED WETLAND
- MONITORING WELL LOCATION
- ACCESS ROAD CENTERLINE
- NYSDEC REGULATED FRESHWATER WETLAND ADJACENT AREA
- LIMITS OF DISTURBANCE FOR FULL-SCALE ERD APPLICATION (LOD)
- GROUNDWATER FLOW DIRECTION ARROW
- TEMPORARY PIEZOMETER LOCATION
- 1 DPT SCREEN INJECTION POINT
- 12 TEMPORARY INJECTION WELL
- >1,600 GALLONS (>125% OF PLANNED INJECTION VOLUME)
- 1,200 TO 1,400 GALLONS (100% ± 10% OF PLANNED INJECTION VOLUME)
- 700 TO 900 GALLONS (50-70% OF PLANNED INJECTION VOLUME)
- 200 TO 500 GALLONS (10-40% OF PLANNED INJECTION VOLUME)
- <100 GALLONS (<10% OF PLANNED INJECTION VOLUME)
- DAYLIGHTING OBSERVED

NOTES:

1. INITIAL TARGET INJECTION VOLUME WAS 1,320 GALLONS AT EACH LOCATION. ACTUAL INJECTION VOLUMES VARIED BASED ON FIELD CONDITIONS.
2. DPT = DIRECT-PUSH TECHNOLOGY
3. ERD = ENHANCED REDUCTIVE DECHLORINATION
4. NYSDEC = NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

0 15' 30'
GRAPHIC SCALE

KRUTULIS PROPERTY SITE
STATE SUPERFUND PROGRAM SITE NO. 727009
848 MARSH MILL ROAD, KIRKVILLE, NY

ERD FIRST QUARTERLY GROUNDWATER MONITORING STATUS UPDATE

ERD INJECTION AREA

ARCADIS

ATTACHMENT 1

C:\Users\LPOSENAUER\DOCACCDocs\Arcadis ACC US\AUS-89999999-BRISTOL_727009_KIRKVILLE_NY\Project Files\10_WIP\10T_ARC_ENV\2025\01-DWG\ERD1QGW-AT1-ERD INJECTION PLAN.dwg LAYOUT: 1 SAVED: 5/12/2025 12:11 PM ACADVER: 24.3S (LMS TECH) PAGESETUP: C-LD2B-PDF
PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 5/12/2025 2:48 PM BY: POSENAUER, LISA
XREFS: Krutulis-X-Contours
IMAGES: Arcadis Logo.PNG

ATTACHMENT 2

Site

Event

GROUND-WATER SAMPLING LOG

Sampling Personnel: P. Cornell Jr
Well ID: PZ-1
Client / Job Number: BMS/Krutulis
Date: 3-26-25
Weather: 32°F snow
Time In: 1200 **Time Out:** 1240

Well Information

Depth to Water:	(feet) 4.99	(from MP)	
Total Depth:	(feet) 27.90	(from MP)	
Length of Water Column:	(feet) 22.91		
Volume of Water in Well:	(gal) 0.939		
Three Well Volumes:	(gal) 2.817		

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:		Yes	No
Measuring Point Marked:		Yes	No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Waterra	Other:	
Tubing/Bailer Material:	Steel	Polyethylene	Teflon	Other:	
Sampling Method:	Bailer	Peristaltic	Waterra	Other:	
Duration of Pumping:	(min) 35				
Average Pumping Rate:	(ml/min) 200	Water-Quality Meter Type:	Horiba		
Total Volume Removed:	(gal) 1.85 7L	Did well go dry:	Yes	No	

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3785 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP
± 0.1	±10%	± 3.0%	± 10 mV

Parameter:	1	2	3	4	5	6	7	8	9
	1200	1205	1210	1215	1220	1225	1230		
Volume Purged (gal)	0	1L	2L	3L	4L	5L	6L		
Rate (mL/min)	200	200	200	200	200	200	200		
Depth to Water (ft.)	5.60	5.61	5.62	5.61	5.62	5.61	5.60		
pH	6.84	7.03	7.05	7.02	7.01	7.00	6.99		
Temp. (C)	7.86	7.77	7.85	7.83	7.81	7.80	7.78		
Conductivity (mS/cm)	0.377	0.380	0.378	0.380	0.384	0.384	0.384		
Dissolved Oxygen (mg/L)	6.24	1.80	0.95	0.70	0.68	0.66	0.65		
ORP (mV)	-180	-226	-243	-253	-263	-265	-266		
Turbidity (NTU)	53	20.2	19.3	19.0	19.2	19.1	19.0		
Notes:									

Sampling Information

Analyses	#	Laboratory

Sample ID: PZ-1	Sample Time: 1235		
MS/MSD:	Yes	No	
Duplicate:	Yes	No	
Duplicate ID	Dup. Time:		
Chain of Custody Signed By:			

Problems / Observations

ARCADIS
Groundwater Sampling Form

Page 1 of 1

Project No. 30215550 | Well ID: PZ-2 | Date 3-26-25

Project Name/Location: BMS/ Lotte | Weather 35° Cloudy

Measuring Pt. Description: TIC | Screen Setting (ft-bmp): — | Casing Diameter (in.): 1" | Well Material: X PVC / ___ SS

Static Water Level (ft-bmp): 4.83 | Total Depth (ft-bmp): 27.97 | Water Column/ Gallons in Well: 23.14 / 0.93 gal

MP Elevation: — | Pump Intake (ft-bmp): ~23.0 | Purge Method: Peri | Sample Method: Low Flow

Pump On/Off: 1130/ | Volumes Purged: — | Centrifugal / Submersible / Other

Sample Time: Label 1220, Start, End | Replicate/ Code No.: — | Sampled by: DRM

PID: 0.0 | Water Quality Meter Type and ID: Horiba U52

Time	Minutes Elapsed	Rate (mL/min)	Depth to Water (ft)	Liters Purged	pH +/- 0.1	Cond. (µS/cm) (mS/cm) +/- 3%	Turbidity (NTU) +/- 10%	Dissolved Oxygen (mg/L) +/- 10%	Temp. (°C) +/- 10%	Redox (mV) +/- 10%	Appearance Color	Appearance Odor
1135	5	200	4.91	1	6.85	0.476	97.4	6.11	8.72	-141	Cloudy	none
1140	10	200	4.97	2	6.85	0.474	86	4.71	8.72	-147	"	"
1145	15	200	5.01	3	6.84	0.473	70	3.68	8.71	-153	"	"
1150	20	200	5.03	4	6.84	0.473	52	2.65	8.81	-159	"	"
1155	25	200	5.04	5	6.84	0.469	47.3	1.93	8.84	-162	"	"
1200	30	200	5.04	6	6.85	0.466	39.2	1.51	8.84	-164	"	"
1205	35	200	5.04	7	6.86	0.459	37.1	1.47	8.91	-166	"	"
1210	40	200	5.04	8	6.86	0.459	36.4	1.42	9.00	-166	"	"
1215	45	200	5.04	9	6.87	0.460	35.8	1.37	9.01	-168	"	"
1220			Sample									

Constituents Sampled	Container	Number	Preservative
VOC	40mL	3	HCl
RSK 175	"	3	"
TOC	"	3	"
Sulfate	60mL	1	None
Diss. Iron	250	1	SO4

Well Casing Volumes

Gallons/Foot: 1" = 0.04; 1.25" = 0.06; 1.5" = 0.09; 2" = 0.16; 2.5" = 0.26; 3" = 0.37; 3.5" = 0.50; 4" = 0.65; 6" = 1.47

Well Information

Well Location: | Well Locked at Arrival:

Condition of Well: | Well Locked at Departure:

Well Completion: Flush Mount / Stick Up | Key Number To Well:

Site | Event

GROUND-WATER SAMPLING LOG

Sampling Personnel: D. Cornell Jr | **Well ID:** PZ-3
Client / Job Number: BMS Krutulis | **Date:** 3-26-25
Weather: 32°F Cloudy | **Time In:** 1000 **Time Out:** 1105

Well Information

Depth to Water:	(feet)	4.51	(from MP)
Total Depth:	(feet)	25.85	(from MP)
Length of Water Column:	(feet)	24.34	
Volume of Water in Well:	(gal)	0.998	
Three Well Volumes:	(gal)	2.994	

Well Type:	Flushmount	(Stick-Up)
Well Material:	(Stainless Steel)	PVC
Well Locked:	(Yes)	No
Measuring Point Marked:	(Yes)	No
Well Diameter:	(1") 2"	Other:

Purging Information

Purging Method:	Bailer	(Peristaltic)	Waterra	Other:
Tubing/Bailer Material:	Steel	(Polyethylene)	Teflon	Other:
Sampling Method:	Bailer	(Peristaltic)	Waterra	Other:

Duration of Pumping:	(min)	35			
Average Pumping Rate:	(ml/min)	200	Water-Quality Meter Type:	Horiba	
Total Volume Removed:	(gal)	1.849 7L	Did well go dry:	Yes	(No)

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3785 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP
± 0.1	±10%	± 3.0%	± 10 mV

Parameter:	1	2	3	4	5	6	7	8	9
	1025	1030	1035	1040	1045	1050	1055		
Volume Purged (gal) (L)	0	1L	2L	3L	4L	5L	6L		
Rate (mL/min)	200 ML	200	200	200	200	200	200		
Depth to Water (ft.)	4.51	4.49	4.48	4.50	4.50	4.51	4.51		
pH	6.90	6.72	6.67	6.67	6.68	6.69	6.70		
Temp. (C)	9.00	8.61	8.72	8.69	8.67	8.68	8.68		
Conductivity (mS/cm)	0.312	0.322	0.327	0.326	0.327	0.326	0.325		
Dissolved Oxygen (mg/L)	2.66	1.73	1.05	0.90	0.88	0.86	0.84		
ORP (mV)	-88	-118	-140	-146	-148	-150	-151		
Turbidity (NTU)	202	167	129	62	42	41	40		
Notes:									

Sampling Information

Analyses	#	Laboratory

Sample ID: PZ-3 Sample Time: 1100
MS/MSD: Yes (No)
Duplicate: Yes (No)
Duplicate ID Dup. Time:
Chain of Custody Signed By:

Problems / Observations

Groundwater Sampling Form

Project No. 30215550 | Well ID: PZ-4 | Page 1 of 1

Project Name/Location: BMS/ Lotte | Date 3-26-25

Measuring Pt. Description: TIC | Screen Setting (ft-bmp): – | Casing Diameter (in.): 1" | Weather: 35° Sunny

Static Water Level (ft-bmp): 3.49 | Total Depth (ft-bmp): 26.76 | Water Column/ Gallons in Well: 23.27 / 0.93 gal | Well Material: x PVC, ___ SS

MP Elevation: – | Pump Intake (ft-bmp): ~23.0 | Purge Method: Peri

Pump On/Off: 1010 / | Volumes Purged: – | Centrifugal / Submersible / Other | Sample Method: Low Flow

Sample Time: Label 1050, Start, End | Replicate/ Code No.: – | Sampled by: DRM

PID: 0.0 | Water Quality Meter Type and ID: Horiba

Time	Minutes Elapsed	Rate (mL/min)	Depth to Water (ft)	Liters Purged	pH +/- 0.1	Cond. (µS/cm) (mS/cm) +/- 3%	Turbidity (NTU) +/- 10%	Dissolved Oxygen (mg/L) +/- 10%	Temp. (°C) +/- 10%	Redox (mV) +/- 10%	Appearance: Color	Appearance: Odor
1015	5	200	3.84	1	6.24	0.342	84.5	0.70	10.17	-64	cloudy	none
1020	10	200	4.79	2	6.54	0.317	62.4	0.19	9.72	-140	"	"
1025	15	200	4.88	3	6.63	0.317	56.4	0.06	9.68	-164	"	"
1030	20	200	4.91	4	6.70	0.311	48.7	0.02	9.68	-177	"	"
1035	25	200	4.91	5	6.73	0.310	46.3	0.04	9.73	-178	"	"
1040	30	200	4.91	6	6.78	0.308	45.9	0.03	9.77	-178	"	"
1045	35	200	4.91	7	6.82	0.306	44.2	0.05	9.76	-177	"	"
1050			Sample									

Constituents Sampled	Container	Number	Preservative
VOC 8260C (Site)	40mL VOA	3	HCl
DRO_173	"	3	"
TOC 9060A	"	3	SO4
Sulfate	60mL	1	none
Diss Iron (FE)	250	1	Nitric

Well Casing Volumes

Gallons/Foot: 1" = 0.04; 1.25" = 0.06; 1.5" = 0.09; 2" = 0.16; 2.5" = 0.26; 3" = 0.37; 3.5" = 0.50; 4" = 0.65; 6" = 1.47

Well Information

Well Location: Woods | Well Locked at Arrival:

Condition of Well: Good | Well Locked at Departure:

Well Completion: Flush Mount / (Stick Up) | Key Number To Well:

Initial water white/cloudy

6/30/2017

Site | Event

GROUND-WATER SAMPLING LOG

Sampling Personnel: D. Cornell Jr | **Well ID:** MW-3S
Client / Job Number: BMS Krutulis | **Date:** 3-27-25
Weather: 33 sunny | **Time In:** 0900 **Time Out:** 1020

Well Information

Depth to Water:	(feet)	0.2	(from MP)
Total Depth:	(feet)	18.36	(from MP)
Length of Water Column:	(feet)	18.16	
Volume of Water in Well:	(gal)	0.745	
Three Well Volumes:	(gal)	2.235	

Well Type:	Flushmount		Stick-Up
Well Material:	Stainless Steel		PVC
Well Locked:	Yes		No
Measuring Point Marked:	Yes		No
Well Diameter:	1"	2"	Other:

Purging Information

Purging Method:	Bailer	Peristaltic	Waterra	Other:
Tubing/Bailer Material:	Steel	Polyethylene	Teflon	Other:
Sampling Method:	Bailer	Peristaltic	Waterra	Other:

Duration of Pumping:	(min)	40			
Average Pumping Rate:	(ml/min)	200	Water-Quality Meter Type:	Horiba	
Total Volume Removed:	(gal)	2.11	8L Did well go dry:	Yes	No

Conversion Factors

gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469

1 gal = 3.785 L =3785 ml = 0.1337 cubic feet

Unit Stability

pH	DO	Cond.	ORP
± 0.1	±10%	± 3.0%	± 10 mV

Parameter:	1	2	3	4	5	6	7	8	9
	0930	0935	0940	0945	0950	0955	1000		
Volume Purged (gal)	0	1L	2L	3L	4L	5L	6L		
Rate (mL/min)	200	200	200	200	200	200	200		
Depth to Water (ft.)	0.61	0.65	0.65	0.66	0.65	0.66	0.66		
pH	6.35	6.43	6.57	6.59	6.60	6.61	6.62		
Temp. (C)	4.59	4.68	4.74	4.78	4.78	4.80	4.81		
Conductivity (mS/cm)	0.502	0.502	0.502	0.499	0.498	0.497	0.496		
Dissolved Oxygen (mg/L)	2.67	1.11	1.03	0.81	0.79	0.78	0.77		
ORP (mV)	-159	-193	-207	-223	-225	-226	-228		
Turbidity (NTU)	39.7	17.8	13.2	10.1	9.9	9.8	9.8		
Notes:									

Sampling Information

Analyses	#	Laboratory

Sample ID:	MW-3S	Sample Time:	1010
MS/MSD:	Yes	No	
Duplicate:	Yes	No	
Duplicate ID		Dup. Time:	
Chain of Custody Signed By:			

Problems / Observations

ARCADIS

Groundwater Sampling Form

Project No. 30215550 | Well ID: MW-3D | Date 3-27-26

Project Name/Location: BMS/ Lotte | Weather 35° Sunny

Measuring Pt. Description: TIC | Screen Setting (ft-bmp): — | Casing Diameter (in.): 2" | Well Material: X PVC ___ SS

Static Water Level (ft-bmp): 4.12 | Total Depth (ft-bmp): 31.97 | Water Column/ Gallons in Well: 27.85 / 4.54

MP Elevation: — | Pump Intake (ft-bmp): ~28.0 | Purge Method: peri | Sample Method: Low Flow

Pump On/Off: 0920 | Volumes Purged: — | Centrifugal ___ Submersible ___ Other ___

Sample Time: Label 1005 Start ___ End ___ | Replicate/ Code No. — | Sampled by DRM

PID: 0.0 | Water Quality Meter Type and ID: Horiba U52

Time	Minutes Elapsed	Rate (mL/min)	Depth to Water (ft)	Liters Purged	pH +/- 0.1	Cond. (µS/cm) (mS/cm) +/- 3%	Turbidity (NTU) +/- 10%	Dissolved Oxygen (mg/L) +/- 10%	Temp. (°C) +/- 10%	Redox (mV) +/- 10%	Appearance Color	Appearance Odor
0925	5	200	4.30	1	7.38	0.299	57.3	1.86	6.04	-135	clear	none
0930	10	200	4.37	2	7.39	0.297	52.4	1.21	6.39	-139	"	"
0935	15	200	4.43	3	7.38	0.295	46.4	0.96	6.88	-144	"	"
0940	20	200	4.48	4	7.40	0.296	41.7	0.46	7.24	-150	"	"
0945	25	200	4.59	5	7.43	0.295	35.8	0.31	7.51	-154	"	"
0950	30	200	4.62	6	7.45	0.295	31.3	0.27	7.76	-157	"	"
0955	35	200	4.62	7	7.46	0.296	30.1	0.29	7.90	-161	"	"
1000	40	200	4.62	8	7.49	0.297	29.4	0.28	7.85	-163	"	"
1005	—	—	Sample	—	—	—	—	—	—	—	—	—

Constituents Sampled	Container	Number	Preservative
VOC			
RSK 175			
TOC			
Sulfate			
Diss. Iron			

Well Casing Volumes

Gallons/Foot: 1" = 0.04 | 1.25" = 0.06 | 1.5" = 0.09 | 2" = 0.16 | 2.5" = 0.26 | 3" = 0.37 | 3.5" = 0.50 | 4" = 0.65 | 6" = 1.47

Well Information

Well Location: Yard | Well Locked at Arrival: ___

Condition of Well: Good | Well Locked at Departure: ___

Well Completion: Flush Mount / Stick Up | Key Number To Well: ___

Site

Event

GROUND-WATER SAMPLING LOG

Sampling Personnel: D. Cornell Jr
Client / Job Number: BMS Krutulis
Weather: 35 sunny

Well ID: MW-7
Date: 3-27-25
Time In: 1100 Time Out: 1200

Well Information

Depth to Water:	(feet)	3.8	(from MP)
Total Depth:	(feet)	23.4	(from MP)
Length of Water Column:	(feet)	19.6	
Volume of Water in Well:	(gal)	3.195	
Three Well Volumes:	(gal)	9.585	

Well Type:	Flushmount		(Stick-Up)
Well Material:	Stainless Steel		(PVC)
Well Locked:	(Yes)		No
Measuring Point Marked:	(Yes)		No
Well Diameter:	1"	(2")	Other:

Purging Information

Purging Method:	Bailer	(Peristaltic)	Waterra	Other:
Tubing/Bailer Material:	Steel	(Polyethylene)	Teflon	Other:
Sampling Method:	Bailer	(Peristaltic)	Waterra	Other:

Duration of Pumping:	(min)	40			
Average Pumping Rate:	(ml/min)	200	Water-Quality Meter Type:	Horiba	
Total Volume Removed:	(gal)	2.113 8L	Did well go dry:	Yes	(No)

Conversion Factors				
gal / ft. of water	1" ID	2" ID	4" ID	6" ID
	0.041	0.163	0.653	1.469
1 gal = 3.785 L =3785 ml = 0.1337 cubic feet				

Unit Stability			
pH	DO	Cond.	ORP
± 0.1	±10%	± 3.0%	± 10 mV

Parameter:	1	2	3	4	5	6	7	8	9
	1120	1125	1130	1135	1140	1145	1150	1155	
Volume Purged (gal)	0L	1L	2L	3L	4L	5L	6L	7L	
Rate (mL/min)	200	200	200	200	200	200	200	200	
Depth to Water (ft.)	4.48	4.49	4.50	4.50	4.50	4.50	4.50	4.50	
pH	6.69	6.94	7.06	7.09	7.10	7.10	7.12	7.13	
Temp. (C)	7.33	7.63	7.77	7.80	7.81	7.82	7.84	7.85	
Conductivity (mS/cm)	0.311	0.310	0.306	0.304	0.301	0.300	0.298	0.297	
Dissolved Oxygen (mg/L)	5.38	5.20	4.12	3.60	3.62	3.57	3.55	3.51	
ORP (mV)	-18	-20	-26	-28	-30	-32	-29	-27	
Turbidity (NTU)	83.1	53.7	45.6	39.0	29.7	28.9	29.2	29.0	
Notes:									

Sampling Information

Analyses	#	Laboratory

Sample ID: MW-7 Sample Time: ~~1200~~ 1156

MS/MSD: Yes (No)

Duplicate: Yes (No)

Duplicate ID: Dup. Time:

Chain of Custody Signed By:

Problems / Observations

ATTACHMENT 3

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Carla DaParma
Arcadis U.S., Inc.
Arcadis
2100 Georgetown Drive, Suite 402
Sewickley, Pennsylvania 15143

Generated 4/7/2025 10:16:19 AM

JOB DESCRIPTION

BMS Krutulis GW Sampling Project

JOB NUMBER

480-228240-1

Eurofins Buffalo
10 Hazelwood Drive
Amherst NY 14228-2298

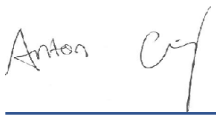
See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northeast, LLC Project Manager.

Authorization



Generated
4/7/2025 10:16:19 AM

Authorized for release by
Anton Gruning, Project Management Assistant I
Anton.Gruning@et.eurofinsus.com
Designee for
John Schove, Project Manager II
John.Schove@et.eurofinsus.com
(716)504-9838

Table of Contents

Definitions/Glossary

Client: Arcadis U.S., Inc. Job ID: 480-228240-1
Project/Site: BMS Krutulis GW Sampling Project

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.
vs	Reported analyte concentrations are below 200 ug/kg and may be biased low due to the sample not being collected according to 5035A-L low-level specifications.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
^5-	Linear Range Check (LRC) is outside acceptance limits, low biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
L	A negative instrument reading had an absolute value greater than the reporting limit
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 480-228240-1 Eurofins Buffalo

Job Narrative
480-228240-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 3/28/2025 8:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C.

GC/MS VOA
Method 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: PZ-4 (480-228240-1), PZ-3 (480-228240-2) and MW-3D (480-228240-5). Elevated reporting limits (RLs) are provided.

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-742215 recovered above the upper control limit for trans-1,3-Dichloropropene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: WC-WATER (480-228240-9).

Method 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: WC-WATER (480-228240-9). Elevated reporting limits (RLs) are provided.

Method 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: PZ-2 (480-228240-3) and MW-3S (480-228240-6). Elevated reporting limits (RLs) are provided.

Method 8260C - TCLP: The following samples were diluted due to the nature of the TCLP matrix: WC-SOIL (480-228240-10) and (LB 480-742331/1-A). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC/MS Semi VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC VOA
Method RSK_175: The following samples were diluted to bring the concentration of target analytes within the calibration range: PZ-4 (480-228240-1), PZ-3 (480-228240-2), PZ-2 (480-228240-3), PZ-1 (480-228240-4), MW-3D (480-228240-5) and MW-3S (480-228240-6). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Herbicides
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

PCBs
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Pesticides
Method 8081B - TCLP: The method blank for preparation batch 480-742325 and 480-742496 and analytical batch 480-742563 contained gamma-BHC (Lindane) and Methoxychlor above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed. The following associated sample is impacted: WC-SOIL (480-228240-10).

Method 8081B - TCLP: The continuing calibration verification (CCV) associated with batch 480-742563 recovered above the upper

control limit for Chlordane (technical). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: WC-SOIL (480-228240-10).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
Method 6010D - TCLP: The absolute response for Zinc was greater than the method reporting limit (RL) in the following sample: (LB 480-742325/1-B).
The instrument raw data has been manually reviewed and the result can be reported as ND.

Method 6010D - TCLP: The linear range check (LRC) standard recovery associated with 480-742575 is outside the acceptance criteria for the following analytes: Silver and Nickel. The concentration of these analyte(s) in the sample(s) are below the highest standard of the calibration curve; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
Method 9045D: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following sample has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: WC-SOIL (480-228240-10).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Field Service / Mobile Lab
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: Arcadis U.S., Inc.
Job ID: 480-228240-1
Project/Site: BMS Krutulis GW Sampling Project

Client Sample ID: PZ-4 — Lab Sample ID: 480-228240-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1200		20	16	ug/L	20		8260C	Total/NA
Toluene	18	J	20	10	ug/L	20		8260C	Total/NA
trans-1,2-Dichloroethene	270		20	18	ug/L	20		8260C	Total/NA
Vinyl chloride	73		20	18	ug/L	20		8260C	Total/NA
Ethane	1.7	J	7.5	1.5	ug/L	1		RSK-175	Total/NA
Ethene	1.5	J	7.0	1.5	ug/L	1		RSK-175	Total/NA
Methane - DL	840		88	22	ug/L	22		RSK-175	Total/NA
Iron, Dissolved	0.92		0.050	0.019	mg/L	1		6010D	Dissolved
Sulfate	4.2		2.0	0.35	mg/L	1		300.0	Total/NA
Total Organic Carbon	4.6		1.0	0.43	mg/L	1		9060A	Total/NA

Client Sample ID: PZ-3 — Lab Sample ID: 480-228240-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	100		10	8.1	ug/L	10		8260C	Total/NA
trans-1,2-Dichloroethene	69		10	9.0	ug/L	10		8260C	Total/NA
Trichloroethene	450		10	4.6	ug/L	10		8260C	Total/NA
Ethane	3.0	J	7.5	1.5	ug/L	1		RSK-175	Total/NA
Methane - DL	6600		88	22	ug/L	22		RSK-175	Total/NA
Iron, Dissolved	0.18		0.050	0.019	mg/L	1		6010D	Dissolved
Sulfate	9.1		2.0	0.35	mg/L	1		300.0	Total/NA
Total Organic Carbon	0.52	J	1.0	0.43	mg/L	1		9060A	Total/NA

Client Sample ID: PZ-2 — Lab Sample ID: 480-228240-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	3500		100	81	ug/L	100		8260C	Total/NA
trans-1,2-Dichloroethene	290		100	90	ug/L	100		8260C	Total/NA
Trichloroethene	92	J	100	46	ug/L	100		8260C	Total/NA
Vinyl chloride	100		100	90	ug/L	100		8260C	Total/NA
Ethene	2.5	J	7.0	1.5	ug/L	1		RSK-175	Total/NA
Methane - DL	3800		88	22	ug/L	22		RSK-175	Total/NA
Iron, Dissolved	0.80		0.050	0.019	mg/L	1		6010D	Dissolved
Sulfate	5.7		2.0	0.35	mg/L	1		300.0	Total/NA
Total Organic Carbon	23.8		1.0	0.43	mg/L	1		9060A	Total/NA

Client Sample ID: PZ-1 — Lab Sample ID: 480-228240-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	58		1.0	0.81	ug/L	1		8260C	Total/NA
trans-1,2-Dichloroethene	2.9		1.0	0.90	ug/L	1		8260C	Total/NA
Trichloroethene	8.3		1.0	0.46	ug/L	1		8260C	Total/NA
Ethane	29		7.5	1.5	ug/L	1		RSK-175	Total/NA
Methane - DL	28000		880	220	ug/L	220		RSK-175	Total/NA
Iron, Dissolved	0.81		0.050	0.019	mg/L	1		6010D	Dissolved
Sulfate	7.2		2.0	0.35	mg/L	1		300.0	Total/NA
Total Organic Carbon	23.0		1.0	0.43	mg/L	1		9060A	Total/NA

Client Sample ID: MW-3D — Lab Sample ID: 480-228240-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	84		4.0	3.2	ug/L	4		8260C	Total/NA
trans-1,2-Dichloroethene	17		4.0	3.6	ug/L	4		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Buffalo

Client Sample ID: MW-3D (Continued) — Lab Sample ID: 480-228240-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	32		4.0	3.6	ug/L	4		8260C	Total/NA
Ethane	3.8	J	7.5	1.5	ug/L	1		RSK-175	Total/NA
Ethene	2.0	J	7.0	1.5	ug/L	1		RSK-175	Total/NA
Methane - DL	6400		88	22	ug/L	22		RSK-175	Total/NA
Iron, Dissolved	0.17		0.050	0.019	mg/L	1		6010D	Dissolved
Sulfate	6.4		2.0	0.35	mg/L	1		300.0	Total/NA
Total Organic Carbon	1.1		1.0	0.43	mg/L	1		9060A	Total/NA

Client Sample ID: MW-3S — Lab Sample ID: 480-228240-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	2400		50	41	ug/L	50		8260C	Total/NA
trans-1,2-Dichloroethene	84		50	45	ug/L	50		8260C	Total/NA
Vinyl chloride	1600		50	45	ug/L	50		8260C	Total/NA
Ethane	6.5	J	7.5	1.5	ug/L	1		RSK-175	Total/NA
Ethene	220		7.0	1.5	ug/L	1		RSK-175	Total/NA
Methane - DL	6600		88	22	ug/L	22		RSK-175	Total/NA
Iron, Dissolved	2.2		0.050	0.019	mg/L	1		6010D	Dissolved
Sulfate	5.0		2.0	0.35	mg/L	1		300.0	Total/NA
Total Organic Carbon	32.4		1.0	0.43	mg/L	1		9060A	Total/NA

Client Sample ID: MW-7 — Lab Sample ID: 480-228240-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.82	J	1.0	0.81	ug/L	1		8260C	Total/NA
Trichloroethene	2.0		1.0	0.46	ug/L	1		8260C	Total/NA
Methane	73		4.0	1.0	ug/L	1		RSK-175	Total/NA
Sulfate	10.8		2.0	0.35	mg/L	1		300.0	Total/NA
Total Organic Carbon	0.60	J	1.0	0.43	mg/L	1		9060A	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-228240-8

No Detections.

Client Sample ID: WC-WATER — Lab Sample ID: 480-228240-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	270		5.0	4.1	ug/L	5		8260C	Total/NA
trans-1,2-Dichloroethene	23		5.0	4.5	ug/L	5		8260C	Total/NA
Trichloroethene	7.5		5.0	2.3	ug/L	5		8260C	Total/NA
Vinyl chloride	58		5.0	4.5	ug/L	5		8260C	Total/NA
Field pH	7.78				SU	1		Field Sampling	Total/NA

Client Sample ID: WC-SOIL — Lab Sample ID: 480-228240-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.0056	J	0.010	0.0046	mg/L	10		8260C	TCLP
Chloroform	0.65	J vs B	5.9	0.37	ug/Kg	1	☼	8260C	Total/NA
cis-1,2-Dichloroethene	8.8	vs	5.9	0.76	ug/Kg	1	☼	8260C	Total/NA
trans-1,2-Dichloroethene	1.2	J vs	5.9	0.61	ug/Kg	1	☼	8260C	Total/NA
Trichloroethene	11	vs	5.9	1.3	ug/Kg	1	☼	8260C	Total/NA
Di-n-octyl phthalate	28	J	200	24	ug/Kg	1	☼	8270D	Total/NA
gamma-BHC (Lindane)	0.000079	J B	0.00020	0.0000060	mg/L	1		8081B	TCLP
Methoxychlor	0.00015	J B	0.00020	0.000014	mg/L	1		8081B	TCLP

This Detection Summary does not include radiochemical test results.

Client Sample ID: WC-SOIL (Continued)
Lab Sample ID: 480-228240-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0060	J	0.015	0.0056	mg/L	1		6010D	TCLP
Barium	0.19	J	1.0	0.10	mg/L	1		6010D	TCLP
Copper	0.022		0.010	0.0016	mg/L	1		6010D	TCLP
Nickel	0.0088	J ^5-	0.010	0.0013	mg/L	1		6010D	TCLP
Flashpoint	>180		50.0	50.0	Degrees F	1		1010B	Total/NA
pH	6.1	HF	0.1	0.1	SU	1		9045D	Total/NA
Temperature	17.3	HF	0.001	0.001	Degrees C	1		9045D	Total/NA

Client Sample ID: PZ-4
Date Collected: 03/26/25 10:50
Date Received: 03/28/25 08:30

Lab Sample ID: 480-228240-1
Matrix: Water

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	20	U	20	5.8	ug/L			03/28/25 17:03	20
4-Methyl-2-pentanone (MIBK)	100	U	100	42	ug/L			03/28/25 17:03	20
Acetone	200	U	200	60	ug/L			03/28/25 17:03	20
Benzene	20	U	20	8.2	ug/L			03/28/25 17:03	20
Chloroform	20	U	20	6.8	ug/L			03/28/25 17:03	20
cis-1,2-Dichloroethene	**1200**		20	16	ug/L			03/28/25 17:03	20
Tetrachloroethene	20	U	20	7.2	ug/L			03/28/25 17:03	20
Toluene	**18**	**J**	20	10	ug/L			03/28/25 17:03	20
trans-1,2-Dichloroethene	**270**		20	18	ug/L			03/28/25 17:03	20
Trichloroethene	20	U	20	9.2	ug/L			03/28/25 17:03	20
Vinyl chloride	**73**		20	18	ug/L			03/28/25 17:03	20
Xylenes, Total	40	U	40	13	ug/L			03/28/25 17:03	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*77 - 120*		*03/28/25 17:03*	*20*
Dibromofluoromethane (Surr)	*95*		*75 - 123*		*03/28/25 17:03*	*20*
Toluene-d8 (Surr)	*96*		*80 - 120*		*03/28/25 17:03*	*20*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**1.7**	**J**	7.5	1.5	ug/L			03/31/25 09:47	1
Ethene	**1.5**	**J**	7.0	1.5	ug/L			03/31/25 09:47	1

Method: RSK-175 - Dissolved Gases (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**840**		88	22	ug/L			03/31/25 11:59	22

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**0.92**		0.050	0.019	mg/L		03/29/25 09:42	04/01/25 17:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (EPA 300.0)	**4.2**		2.0	0.35	mg/L			03/28/25 22:41	1
Total Organic Carbon (SW846 9060A)	**4.6**		1.0	0.43	mg/L			03/29/25 00:22	1

Client: Arcadis U.S., Inc.
Job ID: 480-228240-1
Project/Site: BMS Krutulis GW Sampling Project

Client Sample ID: PZ-3
Lab Sample ID: 480-228240-2
Date Collected: 03/26/25 11:00
Matrix: Water
Date Received: 03/28/25 08:30

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	10	U	10	2.9	ug/L			03/28/25 17:25	10
4-Methyl-2-pentanone (MIBK)	50	U	50	21	ug/L			03/28/25 17:25	10
Acetone	100	U	100	30	ug/L			03/28/25 17:25	10
Benzene	10	U	10	4.1	ug/L			03/28/25 17:25	10
Chloroform	10	U	10	3.4	ug/L			03/28/25 17:25	10
cis-1,2-Dichloroethene	**100**		10	8.1	ug/L			03/28/25 17:25	10
Tetrachloroethene	10	U	10	3.6	ug/L			03/28/25 17:25	10
Toluene	10	U	10	5.1	ug/L			03/28/25 17:25	10
trans-1,2-Dichloroethene	**69**		10	9.0	ug/L			03/28/25 17:25	10
Trichloroethene	**450**		10	4.6	ug/L			03/28/25 17:25	10
Vinyl chloride	10	U	10	9.0	ug/L			03/28/25 17:25	10
Xylenes, Total	20	U	20	6.6	ug/L			03/28/25 17:25	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*77 - 120*		*03/28/25 17:25*	*10*
Dibromofluoromethane (Surr)	*101*		*75 - 123*		*03/28/25 17:25*	*10*
Toluene-d8 (Surr)	*97*		*80 - 120*		*03/28/25 17:25*	*10*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**3.0**	**J**	7.5	1.5	ug/L			03/31/25 10:06	1
Ethene	7.0	U	7.0	1.5	ug/L			03/31/25 10:06	1

Method: RSK-175 - Dissolved Gases (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**6600**		88	22	ug/L			03/31/25 12:18	22

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**0.18**		0.050	0.019	mg/L		03/29/25 09:42	04/01/25 17:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (EPA 300.0)	**9.1**		2.0	0.35	mg/L			03/28/25 22:55	1
Total Organic Carbon (SW846 9060A)	**0.52**	**J**	1.0	0.43	mg/L			03/29/25 00:52	1

Client Sample ID: PZ-2
Lab Sample ID: 480-228240-3
Date Collected: 03/26/25 12:20
Matrix: Water
Date Received: 03/28/25 08:30

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	100	U	100	29	ug/L			03/31/25 18:55	100
4-Methyl-2-pentanone (MIBK)	500	U	500	210	ug/L			03/31/25 18:55	100
Acetone	1000	U	1000	300	ug/L			03/31/25 18:55	100
Benzene	100	U	100	41	ug/L			03/31/25 18:55	100
Chloroform	100	U	100	34	ug/L			03/31/25 18:55	100
cis-1,2-Dichloroethene	**3500**		100	81	ug/L			03/31/25 18:55	100
Tetrachloroethene	100	U	100	36	ug/L			03/31/25 18:55	100
Toluene	100	U	100	51	ug/L			03/31/25 18:55	100
trans-1,2-Dichloroethene	**290**		100	90	ug/L			03/31/25 18:55	100
Trichloroethene	**92**	**J**	100	46	ug/L			03/31/25 18:55	100
Vinyl chloride	**100**		100	90	ug/L			03/31/25 18:55	100
Xylenes, Total	200	U	200	66	ug/L			03/31/25 18:55	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*77 - 120*		*03/31/25 18:55*	*100*
Dibromofluoromethane (Surr)	*100*		*75 - 123*		*03/31/25 18:55*	*100*
Toluene-d8 (Surr)	*97*		*80 - 120*		*03/31/25 18:55*	*100*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	7.5	U	7.5	1.5	ug/L			03/31/25 10:25	1
Ethene	**2.5**	**J**	7.0	1.5	ug/L			03/31/25 10:25	1

Method: RSK-175 - Dissolved Gases (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**3800**		88	22	ug/L			03/31/25 12:37	22

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**0.80**		0.050	0.019	mg/L		03/29/25 09:42	04/01/25 17:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (EPA 300.0)	**5.7**		2.0	0.35	mg/L			03/28/25 23:10	1
Total Organic Carbon (SW846 9060A)	**23.8**		1.0	0.43	mg/L			03/29/25 01:21	1

Client Sample ID: PZ-1
Lab Sample ID: 480-228240-4

Date Collected: 03/26/25 12:35
Matrix: Water
Date Received: 03/28/25 08:30

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			03/31/25 19:19	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			03/31/25 19:19	1
Acetone	10	U	10	3.0	ug/L			03/31/25 19:19	1
Benzene	1.0	U	1.0	0.41	ug/L			03/31/25 19:19	1
Chloroform	1.0	U	1.0	0.34	ug/L			03/31/25 19:19	1
cis-1,2-Dichloroethene	**58**		1.0	0.81	ug/L			03/31/25 19:19	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			03/31/25 19:19	1
Toluene	1.0	U	1.0	0.51	ug/L			03/31/25 19:19	1
trans-1,2-Dichloroethene	**2.9**		1.0	0.90	ug/L			03/31/25 19:19	1
Trichloroethene	**8.3**		1.0	0.46	ug/L			03/31/25 19:19	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			03/31/25 19:19	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			03/31/25 19:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*77 - 120*		*03/31/25 19:19*	*1*
Dibromofluoromethane (Surr)	*100*		*75 - 123*		*03/31/25 19:19*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*03/31/25 19:19*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**29**		7.5	1.5	ug/L			03/31/25 10:44	1
Ethene	7.0	U	7.0	1.5	ug/L			03/31/25 10:44	1

Method: RSK-175 - Dissolved Gases (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**28000**		880	220	ug/L			03/31/25 13:52	220

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**0.81**		0.050	0.019	mg/L		03/29/25 09:42	04/01/25 17:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (EPA 300.0)	**7.2**		2.0	0.35	mg/L			03/31/25 15:48	1
Total Organic Carbon (SW846 9060A)	**23.0**		1.0	0.43	mg/L			03/29/25 01:49	1

Client Sample ID: MW-3D
Date Collected: 03/27/25 10:05
Date Received: 03/28/25 08:30

Lab Sample ID: 480-228240-5
Matrix: Water

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	4.0	U	4.0	1.2	ug/L			03/28/25 18:33	4
4-Methyl-2-pentanone (MIBK)	20	U	20	8.4	ug/L			03/28/25 18:33	4
Acetone	40	U	40	12	ug/L			03/28/25 18:33	4
Benzene	4.0	U	4.0	1.6	ug/L			03/28/25 18:33	4
Chloroform	4.0	U	4.0	1.4	ug/L			03/28/25 18:33	4
cis-1,2-Dichloroethene	**84**		4.0	3.2	ug/L			03/28/25 18:33	4
Tetrachloroethene	4.0	U	4.0	1.4	ug/L			03/28/25 18:33	4
Toluene	4.0	U	4.0	2.0	ug/L			03/28/25 18:33	4
trans-1,2-Dichloroethene	**17**		4.0	3.6	ug/L			03/28/25 18:33	4
Trichloroethene	4.0	U	4.0	1.8	ug/L			03/28/25 18:33	4
Vinyl chloride	**32**		4.0	3.6	ug/L			03/28/25 18:33	4
Xylenes, Total	8.0	U	8.0	2.6	ug/L			03/28/25 18:33	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*77 - 120*		*03/28/25 18:33*	*4*
Dibromofluoromethane (Surr)	*105*		*75 - 123*		*03/28/25 18:33*	*4*
Toluene-d8 (Surr)	*97*		*80 - 120*		*03/28/25 18:33*	*4*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**3.8**	**J**	7.5	1.5	ug/L			03/31/25 11:03	1
Ethene	**2.0**	**J**	7.0	1.5	ug/L			03/31/25 11:03	1

Method: RSK-175 - Dissolved Gases (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**6400**		88	22	ug/L			03/31/25 13:15	22

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**0.17**		0.050	0.019	mg/L		03/29/25 09:42	04/01/25 17:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (EPA 300.0)	**6.4**		2.0	0.35	mg/L			03/31/25 16:03	1
Total Organic Carbon (SW846 9060A)	**1.1**		1.0	0.43	mg/L			03/29/25 02:18	1

Client: Arcadis U.S., Inc.
Job ID: 480-228240-1
Project/Site: BMS Krutulis GW Sampling Project

Client Sample ID: MW-3S
Date Collected: 03/27/25 10:10
Date Received: 03/28/25 08:30

Lab Sample ID: 480-228240-6
Matrix: Water

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	50	U	50	15	ug/L			03/31/25 19:43	50
4-Methyl-2-pentanone (MIBK)	250	U	250	110	ug/L			03/31/25 19:43	50
Acetone	500	U	500	150	ug/L			03/31/25 19:43	50
Benzene	50	U	50	21	ug/L			03/31/25 19:43	50
Chloroform	50	U	50	17	ug/L			03/31/25 19:43	50
cis-1,2-Dichloroethene	**2400**		50	41	ug/L			03/31/25 19:43	50
Tetrachloroethene	50	U	50	18	ug/L			03/31/25 19:43	50
Toluene	50	U	50	26	ug/L			03/31/25 19:43	50
trans-1,2-Dichloroethene	**84**		50	45	ug/L			03/31/25 19:43	50
Trichloroethene	50	U	50	23	ug/L			03/31/25 19:43	50
Vinyl chloride	**1600**		50	45	ug/L			03/31/25 19:43	50
Xylenes, Total	100	U	100	33	ug/L			03/31/25 19:43	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*77 - 120*		*03/31/25 19:43*	*50*
Dibromofluoromethane (Surr)	*102*		*75 - 123*		*03/31/25 19:43*	*50*
Toluene-d8 (Surr)	*97*		*80 - 120*		*03/31/25 19:43*	*50*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**6.5**	**J**	7.5	1.5	ug/L			03/31/25 11:22	1
Ethene	**220**		7.0	1.5	ug/L			03/31/25 11:22	1

Method: RSK-175 - Dissolved Gases (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**6600**		88	22	ug/L			03/31/25 13:34	22

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**2.2**		0.050	0.019	mg/L		03/29/25 09:42	04/01/25 17:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (EPA 300.0)	**5.0**		2.0	0.35	mg/L			03/31/25 16:17	1
Total Organic Carbon (SW846 9060A)	**32.4**		1.0	0.43	mg/L			03/29/25 06:40	1

Client: Arcadis U.S., Inc.
Job ID: 480-228240-1
Project/Site: BMS Krutulis GW Sampling Project

Client Sample ID: MW-7
Date Collected: 03/27/25 11:56
Date Received: 03/28/25 08:30

Lab Sample ID: 480-228240-7
Matrix: Water

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			03/31/25 20:07	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			03/31/25 20:07	1
Acetone	10	U	10	3.0	ug/L			03/31/25 20:07	1
Benzene	1.0	U	1.0	0.41	ug/L			03/31/25 20:07	1
Chloroform	1.0	U	1.0	0.34	ug/L			03/31/25 20:07	1
cis-1,2-Dichloroethene	**0.82**	**J**	1.0	0.81	ug/L			03/31/25 20:07	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			03/31/25 20:07	1
Toluene	1.0	U	1.0	0.51	ug/L			03/31/25 20:07	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			03/31/25 20:07	1
Trichloroethene	**2.0**		1.0	0.46	ug/L			03/31/25 20:07	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			03/31/25 20:07	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			03/31/25 20:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*77 - 120*		*03/31/25 20:07*	*1*
Dibromofluoromethane (Surr)	*103*		*75 - 123*		*03/31/25 20:07*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*03/31/25 20:07*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**73**		4.0	1.0	ug/L			03/31/25 11:40	1
Ethane	7.5	U	7.5	1.5	ug/L			03/31/25 11:40	1
Ethene	7.0	U	7.0	1.5	ug/L			03/31/25 11:40	1

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	0.050	U	0.050	0.019	mg/L		03/29/25 09:42	04/01/25 17:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (EPA 300.0)	**10.8**		2.0	0.35	mg/L			03/31/25 16:32	1
Total Organic Carbon (SW846 9060A)	**0.60**	**J**	1.0	0.43	mg/L			03/29/25 07:09	1

Client: Arcadis U.S., Inc.
Job ID: 480-228240-1
Project/Site: BMS Krutulis GW Sampling Project

Client Sample ID: TRIP BLANK
Lab Sample ID: 480-228240-8
Date Collected: 03/27/25 00:00
Matrix: Water
Date Received: 03/28/25 08:30

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			03/31/25 20:31	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			03/31/25 20:31	1
Acetone	10	U	10	3.0	ug/L			03/31/25 20:31	1
Benzene	1.0	U	1.0	0.41	ug/L			03/31/25 20:31	1
Chloroform	1.0	U	1.0	0.34	ug/L			03/31/25 20:31	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			03/31/25 20:31	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			03/31/25 20:31	1
Toluene	1.0	U	1.0	0.51	ug/L			03/31/25 20:31	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			03/31/25 20:31	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			03/31/25 20:31	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			03/31/25 20:31	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			03/31/25 20:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*77 - 120*		*03/31/25 20:31*	*1*
Dibromofluoromethane (Surr)	*102*		*75 - 123*		*03/31/25 20:31*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*03/31/25 20:31*	*1*

Client: Arcadis U.S., Inc.
Job ID: 480-228240-1
Project/Site: BMS Krutulis GW Sampling Project

Client Sample ID: WC-WATER
Lab Sample ID: 480-228240-9

Date Collected: 03/27/25 12:10
Matrix: Water
Date Received: 03/28/25 08:30

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	5.0	U	5.0	4.1	ug/L			04/01/25 04:31	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1.1	ug/L			04/01/25 04:31	5
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	1.6	ug/L			04/01/25 04:31	5
1,1,2-Trichloroethane	5.0	U	5.0	1.2	ug/L			04/01/25 04:31	5
1,1-Dichloroethane	5.0	U	5.0	1.9	ug/L			04/01/25 04:31	5
1,1-Dichloroethene	5.0	U	5.0	1.5	ug/L			04/01/25 04:31	5
1,2,4-Trichlorobenzene	5.0	U	5.0	2.1	ug/L			04/01/25 04:31	5
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	2.0	ug/L			04/01/25 04:31	5
1,2-Dibromoethane	5.0	U	5.0	3.7	ug/L			04/01/25 04:31	5
1,2-Dichlorobenzene	5.0	U	5.0	4.0	ug/L			04/01/25 04:31	5
1,2-Dichloroethane	5.0	U	5.0	1.1	ug/L			04/01/25 04:31	5
1,2-Dichloropropane	5.0	U	5.0	3.6	ug/L			04/01/25 04:31	5
1,3-Dichlorobenzene	5.0	U	5.0	3.9	ug/L			04/01/25 04:31	5
1,4-Dichlorobenzene	5.0	U	5.0	4.2	ug/L			04/01/25 04:31	5
2-Butanone (MEK)	50	U	50	6.6	ug/L			04/01/25 04:31	5
2-Hexanone	25	U	25	6.2	ug/L			04/01/25 04:31	5
4-Methyl-2-pentanone (MIBK)	25	U	25	11	ug/L			04/01/25 04:31	5
Acetone	50	U	50	15	ug/L			04/01/25 04:31	5
Benzene	5.0	U	5.0	2.1	ug/L			04/01/25 04:31	5
Bromodichloromethane	5.0	U	5.0	2.0	ug/L			04/01/25 04:31	5
Bromoform	5.0	U	5.0	1.3	ug/L			04/01/25 04:31	5
Bromomethane	5.0	U	5.0	3.5	ug/L			04/01/25 04:31	5
Carbon disulfide	5.0	U	5.0	0.95	ug/L			04/01/25 04:31	5
Carbon tetrachloride	5.0	U	5.0	1.4	ug/L			04/01/25 04:31	5
Chlorobenzene	5.0	U	5.0	3.8	ug/L			04/01/25 04:31	5
Chloroethane	5.0	U	5.0	1.6	ug/L			04/01/25 04:31	5
Chloroform	5.0	U	5.0	1.7	ug/L			04/01/25 04:31	5
Chloromethane	5.0	U	5.0	1.8	ug/L			04/01/25 04:31	5
cis-1,2-Dichloroethene	**270**		5.0	4.1	ug/L			04/01/25 04:31	5
cis-1,3-Dichloropropene	5.0	U	5.0	1.8	ug/L			04/01/25 04:31	5
Cyclohexane	5.0	U	5.0	0.90	ug/L			04/01/25 04:31	5
Dibromochloromethane	5.0	U	5.0	1.6	ug/L			04/01/25 04:31	5
Dichlorodifluoromethane	5.0	U	5.0	3.4	ug/L			04/01/25 04:31	5
Ethylbenzene	5.0	U	5.0	3.7	ug/L			04/01/25 04:31	5
Isopropylbenzene	5.0	U	5.0	4.0	ug/L			04/01/25 04:31	5
Methyl acetate	13	U	13	6.5	ug/L			04/01/25 04:31	5
Methyl tert-butyl ether	5.0	U	5.0	0.80	ug/L			04/01/25 04:31	5
Methylcyclohexane	5.0	U	5.0	0.80	ug/L			04/01/25 04:31	5
Methylene Chloride	5.0	U	5.0	2.2	ug/L			04/01/25 04:31	5
Styrene	5.0	U	5.0	3.7	ug/L			04/01/25 04:31	5
Tetrachloroethene	5.0	U	5.0	1.8	ug/L			04/01/25 04:31	5
Toluene	5.0	U	5.0	2.6	ug/L			04/01/25 04:31	5
trans-1,2-Dichloroethene	**23**		5.0	4.5	ug/L			04/01/25 04:31	5
trans-1,3-Dichloropropene	5.0	U	5.0	1.9	ug/L			04/01/25 04:31	5
Trichloroethene	**7.5**		5.0	2.3	ug/L			04/01/25 04:31	5
Trichlorofluoromethane	5.0	U	5.0	4.4	ug/L			04/01/25 04:31	5
Vinyl chloride	**58**		5.0	4.5	ug/L			04/01/25 04:31	5
Xylenes, Total	10	U	10	3.3	ug/L			04/01/25 04:31	5

Client: Arcadis U.S., Inc.
Job ID: 480-228240-1
Project/Site: BMS Krutulis GW Sampling Project

Client Sample ID: WC-WATER
Lab Sample ID: 480-228240-9

Date Collected: 03/27/25 12:10
Matrix: Water
Date Received: 03/28/25 08:30

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*77 - 120*		*04/01/25 04:31*	*5*
4-Bromofluorobenzene (Surr)	*94*		*73 - 120*		*04/01/25 04:31*	*5*
Dibromofluoromethane (Surr)	*108*		*75 - 123*		*04/01/25 04:31*	*5*
Toluene-d8 (Surr)	*97*		*80 - 120*		*04/01/25 04:31*	*5*

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**7.78**				SU			03/27/25 12:10	1

Client Sample ID: WC-SOIL
Date Collected: 03/27/25 12:00
Date Received: 03/28/25 08:30

Lab Sample ID: 480-228240-10
Matrix: Solid
Percent Solids: 81.5

Method: SW846 8260C - TCLP Volatiles - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.010	U	0.010	0.0029	mg/L			04/02/25 15:37	10
1,2-Dichloroethane	0.010	U	0.010	0.0021	mg/L			04/02/25 15:37	10
2-Butanone (MEK)	0.050	U	0.050	0.013	mg/L			04/02/25 15:37	10
Benzene	0.010	U	0.010	0.0041	mg/L			04/02/25 15:37	10
Carbon tetrachloride	0.010	U	0.010	0.0027	mg/L			04/02/25 15:37	10
Chlorobenzene	0.010	U	0.010	0.0075	mg/L			04/02/25 15:37	10
Chloroform	0.010	U	0.010	0.0034	mg/L			04/02/25 15:37	10
Tetrachloroethene	0.010	U	0.010	0.0036	mg/L			04/02/25 15:37	10
Trichloroethene	**0.0056**	**J**	0.010	0.0046	mg/L			04/02/25 15:37	10
Vinyl chloride	0.010	U	0.010	0.0090	mg/L			04/02/25 15:37	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*77 - 120*		*04/02/25 15:37*	*10*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*04/02/25 15:37*	*10*
Dibromofluoromethane (Surr)	*101*		*75 - 123*		*04/02/25 15:37*	*10*
Toluene-d8 (Surr)	*96*		*80 - 120*		*04/02/25 15:37*	*10*

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	5.9	U vs	5.9	0.43	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
1,1,2,2-Tetrachloroethane	5.9	U vs	5.9	0.96	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
1,1,2-Trichloro-1,2,2-trifluoroethane	5.9	U vs	5.9	1.4	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
1,1,2-Trichloroethane	5.9	U vs	5.9	0.77	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
1,1-Dichloroethane	5.9	U vs	5.9	0.72	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
1,1-Dichloroethene	5.9	U vs	5.9	0.73	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
1,2,4-Trichlorobenzene	5.9	U vs	5.9	0.36	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
1,2-Dibromo-3-Chloropropane	5.9	U vs	5.9	3.0	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
1,2-Dibromoethane	5.9	U vs	5.9	0.76	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
1,2-Dichlorobenzene	5.9	U vs	5.9	0.46	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
1,2-Dichloroethane	5.9	U vs	5.9	0.30	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
1,2-Dichloropropane	5.9	U vs	5.9	3.0	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
1,3-Dichlorobenzene	5.9	U vs	5.9	0.31	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
1,4-Dichlorobenzene	5.9	U vs	5.9	0.83	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
2-Butanone (MEK)	30	U vs	30	2.2	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
2-Hexanone	30	U vs	30	3.0	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
4-Methyl-2-pentanone (MIBK)	30	U vs	30	1.9	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Acetone	30	U vs	30	5.0	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Benzene	5.9	U vs	5.9	0.29	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Bromodichloromethane	5.9	U vs	5.9	0.80	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Bromoform	5.9	U vs	5.9	3.0	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Bromomethane	5.9	U vs	5.9	0.53	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Carbon disulfide	5.9	U vs	5.9	3.0	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Carbon tetrachloride	5.9	U vs	5.9	0.57	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Chlorobenzene	5.9	U vs	5.9	0.78	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Chloroethane	5.9	U vs	5.9	1.3	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Chloroform	**0.65**	**J vs B**	5.9	0.37	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Chloromethane	5.9	U vs	5.9	0.36	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
cis-1,2-Dichloroethene	**8.8**	**vs**	5.9	0.76	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
cis-1,3-Dichloropropene	5.9	U vs	5.9	0.85	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Cyclohexane	5.9	U vs	5.9	0.83	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1

Client Sample ID: WC-SOIL
Date Collected: 03/27/25 12:00
Date Received: 03/28/25 08:30

Lab Sample ID: 480-228240-10
Matrix: Solid
Percent Solids: 81.5

Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	5.9	U vs	5.9	0.76	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Dichlorodifluoromethane	5.9	U vs	5.9	0.49	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Ethylbenzene	5.9	U vs	5.9	0.41	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Isopropylbenzene	5.9	U vs	5.9	0.90	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Methyl acetate	30	U vs	30	3.6	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Methyl tert-butyl ether	5.9	U vs	5.9	0.58	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Methylcyclohexane	5.9	U vs	5.9	0.90	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Methylene Chloride	5.9	U vs	5.9	2.7	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Styrene	5.9	U vs	5.9	0.30	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Tetrachloroethene	5.9	U vs	5.9	0.80	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Toluene	5.9	U vs	5.9	0.45	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
trans-1,2-Dichloroethene	**1.2**	**J vs**	5.9	0.61	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
trans-1,3-Dichloropropene	5.9	U vs	5.9	2.6	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Trichloroethene	**11**	**vs**	5.9	1.3	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Trichlorofluoromethane	5.9	U vs	5.9	0.56	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Vinyl chloride	5.9	U vs	5.9	0.72	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1
Xylenes, Total	12	U vs	12	1.0	ug/Kg	☼	03/29/25 07:04	03/29/25 17:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*64 - 126*	*03/29/25 07:04*	*03/29/25 17:35*	*1*
4-Bromofluorobenzene (Surr)	*87*		*72 - 126*	*03/29/25 07:04*	*03/29/25 17:35*	*1*
Dibromofluoromethane (Surr)	*102*		*60 - 140*	*03/29/25 07:04*	*03/29/25 17:35*	*1*
Toluene-d8 (Surr)	*99*		*71 - 125*	*03/29/25 07:04*	*03/29/25 17:35*	*1*

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	200	U	200	55	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
2,4,6-Trichlorophenol	200	U	200	41	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
2,4-Dichlorophenol	200	U	200	22	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
2,4-Dimethylphenol	200	U	200	49	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
2,4-Dinitrophenol	2000	U	2000	940	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
2,4-Dinitrotoluene	200	U	200	42	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
2,6-Dinitrotoluene	200	U	200	24	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
2-Chloronaphthalene	200	U	200	34	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
2-Chlorophenol	400	U	400	37	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
2-Methylnaphthalene	200	U	200	41	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
2-Methylphenol	200	U	200	24	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
2-Nitroaniline	400	U	400	30	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
2-Nitrophenol	200	U	200	58	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
3,3'-Dichlorobenzidine	400	U	400	240	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
3-Nitroaniline	400	U	400	57	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
4,6-Dinitro-2-methylphenol	400	U	400	200	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
4-Bromophenyl phenyl ether	200	U	200	29	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
4-Chloro-3-methylphenol	200	U	200	51	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
4-Chloroaniline	200	U	200	51	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
4-Chlorophenyl phenyl ether	200	U	200	25	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
4-Methylphenol	400	U	400	24	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
4-Nitroaniline	400	U	400	110	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
4-Nitrophenol	400	U	400	140	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Acenaphthene	200	U	200	30	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1

Client Sample ID: WC-SOIL
Lab Sample ID: 480-228240-10
Date Collected: 03/27/25 12:00
Matrix: Solid
Date Received: 03/28/25 08:30
Percent Solids: 81.5

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	200	U	200	26	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Acetophenone	200	U	200	28	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Anthracene	200	U	200	51	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Atrazine	200	U	200	71	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Benzaldehyde	200	U	200	160	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Benzo[a]anthracene	200	U	200	20	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Benzo[a]pyrene	200	U	200	30	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Benzo[b]fluoranthene	200	U	200	33	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Benzo[g,h,i]perylene	200	U	200	22	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Benzo[k]fluoranthene	200	U	200	26	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Biphenyl	200	U	200	30	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
bis (2-chloroisopropyl) ether	200	U	200	41	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Bis(2-chloroethoxy)methane	200	U	200	43	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Bis(2-chloroethyl)ether	200	U	200	26	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Bis(2-ethylhexyl) phthalate	200	U	200	70	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Butyl benzyl phthalate	200	U	200	34	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Caprolactam	200	U	200	61	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Carbazole	200	U	200	24	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Chrysene	200	U	200	46	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Dibenz(a,h)anthracene	200	U	200	36	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Dibenzofuran	200	U	200	24	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Diethyl phthalate	200	U	200	26	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Dimethyl phthalate	200	U	200	24	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Di-n-butyl phthalate	200	U	200	35	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Di-n-octyl phthalate	**28**	**J**	200	24	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Fluoranthene	200	U	200	22	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Fluorene	200	U	200	24	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Hexachlorobenzene	200	U	200	28	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Hexachlorobutadiene	200	U	200	30	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Hexachlorocyclopentadiene	200	U	200	28	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Hexachloroethane	200	U	200	26	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Indeno[1,2,3-cd]pyrene	200	U	200	25	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Isophorone	200	U	200	43	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Naphthalene	200	U	200	26	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Nitrobenzene	200	U	200	23	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
N-Nitrosodi-n-propylamine	200	U	200	35	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
N-Nitrosodiphenylamine	200	U	200	170	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Pentachlorophenol	400	U	400	200	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Phenanthrene	200	U	200	30	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Phenol	200	U	200	31	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1
Pyrene	200	U	200	24	ug/Kg	☼	03/31/25 06:36	04/01/25 20:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*96*		*26 - 143*	*03/31/25 06:36*	*04/01/25 20:43*	*1*
2-Fluorobiphenyl (Surr)	*75*		*50 - 121*	*03/31/25 06:36*	*04/01/25 20:43*	*1*
2-Fluorophenol (Surr)	*64*		*36 - 120*	*03/31/25 06:36*	*04/01/25 20:43*	*1*
Nitrobenzene-d5 (Surr)	*69*		*40 - 121*	*03/31/25 06:36*	*04/01/25 20:43*	*1*
Phenol-d5 (Surr)	*74*		*41 - 120*	*03/31/25 06:36*	*04/01/25 20:43*	*1*
p-Terphenyl-d14 (Surr)	*88*		*46 - 143*	*03/31/25 06:36*	*04/01/25 20:43*	*1*

Client Sample ID: WC-SOIL
Date Collected: 03/27/25 12:00
Date Received: 03/28/25 08:30

Lab Sample ID: 480-228240-10
Matrix: Solid
Percent Solids: 81.5

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.040	U	0.040	0.0018	mg/L		04/02/25 13:37	04/03/25 14:15	1
2,4,5-Trichlorophenol	0.020	U	0.020	0.0019	mg/L		04/02/25 13:37	04/03/25 14:15	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.0024	mg/L		04/02/25 13:37	04/03/25 14:15	1
2,4-Dinitrotoluene	0.020	U	0.020	0.0017	mg/L		04/02/25 13:37	04/03/25 14:15	1
2-Methylphenol	0.020	U	0.020	0.0016	mg/L		04/02/25 13:37	04/03/25 14:15	1
3-Methylphenol	0.040	U	0.040	0.0016	mg/L		04/02/25 13:37	04/03/25 14:15	1
4-Methylphenol	0.040	U	0.040	0.0014	mg/L		04/02/25 13:37	04/03/25 14:15	1
Hexachlorobenzene	0.020	U	0.020	0.0020	mg/L		04/02/25 13:37	04/03/25 14:15	1
Hexachlorobutadiene	0.020	U	0.020	0.0027	mg/L		04/02/25 13:37	04/03/25 14:15	1
Hexachloroethane	0.020	U	0.020	0.0023	mg/L		04/02/25 13:37	04/03/25 14:15	1
Nitrobenzene	0.020	U	0.020	0.0011	mg/L		04/02/25 13:37	04/03/25 14:15	1
Pentachlorophenol	0.040	U	0.040	0.0088	mg/L		04/02/25 13:37	04/03/25 14:15	1
Pyridine	0.10	U	0.10	0.0016	mg/L		04/02/25 13:37	04/03/25 14:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*100*		*25 - 144*	*04/02/25 13:37*	*04/03/25 14:15*	*1*
2-Fluorobiphenyl (Surr)	*97*		*53 - 126*	*04/02/25 13:37*	*04/03/25 14:15*	*1*
2-Fluorophenol (Surr)	*54*		*24 - 120*	*04/02/25 13:37*	*04/03/25 14:15*	*1*
Nitrobenzene-d5 (Surr)	*93*		*29 - 129*	*04/02/25 13:37*	*04/03/25 14:15*	*1*
Phenol-d5 (Surr)	*39*		*10 - 120*	*04/02/25 13:37*	*04/03/25 14:15*	*1*
p-Terphenyl-d14 (Surr)	*99*		*33 - 132*	*04/02/25 13:37*	*04/03/25 14:15*	*1*

Method: SW846 8081B - Organochlorine Pesticides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0.0020	U	0.0020	0.000029	mg/L		04/02/25 13:29	04/03/25 11:41	1
Endrin	0.00020	U	0.00020	0.000014	mg/L		04/02/25 13:29	04/03/25 11:41	1
gamma-BHC (Lindane)	**0.000079**	**J B**	0.00020	0.0000060	mg/L		04/02/25 13:29	04/03/25 11:41	1
Heptachlor	0.00020	U	0.00020	0.0000085	mg/L		04/02/25 13:29	04/03/25 11:41	1
Heptachlor epoxide	0.00020	U	0.00020	0.0000053	mg/L		04/02/25 13:29	04/03/25 11:41	1
Methoxychlor	**0.00015**	**J B**	0.00020	0.000014	mg/L		04/02/25 13:29	04/03/25 11:41	1
Toxaphene	0.0020	U	0.0020	0.00012	mg/L		04/02/25 13:29	04/03/25 11:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*94*		*10 - 120*	*04/02/25 13:29*	*04/03/25 11:41*	*1*
DCB Decachlorobiphenyl	*81*		*10 - 120*	*04/02/25 13:29*	*04/03/25 11:41*	*1*
Tetrachloro-m-xylene	*68*		*10 - 120*	*04/02/25 13:29*	*04/03/25 11:41*	*1*
Tetrachloro-m-xylene	*52*		*10 - 120*	*04/02/25 13:29*	*04/03/25 11:41*	*1*

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.20	U	0.20	0.039	mg/Kg		03/31/25 06:44	03/31/25 15:11	1
PCB-1221	0.20	U	0.20	0.039	mg/Kg		03/31/25 06:44	03/31/25 15:11	1
PCB-1232	0.20	U	0.20	0.039	mg/Kg		03/31/25 06:44	03/31/25 15:11	1
PCB-1242	0.20	U	0.20	0.039	mg/Kg		03/31/25 06:44	03/31/25 15:11	1
PCB-1248	0.20	U	0.20	0.039	mg/Kg		03/31/25 06:44	03/31/25 15:11	1
PCB-1254	0.20	U	0.20	0.094	mg/Kg		03/31/25 06:44	03/31/25 15:11	1
PCB-1260	0.20	U	0.20	0.094	mg/Kg		03/31/25 06:44	03/31/25 15:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*98*		*60 - 154*	*03/31/25 06:44*	*03/31/25 15:11*	*1*
Tetrachloro-m-xylene	*106*		*60 - 154*	*03/31/25 06:44*	*03/31/25 15:11*	*1*

Client Sample ID: WC-SOIL
Lab Sample ID: 480-228240-10

Date Collected: 03/27/25 12:00
Matrix: Solid

Date Received: 03/28/25 08:30
Percent Solids: 81.5

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*100*		*65 - 174*	*03/31/25 06:44*	*03/31/25 15:11*	*1*
DCB Decachlorobiphenyl	*106*		*65 - 174*	*03/31/25 06:44*	*03/31/25 15:11*	*1*

Method: SW846 8151 - TCLP Herbicides - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.0020	U	0.0020	0.00040	mg/L		04/02/25 13:24	04/03/25 13:58	1
Silvex (2,4,5-TP)	0.0020	U	0.0020	0.00036	mg/L		04/02/25 13:24	04/03/25 13:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*50*		*21 - 143*	*04/02/25 13:24*	*04/03/25 13:58*	*1*
2,4-Dichlorophenylacetic acid	*48*		*21 - 143*	*04/02/25 13:24*	*04/03/25 13:58*	*1*

Method: SW846 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0060**	**J**	0.015	0.0056	mg/L		04/02/25 08:38	04/02/25 17:09	1
Barium	**0.19**	**J**	1.0	0.10	mg/L		04/02/25 08:38	04/02/25 17:09	1
Beryllium	0.0020	U	0.0020	0.00030	mg/L		04/02/25 08:38	04/02/25 17:09	1
Cadmium	0.0020	U	0.0020	0.00050	mg/L		04/02/25 08:38	04/02/25 17:09	1
Chromium	0.020	U	0.020	0.010	mg/L		04/02/25 08:38	04/02/25 17:09	1
Copper	**0.022**		0.010	0.0016	mg/L		04/02/25 08:38	04/02/25 17:09	1
Lead	0.020	U	0.020	0.0030	mg/L		04/02/25 08:38	04/02/25 17:09	1
Nickel	**0.0088**	**J ^5-**	0.010	0.0013	mg/L		04/02/25 08:38	04/02/25 17:09	1
Selenium	0.025	U	0.025	0.0087	mg/L		04/02/25 08:38	04/02/25 17:09	1
Silver	0.0060	U ^5-	0.0060	0.0017	mg/L		04/02/25 08:38	04/02/25 17:09	1
Zinc	0.050	U	0.050	0.020	mg/L		04/02/25 08:38	04/02/25 17:09	1

Method: SW846 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000042	mg/L		04/02/25 12:07	04/02/25 15:08	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint (SW846 1010B)	**>180**		50.0	50.0	Degrees F			03/28/25 11:38	1
Cyanide, Reactive (SW846 9012)	10	U	10	10	mg/Kg		04/03/25 17:56	04/04/25 15:43	1
Sulfide, Reactive (SW846 9034)	10	U	10	10	mg/Kg		04/03/25 17:56	04/04/25 13:00	1
pH (SW846 9045D)	**6.1**	**HF**	0.1	0.1	SU			04/02/25 09:15	1
Temperature (SW846 9045D)	**17.3**	**HF**	0.001	0.001	Degrees C			04/02/25 09:15	1

Surrogate Summary

Client: Arcadis U.S., Inc.
Project/Site: BMS Krutulis GW Sampling Project

Job ID: 480-228240-1

Method: 8260C - TCLP Volatiles

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(77-120)	(73-120)	(75-123)	(80-120)
LCS 480-742432/6	Lab Control Sample	99	102	101	101
MB 480-742432/8	Method Blank	103	97	104	98

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260C - TCLP Volatiles

Matrix: Solid — **Prep Type: TCLP**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(77-120)	(73-120)	(75-123)	(80-120)
480-228240-10	WC-SOIL	99	95	101	96
LB 480-742331/1-A	Method Blank	103	96	102	97

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(64-126)	(72-126)	(60-140)	(71-125)
480-228240-10	WC-SOIL	108	87	102	99
LCS 480-742122/1-A	Lab Control Sample	103	89	98	101
MB 480-742122/2-A	Method Blank	103	89	98	100

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(77-120)	(75-123)	(80-120)	(73-120)
480-228240-1	PZ-4	102	95	96	
480-228240-2	PZ-3	101	101	97	
480-228240-3	PZ-2	91	100	97	
480-228240-4	PZ-1	92	100	99	
480-228240-5	MW-3D	107	105	97	
480-228240-6	MW-3S	94	102	97	

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(77-120)	(75-123)	(80-120)	(73-120)
480-228240-7	MW-7	93	103	99	
480-228240-8	TRIP BLANK	92	102	96	
480-228240-9	WC-WATER	104	108	97	94
LCS 480-742068/6	Lab Control Sample	98	99	100	
LCS 480-742195/6	Lab Control Sample	95	100	96	
LCS 480-742215/6	Lab Control Sample	99	100	99	98
MB 480-742068/8	Method Blank	102	102	100	
MB 480-742195/8	Method Blank	89	97	96	
MB 480-742215/8	Method Blank	106	103	97	96

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHd14
Lab Sample ID	Client Sample ID	(26-143)	(50-121)	(36-120)	(40-121)	(41-120)	(46-143)
480-228240-10	WC-SOIL	96	75	64	69	74	88
LCS 480-742157/2-A	Lab Control Sample	104	87	89	88	91	94
MB 480-742157/1-A	Method Blank	96	87	79	81	86	94

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHd14
Lab Sample ID	Client Sample ID	(25-144)	(53-126)	(24-120)	(29-129)	(10-120)	(33-132)
LCS 480-742501/2-A	Lab Control Sample	119	101	62	99	46	105
LCSD 480-742501/3-A	Lab Control Sample Dup	112	92	55	90	40	100
MB 480-742501/1-A	Method Blank	101	100	57	92	40	108

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)

Surrogate Summary

Client: Arcadis U.S., Inc. Job ID: 480-228240-1
Project/Site: BMS Krutulis GW Sampling Project

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: TCLP**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHd14
Lab Sample ID	Client Sample ID	(25-144)	(53-126)	(24-120)	(29-129)	(10-120)	(33-132)
480-228240-10	WC-SOIL	100	97	54	93	39	99
LB 480-742325/1-E	Method Blank	109	98	55	94	39	106

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCBP1	DCBP2	TCX1	TCX2
Lab Sample ID	Client Sample ID	(10-120)	(10-120)	(10-120)	(10-120)
LCS 480-742496/2-A	Lab Control Sample	96	87	71	54
LCSD 480-742496/3-A	Lab Control Sample Dup	89	87	65	50
MB 480-742496/1-A	Method Blank	102	95	63	49

Surrogate Legend

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Solid **Prep Type: TCLP**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCBP1	DCBP2	TCX1	TCX2
Lab Sample ID	Client Sample ID	(10-120)	(10-120)	(10-120)	(10-120)
480-228240-10	WC-SOIL	94	81	68	52
LB 480-742325/1-D	Method Blank	85	72	60	49

Surrogate Legend

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TCX1	TCX2	DCBP1	DCBP2
Lab Sample ID	Client Sample ID	(60-154)	(60-154)	(65-174)	(65-174)
480-228240-10	WC-SOIL	98	106	100	106
480-228240-10 MS	WC-SOIL	124	127	130	132
480-228240-10 MSD	WC-SOIL	129	130	135	139
LCS 480-742158/2-A	Lab Control Sample	132	134	132	142
MB 480-742158/1-A	Method Blank	102	115	112	118

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Surrogate Summary

Client: Arcadis U.S., Inc. Job ID: 480-228240-1
Project/Site: BMS Krutulis GW Sampling Project

Method: 8151 - TCLP Herbicides

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCPAA1 (21-143)	DCPAA2 (21-143)
LCS 480-742495/2-A	Lab Control Sample	85	72
LCSD 480-742495/3-A	Lab Control Sample Dup	77	84
MB 480-742495/1-A	Method Blank	74	76

Surrogate Legend

DCPAA = 2,4-Dichlorophenylacetic acid

Method: 8151 - TCLP Herbicides

Matrix: Solid **Prep Type: TCLP**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCPAA1 (21-143)	DCPAA2 (21-143)
480-228240-10	WC-SOIL	50	48
LB 480-742325/1-C	Method Blank	34	37

Surrogate Legend

DCPAA = 2,4-Dichlorophenylacetic acid

Method: 8260C - TCLP Volatiles

Lab Sample ID: MB 480-742432/8
Matrix: Solid
Analysis Batch: 742432

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.0010	U	0.0010	0.00029	mg/L			04/02/25 13:57	1
1,2-Dichloroethane	0.0010	U	0.0010	0.00021	mg/L			04/02/25 13:57	1
2-Butanone (MEK)	0.0050	U	0.0050	0.0013	mg/L			04/02/25 13:57	1
Benzene	0.0010	U	0.0010	0.00041	mg/L			04/02/25 13:57	1
Carbon tetrachloride	0.0010	U	0.0010	0.00027	mg/L			04/02/25 13:57	1
Chlorobenzene	0.0010	U	0.0010	0.00075	mg/L			04/02/25 13:57	1
Chloroform	0.0010	U	0.0010	0.00034	mg/L			04/02/25 13:57	1
Tetrachloroethene	0.0010	U	0.0010	0.00036	mg/L			04/02/25 13:57	1
Trichloroethene	0.0010	U	0.0010	0.00046	mg/L			04/02/25 13:57	1
Vinyl chloride	0.0010	U	0.0010	0.00090	mg/L			04/02/25 13:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*77 - 120*		*04/02/25 13:57*	*1*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*04/02/25 13:57*	*1*
Dibromofluoromethane (Surr)	*104*		*75 - 123*		*04/02/25 13:57*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*04/02/25 13:57*	*1*

Lab Sample ID: LCS 480-742432/6
Matrix: Solid
Analysis Batch: 742432

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	0.0250	0.0301		mg/L		121	66 - 127
1,2-Dichloroethane	0.0250	0.0280		mg/L		112	75 - 120
2-Butanone (MEK)	0.125	0.134		mg/L		107	57 - 140
Benzene	0.0250	0.0276		mg/L		110	71 - 124
Carbon tetrachloride	0.0250	0.0302		mg/L		121	72 - 134
Chlorobenzene	0.0250	0.0279		mg/L		112	80 - 120
Chloroform	0.0250	0.0269		mg/L		107	73 - 127
Tetrachloroethene	0.0250	0.0276		mg/L		110	74 - 122
Trichloroethene	0.0250	0.0286		mg/L		114	74 - 123
Vinyl chloride	0.0250	0.0251		mg/L		100	65 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*77 - 120*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*
Dibromofluoromethane (Surr)	*101*		*75 - 123*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Sample ID: LB 480-742331/1-A
Matrix: Solid
Analysis Batch: 742432

Client Sample ID: Method Blank
Prep Type: TCLP

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.010	U	0.010	0.0029	mg/L			04/02/25 14:21	10
1,2-Dichloroethane	0.010	U	0.010	0.0021	mg/L			04/02/25 14:21	10
2-Butanone (MEK)	0.050	U	0.050	0.013	mg/L			04/02/25 14:21	10
Benzene	0.010	U	0.010	0.0041	mg/L			04/02/25 14:21	10

Method: 8260C - TCLP Volatiles (Continued)

Lab Sample ID: LB 480-742331/1-A
Matrix: Solid
Analysis Batch: 742432

Client Sample ID: Method Blank
Prep Type: TCLP

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.010	U	0.010	0.0027	mg/L			04/02/25 14:21	10
Chlorobenzene	0.010	U	0.010	0.0075	mg/L			04/02/25 14:21	10
Chloroform	0.010	U	0.010	0.0034	mg/L			04/02/25 14:21	10
Tetrachloroethene	0.010	U	0.010	0.0036	mg/L			04/02/25 14:21	10
Trichloroethene	0.010	U	0.010	0.0046	mg/L			04/02/25 14:21	10
Vinyl chloride	0.010	U	0.010	0.0090	mg/L			04/02/25 14:21	10

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*77 - 120*		*04/02/25 14:21*	*10*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*04/02/25 14:21*	*10*
Dibromofluoromethane (Surr)	*102*		*75 - 123*		*04/02/25 14:21*	*10*
Toluene-d8 (Surr)	*97*		*80 - 120*		*04/02/25 14:21*	*10*

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-742068/8
Matrix: Water
Analysis Batch: 742068

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			03/28/25 14:02	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			03/28/25 14:02	1
Acetone	10	U	10	3.0	ug/L			03/28/25 14:02	1
Benzene	1.0	U	1.0	0.41	ug/L			03/28/25 14:02	1
Chloroform	1.0	U	1.0	0.34	ug/L			03/28/25 14:02	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			03/28/25 14:02	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			03/28/25 14:02	1
Toluene	1.0	U	1.0	0.51	ug/L			03/28/25 14:02	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			03/28/25 14:02	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			03/28/25 14:02	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			03/28/25 14:02	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			03/28/25 14:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*77 - 120*		*03/28/25 14:02*	*1*
Dibromofluoromethane (Surr)	*102*		*75 - 123*		*03/28/25 14:02*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*03/28/25 14:02*	*1*

Lab Sample ID: LCS 480-742068/6
Matrix: Water
Analysis Batch: 742068

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	25.0	28.9		ug/L		115	66 - 127
4-Methyl-2-pentanone (MIBK)	125	140		ug/L		112	71 - 125
Acetone	125	136		ug/L		109	56 - 142
Benzene	25.0	26.9		ug/L		108	71 - 124
Chloroform	25.0	25.3		ug/L		101	73 - 127

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-742068/6
Matrix: Water
Analysis Batch: 742068

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
cis-1,2-Dichloroethene	25.0	27.8		ug/L		111	74 - 124
Tetrachloroethene	25.0	29.5		ug/L		118	74 - 122
Toluene	25.0	27.6		ug/L		110	80 - 122
trans-1,2-Dichloroethene	25.0	28.3		ug/L		113	73 - 127
Trichloroethene	25.0	28.2		ug/L		113	74 - 123
Vinyl chloride	25.0	27.1		ug/L		108	65 - 133
Xylenes, Total	50.0	54.0		ug/L		108	76 - 122

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*77 - 120*
Dibromofluoromethane (Surr)	*99*		*75 - 123*
Toluene-d8 (Surr)	*100*		*80 - 120*

Lab Sample ID: MB 480-742122/2-A
Matrix: Solid
Analysis Batch: 742123

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 742122

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	5.0	U	5.0	0.36	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.81	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	1.1	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
1,1,2-Trichloroethane	5.0	U	5.0	0.65	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
1,1-Dichloroethane	5.0	U	5.0	0.61	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
1,1-Dichloroethene	5.0	U	5.0	0.61	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
1,2,4-Trichlorobenzene	5.0	U	5.0	0.30	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	2.5	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
1,2-Dibromoethane	5.0	U	5.0	0.64	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
1,2-Dichlorobenzene	5.0	U	5.0	0.39	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
1,2-Dichloroethane	5.0	U	5.0	0.25	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
1,2-Dichloropropane	5.0	U	5.0	2.5	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
1,3-Dichlorobenzene	5.0	U	5.0	0.26	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
1,4-Dichlorobenzene	5.0	U	5.0	0.70	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
2-Butanone (MEK)	25	U	25	1.8	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
2-Hexanone	25	U	25	2.5	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
4-Methyl-2-pentanone (MIBK)	25	U	25	1.6	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Acetone	25	U	25	4.2	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Benzene	5.0	U	5.0	0.25	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Bromodichloromethane	5.0	U	5.0	0.67	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Bromoform	5.0	U	5.0	2.5	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Bromomethane	5.0	U	5.0	0.45	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Carbon disulfide	5.0	U	5.0	2.5	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Carbon tetrachloride	5.0	U	5.0	0.48	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Chlorobenzene	5.0	U	5.0	0.66	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Chloroethane	5.0	U	5.0	1.1	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Chloroform	0.570	J	5.0	0.31	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Chloromethane	5.0	U	5.0	0.30	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
cis-1,2-Dichloroethene	5.0	U	5.0	0.64	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.72	ug/Kg		03/29/25 07:04	03/29/25 10:30	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-742122/2-A
Matrix: Solid
Analysis Batch: 742123

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 742122

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyclohexane	5.0	U	5.0	0.70	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Dibromochloromethane	5.0	U	5.0	0.64	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Dichlorodifluoromethane	5.0	U	5.0	0.41	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Ethylbenzene	5.0	U	5.0	0.35	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Isopropylbenzene	5.0	U	5.0	0.75	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Methyl acetate	25	U	25	3.0	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Methyl tert-butyl ether	5.0	U	5.0	0.49	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Methylcyclohexane	5.0	U	5.0	0.76	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Methylene Chloride	5.0	U	5.0	2.3	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Styrene	5.0	U	5.0	0.25	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Tetrachloroethene	5.0	U	5.0	0.67	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Toluene	5.0	U	5.0	0.38	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
trans-1,2-Dichloroethene	5.0	U	5.0	0.52	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
trans-1,3-Dichloropropene	5.0	U	5.0	2.2	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Trichloroethene	5.0	U	5.0	1.1	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Trichlorofluoromethane	5.0	U	5.0	0.47	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Vinyl chloride	5.0	U	5.0	0.61	ug/Kg		03/29/25 07:04	03/29/25 10:30	1
Xylenes, Total	10	U	10	0.84	ug/Kg		03/29/25 07:04	03/29/25 10:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*64 - 126*	*03/29/25 07:04*	*03/29/25 10:30*	*1*
4-Bromofluorobenzene (Surr)	*89*		*72 - 126*	*03/29/25 07:04*	*03/29/25 10:30*	*1*
Dibromofluoromethane (Surr)	*98*		*60 - 140*	*03/29/25 07:04*	*03/29/25 10:30*	*1*
Toluene-d8 (Surr)	*100*		*71 - 125*	*03/29/25 07:04*	*03/29/25 10:30*	*1*

Lab Sample ID: LCS 480-742122/1-A
Matrix: Solid
Analysis Batch: 742123

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 742122

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	50.0	42.5		ug/Kg		85	77 - 121
1,1,2,2-Tetrachloroethane	50.0	47.2		ug/Kg		94	80 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	41.5		ug/Kg		83	60 - 140
1,1,2-Trichloroethane	50.0	43.9		ug/Kg		88	78 - 122
1,1-Dichloroethane	50.0	46.1		ug/Kg		92	73 - 126
1,1-Dichloroethene	50.0	39.9		ug/Kg		80	59 - 125
1,2,4-Trichlorobenzene	50.0	43.2		ug/Kg		86	64 - 120
1,2-Dibromo-3-Chloropropane	50.0	48.6		ug/Kg		97	63 - 124
1,2-Dibromoethane	50.0	41.1		ug/Kg		82	78 - 120
1,2-Dichlorobenzene	50.0	44.1		ug/Kg		88	75 - 120
1,2-Dichloroethane	50.0	44.4		ug/Kg		89	77 - 122
1,2-Dichloropropane	50.0	45.5		ug/Kg		91	75 - 124
1,3-Dichlorobenzene	50.0	43.4		ug/Kg		87	74 - 120
1,4-Dichlorobenzene	50.0	42.1		ug/Kg		84	73 - 120
2-Butanone (MEK)	250	262		ug/Kg		105	70 - 134
2-Hexanone	250	275		ug/Kg		110	59 - 130
4-Methyl-2-pentanone (MIBK)	250	283		ug/Kg		113	65 - 133
Acetone	250	254		ug/Kg		101	61 - 137

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-742122/1-A
Matrix: Solid
Analysis Batch: 742123

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 742122

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	50.0	42.9		ug/Kg		86	79 - 127
Bromodichloromethane	50.0	43.6		ug/Kg		87	80 - 122
Bromoform	50.0	41.4		ug/Kg		83	68 - 126
Bromomethane	50.0	39.7		ug/Kg		79	37 - 149
Carbon disulfide	50.0	38.8		ug/Kg		78	64 - 131
Carbon tetrachloride	50.0	42.3		ug/Kg		85	75 - 135
Chlorobenzene	50.0	41.1		ug/Kg		82	76 - 124
Chloroethane	50.0	45.1		ug/Kg		90	69 - 135
Chloroform	50.0	42.7		ug/Kg		85	80 - 120
Chloromethane	50.0	46.2		ug/Kg		92	63 - 127
cis-1,2-Dichloroethene	50.0	42.1		ug/Kg		84	81 - 120
cis-1,3-Dichloropropene	50.0	40.7		ug/Kg		81	80 - 120
Cyclohexane	50.0	49.2		ug/Kg		98	65 - 120
Dibromochloromethane	50.0	44.5		ug/Kg		89	76 - 125
Dichlorodifluoromethane	50.0	29.4		ug/Kg		59	57 - 142
Ethylbenzene	50.0	43.3		ug/Kg		87	80 - 120
Isopropylbenzene	50.0	50.0		ug/Kg		100	72 - 120
Methyl acetate	100	105		ug/Kg		105	55 - 136
Methyl tert-butyl ether	50.0	43.2		ug/Kg		86	63 - 125
Methylcyclohexane	50.0	43.0		ug/Kg		86	60 - 140
Methylene Chloride	50.0	44.9		ug/Kg		90	61 - 127
Styrene	50.0	40.8		ug/Kg		82	80 - 120
Tetrachloroethene	50.0	40.0		ug/Kg		80	74 - 122
Toluene	50.0	43.1		ug/Kg		86	74 - 128
trans-1,2-Dichloroethene	50.0	42.0		ug/Kg		84	78 - 126
trans-1,3-Dichloropropene	50.0	41.8		ug/Kg		84	73 - 123
Trichloroethene	50.0	41.1		ug/Kg		82	77 - 129
Trichlorofluoromethane	50.0	44.7		ug/Kg		89	65 - 146
Vinyl chloride	50.0	43.0		ug/Kg		86	61 - 133
Xylenes, Total	100	84.1		ug/Kg		84	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*64 - 126*
4-Bromofluorobenzene (Surr)	*89*		*72 - 126*
Dibromofluoromethane (Surr)	*98*		*60 - 140*
Toluene-d8 (Surr)	*101*		*71 - 125*

Lab Sample ID: MB 480-742195/8
Matrix: Water
Analysis Batch: 742195

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			03/31/25 13:06	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			03/31/25 13:06	1
Acetone	10	U	10	3.0	ug/L			03/31/25 13:06	1
Benzene	1.0	U	1.0	0.41	ug/L			03/31/25 13:06	1
Chloroform	1.0	U	1.0	0.34	ug/L			03/31/25 13:06	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			03/31/25 13:06	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-742195/8
Matrix: Water
Analysis Batch: 742195

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			03/31/25 13:06	1
Toluene	1.0	U	1.0	0.51	ug/L			03/31/25 13:06	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			03/31/25 13:06	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			03/31/25 13:06	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			03/31/25 13:06	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			03/31/25 13:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*77 - 120*		*03/31/25 13:06*	*1*
Dibromofluoromethane (Surr)	*97*		*75 - 123*		*03/31/25 13:06*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*03/31/25 13:06*	*1*

Lab Sample ID: LCS 480-742195/6
Matrix: Water
Analysis Batch: 742195

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	25.0	27.4		ug/L		110	66 - 127
4-Methyl-2-pentanone (MIBK)	125	118		ug/L		94	71 - 125
Acetone	125	107		ug/L		86	56 - 142
Benzene	25.0	25.7		ug/L		103	71 - 124
Chloroform	25.0	23.6		ug/L		94	73 - 127
cis-1,2-Dichloroethene	25.0	26.7		ug/L		107	74 - 124
Tetrachloroethene	25.0	24.5		ug/L		98	74 - 122
Toluene	25.0	24.5		ug/L		98	80 - 122
trans-1,2-Dichloroethene	25.0	26.2		ug/L		105	73 - 127
Trichloroethene	25.0	26.1		ug/L		104	74 - 123
Vinyl chloride	25.0	26.6		ug/L		106	65 - 133
Xylenes, Total	50.0	50.0		ug/L		100	76 - 122

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*77 - 120*
Dibromofluoromethane (Surr)	*100*		*75 - 123*
Toluene-d8 (Surr)	*96*		*80 - 120*

Lab Sample ID: MB 480-742215/8
Matrix: Water
Analysis Batch: 742215

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.82	ug/L			04/01/25 01:31	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21	ug/L			04/01/25 01:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.31	ug/L			04/01/25 01:31	1
1,1,2-Trichloroethane	1.0	U	1.0	0.23	ug/L			04/01/25 01:31	1
1,1-Dichloroethane	1.0	U	1.0	0.38	ug/L			04/01/25 01:31	1
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			04/01/25 01:31	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.41	ug/L			04/01/25 01:31	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.39	ug/L			04/01/25 01:31	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-742215/8
Matrix: Water
Analysis Batch: 742215

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	1.0	U	1.0	0.73	ug/L			04/01/25 01:31	1
1,2-Dichlorobenzene	1.0	U	1.0	0.79	ug/L			04/01/25 01:31	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			04/01/25 01:31	1
1,2-Dichloropropane	1.0	U	1.0	0.72	ug/L			04/01/25 01:31	1
1,3-Dichlorobenzene	1.0	U	1.0	0.78	ug/L			04/01/25 01:31	1
1,4-Dichlorobenzene	1.0	U	1.0	0.84	ug/L			04/01/25 01:31	1
2-Butanone (MEK)	10	U	10	1.3	ug/L			04/01/25 01:31	1
2-Hexanone	5.0	U	5.0	1.2	ug/L			04/01/25 01:31	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			04/01/25 01:31	1
Acetone	10	U	10	3.0	ug/L			04/01/25 01:31	1
Benzene	1.0	U	1.0	0.41	ug/L			04/01/25 01:31	1
Bromodichloromethane	1.0	U	1.0	0.39	ug/L			04/01/25 01:31	1
Bromoform	1.0	U	1.0	0.26	ug/L			04/01/25 01:31	1
Bromomethane	1.0	U	1.0	0.69	ug/L			04/01/25 01:31	1
Carbon disulfide	1.0	U	1.0	0.19	ug/L			04/01/25 01:31	1
Carbon tetrachloride	1.0	U	1.0	0.27	ug/L			04/01/25 01:31	1
Chlorobenzene	1.0	U	1.0	0.75	ug/L			04/01/25 01:31	1
Chloroethane	1.0	U	1.0	0.32	ug/L			04/01/25 01:31	1
Chloroform	1.0	U	1.0	0.34	ug/L			04/01/25 01:31	1
Chloromethane	1.0	U	1.0	0.35	ug/L			04/01/25 01:31	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			04/01/25 01:31	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.36	ug/L			04/01/25 01:31	1
Cyclohexane	1.0	U	1.0	0.18	ug/L			04/01/25 01:31	1
Dibromochloromethane	1.0	U	1.0	0.32	ug/L			04/01/25 01:31	1
Dichlorodifluoromethane	1.0	U	1.0	0.68	ug/L			04/01/25 01:31	1
Ethylbenzene	1.0	U	1.0	0.74	ug/L			04/01/25 01:31	1
Isopropylbenzene	1.0	U	1.0	0.79	ug/L			04/01/25 01:31	1
Methyl acetate	2.5	U	2.5	1.3	ug/L			04/01/25 01:31	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			04/01/25 01:31	1
Methylcyclohexane	1.0	U	1.0	0.16	ug/L			04/01/25 01:31	1
Methylene Chloride	1.0	U	1.0	0.44	ug/L			04/01/25 01:31	1
Styrene	1.0	U	1.0	0.73	ug/L			04/01/25 01:31	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			04/01/25 01:31	1
Toluene	1.0	U	1.0	0.51	ug/L			04/01/25 01:31	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			04/01/25 01:31	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.37	ug/L			04/01/25 01:31	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			04/01/25 01:31	1
Trichlorofluoromethane	1.0	U	1.0	0.88	ug/L			04/01/25 01:31	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			04/01/25 01:31	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			04/01/25 01:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*77 - 120*		*04/01/25 01:31*	*1*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*04/01/25 01:31*	*1*
Dibromofluoromethane (Surr)	*103*		*75 - 123*		*04/01/25 01:31*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*04/01/25 01:31*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-742215/6
Matrix: Water
Analysis Batch: 742215

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	25.0	28.4		ug/L		113	73 - 126
1,1,2,2-Tetrachloroethane	25.0	26.2		ug/L		105	76 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	26.0		ug/L		104	61 - 148
1,1,2-Trichloroethane	25.0	24.9		ug/L		100	76 - 122
1,1-Dichloroethane	25.0	26.8		ug/L		107	77 - 120
1,1-Dichloroethene	25.0	26.2		ug/L		105	66 - 127
1,2,4-Trichlorobenzene	25.0	23.8		ug/L		95	79 - 122
1,2-Dibromo-3-Chloropropane	25.0	28.6		ug/L		115	56 - 134
1,2-Dibromoethane	25.0	26.8		ug/L		107	77 - 120
1,2-Dichlorobenzene	25.0	25.6		ug/L		102	80 - 124
1,2-Dichloroethane	25.0	25.3		ug/L		101	75 - 120
1,2-Dichloropropane	25.0	24.7		ug/L		99	76 - 120
1,3-Dichlorobenzene	25.0	25.5		ug/L		102	77 - 120
1,4-Dichlorobenzene	25.0	24.9		ug/L		100	80 - 120
2-Butanone (MEK)	125	132		ug/L		106	57 - 140
2-Hexanone	125	144		ug/L		115	65 - 127
4-Methyl-2-pentanone (MIBK)	125	136		ug/L		109	71 - 125
Acetone	125	126		ug/L		101	56 - 142
Benzene	25.0	25.5		ug/L		102	71 - 124
Bromodichloromethane	25.0	26.0		ug/L		104	80 - 122
Bromoform	25.0	27.7		ug/L		111	61 - 132
Bromomethane	25.0	26.4		ug/L		106	55 - 144
Carbon disulfide	25.0	24.9		ug/L		99	59 - 134
Carbon tetrachloride	25.0	27.5		ug/L		110	72 - 134
Chlorobenzene	25.0	25.3		ug/L		101	80 - 120
Chloroethane	25.0	25.2		ug/L		101	69 - 136
Chloroform	25.0	23.9		ug/L		96	73 - 127
Chloromethane	25.0	23.5		ug/L		94	68 - 124
cis-1,2-Dichloroethene	25.0	25.5		ug/L		102	74 - 124
cis-1,3-Dichloropropene	25.0	26.2		ug/L		105	74 - 124
Cyclohexane	25.0	25.7		ug/L		103	59 - 135
Dibromochloromethane	25.0	26.7		ug/L		107	75 - 125
Dichlorodifluoromethane	25.0	23.4		ug/L		94	59 - 135
Ethylbenzene	25.0	25.7		ug/L		103	77 - 123
Isopropylbenzene	25.0	27.2		ug/L		109	77 - 122
Methyl acetate	50.0	51.7		ug/L		103	74 - 133
Methyl tert-butyl ether	25.0	26.0		ug/L		104	77 - 120
Methylcyclohexane	25.0	25.3		ug/L		101	68 - 134
Methylene Chloride	25.0	26.1		ug/L		104	75 - 124
Styrene	25.0	25.4		ug/L		102	80 - 120
Tetrachloroethene	25.0	25.4		ug/L		101	74 - 122
Toluene	25.0	25.5		ug/L		102	80 - 122
trans-1,2-Dichloroethene	25.0	25.4		ug/L		102	73 - 127
trans-1,3-Dichloropropene	25.0	29.0		ug/L		116	80 - 120
Trichloroethene	25.0	26.0		ug/L		104	74 - 123
Trichlorofluoromethane	25.0	28.4		ug/L		114	62 - 150
Vinyl chloride	25.0	25.7		ug/L		103	65 - 133
Xylenes, Total	50.0	50.6		ug/L		101	76 - 122

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		77 - 120
4-Bromofluorobenzene (Surr)	98		73 - 120
Dibromofluoromethane (Surr)	100		75 - 123
Toluene-d8 (Surr)	99		80 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-742157/1-A
Matrix: Solid
Analysis Batch: 742326

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 742157

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	170	U	170	46	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
2,4,6-Trichlorophenol	170	U	170	34	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
2,4-Dichlorophenol	170	U	170	18	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
2,4-Dimethylphenol	170	U	170	41	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
2,4-Dinitrophenol	1700	U	1700	780	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
2,4-Dinitrotoluene	170	U	170	35	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
2,6-Dinitrotoluene	170	U	170	20	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
2-Chloronaphthalene	170	U	170	28	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
2-Chlorophenol	330	U	330	31	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
2-Methylnaphthalene	170	U	170	34	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
2-Methylphenol	170	U	170	20	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
2-Nitroaniline	330	U	330	25	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
2-Nitrophenol	170	U	170	48	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
3,3'-Dichlorobenzidine	330	U	330	200	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
3-Nitroaniline	330	U	330	47	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
4,6-Dinitro-2-methylphenol	330	U	330	170	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
4-Bromophenyl phenyl ether	170	U	170	24	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
4-Chloro-3-methylphenol	170	U	170	42	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
4-Chloroaniline	170	U	170	42	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
4-Chlorophenyl phenyl ether	170	U	170	21	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
4-Methylphenol	330	U	330	20	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
4-Nitroaniline	330	U	330	89	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
4-Nitrophenol	330	U	330	120	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Acenaphthene	170	U	170	25	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Acenaphthylene	170	U	170	22	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Acetophenone	170	U	170	23	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Anthracene	170	U	170	42	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Atrazine	170	U	170	59	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Benzaldehyde	170	U	170	140	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Benzo[a]anthracene	170	U	170	17	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Benzo[a]pyrene	170	U	170	25	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Benzo[b]fluoranthene	170	U	170	27	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Benzo[g,h,i]perylene	170	U	170	18	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Benzo[k]fluoranthene	170	U	170	22	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Biphenyl	170	U	170	25	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
bis (2-chloroisopropyl) ether	170	U	170	34	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Bis(2-chloroethoxy)methane	170	U	170	36	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Bis(2-chloroethyl)ether	170	U	170	22	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Bis(2-ethylhexyl) phthalate	170	U	170	58	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Butyl benzyl phthalate	170	U	170	28	ug/Kg		03/31/25 06:36	04/01/25 13:09	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-742157/1-A
Matrix: Solid
Analysis Batch: 742326

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 742157

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Caprolactam	170	U	170	51	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Carbazole	170	U	170	20	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Chrysene	170	U	170	38	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Dibenz(a,h)anthracene	170	U	170	30	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Dibenzofuran	170	U	170	20	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Diethyl phthalate	170	U	170	22	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Dimethyl phthalate	170	U	170	20	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Di-n-butyl phthalate	170	U	170	29	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Di-n-octyl phthalate	170	U	170	20	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Fluoranthene	170	U	170	18	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Fluorene	170	U	170	20	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Hexachlorobenzene	170	U	170	23	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Hexachlorobutadiene	170	U	170	25	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Hexachlorocyclopentadiene	170	U	170	23	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Hexachloroethane	170	U	170	22	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Indeno[1,2,3-cd]pyrene	170	U	170	21	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Isophorone	170	U	170	36	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Naphthalene	170	U	170	22	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Nitrobenzene	170	U	170	19	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
N-Nitrosodi-n-propylamine	170	U	170	29	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
N-Nitrosodiphenylamine	170	U	170	140	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Pentachlorophenol	330	U	330	170	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Phenanthrene	170	U	170	25	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Phenol	170	U	170	26	ug/Kg		03/31/25 06:36	04/01/25 13:09	1
Pyrene	170	U	170	20	ug/Kg		03/31/25 06:36	04/01/25 13:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*96*		*26 - 143*	*03/31/25 06:36*	*04/01/25 13:09*	*1*
2-Fluorobiphenyl (Surr)	*87*		*50 - 121*	*03/31/25 06:36*	*04/01/25 13:09*	*1*
2-Fluorophenol (Surr)	*79*		*36 - 120*	*03/31/25 06:36*	*04/01/25 13:09*	*1*
Nitrobenzene-d5 (Surr)	*81*		*40 - 121*	*03/31/25 06:36*	*04/01/25 13:09*	*1*
Phenol-d5 (Surr)	*86*		*41 - 120*	*03/31/25 06:36*	*04/01/25 13:09*	*1*
p-Terphenyl-d14 (Surr)	*94*		*46 - 143*	*03/31/25 06:36*	*04/01/25 13:09*	*1*

Lab Sample ID: LCS 480-742157/2-A
Matrix: Solid
Analysis Batch: 742251

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 742157

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4,5-Trichlorophenol	1330	1280		ug/Kg		96	59 - 126
2,4,6-Trichlorophenol	1330	1210		ug/Kg		91	59 - 123
2,4-Dichlorophenol	1330	1250		ug/Kg		94	61 - 120
2,4-Dimethylphenol	1330	1270		ug/Kg		95	59 - 120
2,4-Dinitrophenol	2670	2680		ug/Kg		101	41 - 146
2,4-Dinitrotoluene	1330	1380		ug/Kg		103	63 - 120
2,6-Dinitrotoluene	1330	1240		ug/Kg		93	66 - 120
2-Chloronaphthalene	1330	1150		ug/Kg		87	57 - 120
2-Chlorophenol	1330	1140		ug/Kg		85	53 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-742157/2-A
Matrix: Solid
Analysis Batch: 742251

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 742157

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Methylnaphthalene	1330	1150		ug/Kg		86	59 - 120
2-Methylphenol	1330	1270		ug/Kg		95	54 - 120
2-Nitroaniline	1330	1280		ug/Kg		96	61 - 120
2-Nitrophenol	1330	1160		ug/Kg		87	56 - 120
3,3'-Dichlorobenzidine	1330	1140		ug/Kg		85	54 - 120
3-Nitroaniline	1330	1170		ug/Kg		88	48 - 120
4,6-Dinitro-2-methylphenol	2670	2700		ug/Kg		101	49 - 122
4-Bromophenyl phenyl ether	1330	1310		ug/Kg		98	58 - 120
4-Chloro-3-methylphenol	1330	1350		ug/Kg		101	61 - 120
4-Chloroaniline	1330	1100		ug/Kg		83	38 - 120
4-Chlorophenyl phenyl ether	1330	1260		ug/Kg		94	63 - 124
4-Methylphenol	1330	1320		ug/Kg		99	55 - 120
4-Nitroaniline	1330	1340		ug/Kg		100	56 - 120
4-Nitrophenol	2670	2720		ug/Kg		102	43 - 147
Acenaphthene	1330	1180		ug/Kg		88	62 - 120
Acenaphthylene	1330	1190		ug/Kg		89	58 - 121
Acetophenone	1330	1250		ug/Kg		93	54 - 120
Anthracene	1330	1280		ug/Kg		96	62 - 120
Atrazine	1330	1320		ug/Kg		99	60 - 127
Benzaldehyde	1330	1380		ug/Kg		104	10 - 150
Benzo[a]anthracene	1330	1270		ug/Kg		95	65 - 120
Benzo[a]pyrene	1330	1340		ug/Kg		101	64 - 120
Benzo[b]fluoranthene	1330	1300		ug/Kg		98	64 - 120
Benzo[g,h,i]perylene	1330	1410		ug/Kg		106	45 - 145
Benzo[k]fluoranthene	1330	1360		ug/Kg		102	65 - 120
Biphenyl	1330	1130		ug/Kg		85	59 - 120
bis (2-chloroisopropyl) ether	1330	1200		ug/Kg		90	44 - 120
Bis(2-chloroethoxy)methane	1330	1180		ug/Kg		89	55 - 120
Bis(2-chloroethyl)ether	1330	1160		ug/Kg		87	45 - 120
Bis(2-ethylhexyl) phthalate	1330	1330		ug/Kg		100	61 - 133
Butyl benzyl phthalate	1330	1350		ug/Kg		101	61 - 129
Caprolactam	1330	1290		ug/Kg		97	47 - 120
Carbazole	1330	1350		ug/Kg		101	65 - 120
Chrysene	1330	1270		ug/Kg		96	64 - 120
Dibenz(a,h)anthracene	1330	1420		ug/Kg		107	54 - 132
Dibenzofuran	1330	1250		ug/Kg		94	63 - 120
Diethyl phthalate	1330	1320		ug/Kg		99	66 - 120
Dimethyl phthalate	1330	1320		ug/Kg		99	65 - 124
Di-n-butyl phthalate	1330	1420		ug/Kg		107	58 - 130
Di-n-octyl phthalate	1330	1340		ug/Kg		100	57 - 133
Fluoranthene	1330	1330		ug/Kg		100	62 - 120
Fluorene	1330	1240		ug/Kg		93	63 - 120
Hexachlorobenzene	1330	1290		ug/Kg		97	60 - 120
Hexachlorobutadiene	1330	1150		ug/Kg		86	45 - 120
Hexachlorocyclopentadiene	1330	1070		ug/Kg		81	47 - 120
Hexachloroethane	1330	1090		ug/Kg		82	41 - 120
Indeno[1,2,3-cd]pyrene	1330	1390		ug/Kg		105	56 - 134
Isophorone	1330	1280		ug/Kg		96	56 - 120
Naphthalene	1330	1080		ug/Kg		81	55 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-742157/2-A
Matrix: Solid
Analysis Batch: 742251

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 742157

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrobenzene	1330	1120		ug/Kg		84	54 - 120
N-Nitrosodi-n-propylamine	1330	1280		ug/Kg		96	52 - 120
N-Nitrosodiphenylamine	1330	1300		ug/Kg		97	51 - 128
Pentachlorophenol	2670	2650		ug/Kg		99	10 - 120
Phenanthrene	1330	1310		ug/Kg		98	60 - 120
Phenol	1330	1150		ug/Kg		86	53 - 120
Pyrene	1330	1240		ug/Kg		93	61 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*104*		*26 - 143*
2-Fluorobiphenyl (Surr)	*87*		*50 - 121*
2-Fluorophenol (Surr)	*89*		*36 - 120*
Nitrobenzene-d5 (Surr)	*88*		*40 - 121*
Phenol-d5 (Surr)	*91*		*41 - 120*
p-Terphenyl-d14 (Surr)	*94*		*46 - 143*

Lab Sample ID: MB 480-742501/1-A
Matrix: Solid
Analysis Batch: 742581

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 742501

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.010	U	0.010	0.00045	mg/L		04/02/25 13:37	04/03/25 12:00	1
2,4,5-Trichlorophenol	0.0050	U	0.0050	0.00048	mg/L		04/02/25 13:37	04/03/25 12:00	1
2,4,6-Trichlorophenol	0.0050	U	0.0050	0.00060	mg/L		04/02/25 13:37	04/03/25 12:00	1
2,4-Dinitrotoluene	0.0050	U	0.0050	0.00043	mg/L		04/02/25 13:37	04/03/25 12:00	1
3-Methylphenol	0.010	U	0.010	0.00040	mg/L		04/02/25 13:37	04/03/25 12:00	1
2-Methylphenol	0.0050	U	0.0050	0.00040	mg/L		04/02/25 13:37	04/03/25 12:00	1
Pyridine	0.025	U	0.025	0.00040	mg/L		04/02/25 13:37	04/03/25 12:00	1
4-Methylphenol	0.010	U	0.010	0.00035	mg/L		04/02/25 13:37	04/03/25 12:00	1
Hexachlorobenzene	0.0050	U	0.0050	0.00050	mg/L		04/02/25 13:37	04/03/25 12:00	1
Hexachlorobutadiene	0.0050	U	0.0050	0.00068	mg/L		04/02/25 13:37	04/03/25 12:00	1
Hexachloroethane	0.0050	U	0.0050	0.00058	mg/L		04/02/25 13:37	04/03/25 12:00	1
Nitrobenzene	0.0050	U	0.0050	0.00028	mg/L		04/02/25 13:37	04/03/25 12:00	1
Pentachlorophenol	0.010	U	0.010	0.0022	mg/L		04/02/25 13:37	04/03/25 12:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*101*		*25 - 144*	*04/02/25 13:37*	*04/03/25 12:00*	*1*
2-Fluorobiphenyl (Surr)	*100*		*53 - 126*	*04/02/25 13:37*	*04/03/25 12:00*	*1*
2-Fluorophenol (Surr)	*57*		*24 - 120*	*04/02/25 13:37*	*04/03/25 12:00*	*1*
Nitrobenzene-d5 (Surr)	*92*		*29 - 129*	*04/02/25 13:37*	*04/03/25 12:00*	*1*
Phenol-d5 (Surr)	*40*		*10 - 120*	*04/02/25 13:37*	*04/03/25 12:00*	*1*
p-Terphenyl-d14 (Surr)	*108*		*33 - 132*	*04/02/25 13:37*	*04/03/25 12:00*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-742501/2-A
Matrix: Solid
Analysis Batch: 742581

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 742501

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,4-Dichlorobenzene			0.0400	0.0277		mg/L		69	42 - 120		
2,4,5-Trichlorophenol			0.0400	0.0449		mg/L		112	65 - 126		
2,4,6-Trichlorophenol			0.0400	0.0427		mg/L		107	64 - 120		
2,4-Dinitrotoluene			0.0400	0.0448		mg/L		112	69 - 120		
3-Methylphenol			0.0400	0.0335		mg/L		84	39 - 120		
2-Methylphenol			0.0400	0.0334		mg/L		84	39 - 120		
Pyridine			0.0800	0.0149	J	mg/L		19	10 - 120		
4-Methylphenol			0.0400	0.0335		mg/L		84	29 - 131		
Hexachlorobenzene			0.0400	0.0435		mg/L		109	61 - 120		
Hexachlorobutadiene			0.0400	0.0288		mg/L		72	35 - 120		
Hexachloroethane			0.0400	0.0247		mg/L		62	33 - 120		
Nitrobenzene			0.0400	0.0394		mg/L		98	53 - 123		
Pentachlorophenol			0.0800	0.0798		mg/L		100	10 - 136		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*119*		*25 - 144*
2-Fluorobiphenyl (Surr)	*101*		*53 - 126*
2-Fluorophenol (Surr)	*62*		*24 - 120*
Nitrobenzene-d5 (Surr)	*99*		*29 - 129*
Phenol-d5 (Surr)	*46*		*10 - 120*
p-Terphenyl-d14 (Surr)	*105*		*33 - 132*

Lab Sample ID: LCSD 480-742501/3-A
Matrix: Solid
Analysis Batch: 742581

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 742501

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dichlorobenzene			0.0400	0.0251		mg/L		63	42 - 120	10	36
2,4,5-Trichlorophenol			0.0400	0.0415		mg/L		104	65 - 126	8	18
2,4,6-Trichlorophenol			0.0400	0.0392		mg/L		98	64 - 120	9	19
2,4-Dinitrotoluene			0.0400	0.0409		mg/L		102	69 - 120	9	20
3-Methylphenol			0.0400	0.0307		mg/L		77	39 - 120	9	30
2-Methylphenol			0.0400	0.0315		mg/L		79	39 - 120	6	27
Pyridine			0.0800	0.0168	J	mg/L		21	10 - 120	11	49
4-Methylphenol			0.0400	0.0307		mg/L		77	29 - 131	9	24
Hexachlorobenzene			0.0400	0.0415		mg/L		104	61 - 120	5	15
Hexachlorobutadiene			0.0400	0.0257		mg/L		64	35 - 120	11	44
Hexachloroethane			0.0400	0.0223		mg/L		56	33 - 120	10	46
Nitrobenzene			0.0400	0.0360		mg/L		90	53 - 123	9	24
Pentachlorophenol			0.0800	0.0764		mg/L		96	10 - 136	4	37

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*112*		*25 - 144*
2-Fluorobiphenyl (Surr)	*92*		*53 - 126*
2-Fluorophenol (Surr)	*55*		*24 - 120*
Nitrobenzene-d5 (Surr)	*90*		*29 - 129*
Phenol-d5 (Surr)	*40*		*10 - 120*
p-Terphenyl-d14 (Surr)	*100*		*33 - 132*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: LB 480-742325/1-E
Matrix: Solid
Analysis Batch: 742581

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 742501

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.040	U	0.040	0.0018	mg/L		04/02/25 13:37	04/03/25 13:21	1
2,4,5-Trichlorophenol	0.020	U	0.020	0.0019	mg/L		04/02/25 13:37	04/03/25 13:21	1
2,4,6-Trichlorophenol	0.020	U	0.020	0.0024	mg/L		04/02/25 13:37	04/03/25 13:21	1
2,4-Dinitrotoluene	0.020	U	0.020	0.0017	mg/L		04/02/25 13:37	04/03/25 13:21	1
3-Methylphenol	0.040	U	0.040	0.0016	mg/L		04/02/25 13:37	04/03/25 13:21	1
2-Methylphenol	0.020	U	0.020	0.0016	mg/L		04/02/25 13:37	04/03/25 13:21	1
Pyridine	0.10	U	0.10	0.0016	mg/L		04/02/25 13:37	04/03/25 13:21	1
4-Methylphenol	0.040	U	0.040	0.0014	mg/L		04/02/25 13:37	04/03/25 13:21	1
Hexachlorobenzene	0.020	U	0.020	0.0020	mg/L		04/02/25 13:37	04/03/25 13:21	1
Hexachlorobutadiene	0.020	U	0.020	0.0027	mg/L		04/02/25 13:37	04/03/25 13:21	1
Hexachloroethane	0.020	U	0.020	0.0023	mg/L		04/02/25 13:37	04/03/25 13:21	1
Nitrobenzene	0.020	U	0.020	0.0011	mg/L		04/02/25 13:37	04/03/25 13:21	1
Pentachlorophenol	0.040	U	0.040	0.0088	mg/L		04/02/25 13:37	04/03/25 13:21	1

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*109*		*25 - 144*	*04/02/25 13:37*	*04/03/25 13:21*	*1*
2-Fluorobiphenyl (Surr)	*98*		*53 - 126*	*04/02/25 13:37*	*04/03/25 13:21*	*1*
2-Fluorophenol (Surr)	*55*		*24 - 120*	*04/02/25 13:37*	*04/03/25 13:21*	*1*
Nitrobenzene-d5 (Surr)	*94*		*29 - 129*	*04/02/25 13:37*	*04/03/25 13:21*	*1*
Phenol-d5 (Surr)	*39*		*10 - 120*	*04/02/25 13:37*	*04/03/25 13:21*	*1*
p-Terphenyl-d14 (Surr)	*106*		*33 - 132*	*04/02/25 13:37*	*04/03/25 13:21*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-742160/5
Matrix: Water
Analysis Batch: 742160

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	4.0	U	4.0	1.0	ug/L			03/31/25 08:51	1
Ethane	7.5	U	7.5	1.5	ug/L			03/31/25 08:51	1
Ethene	7.0	U	7.0	1.5	ug/L			03/31/25 08:51	1

Lab Sample ID: LCS 480-742160/6
Matrix: Water
Analysis Batch: 742160

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methane	19.5	20.8		ug/L		106	85 - 120
Ethane	36.5	38.8		ug/L		106	79 - 120
Ethene	34.0	35.0		ug/L		103	85 - 120

Lab Sample ID: LCSD 480-742160/7
Matrix: Water
Analysis Batch: 742160

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methane	19.5	21.6		ug/L		111	85 - 120	4	50
Ethane	36.5	40.3		ug/L		110	79 - 120	4	50

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCSD 480-742160/7
Matrix: Water
Analysis Batch: 742160

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethene			34.0	37.2		ug/L		109	85 - 120	6	50

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 480-742496/1-A
Matrix: Solid
Analysis Batch: 742563

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 742496

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0.00050	U	0.00050	0.0000073	mg/L		04/02/25 13:29	04/03/25 09:44	1
Endrin	0.000050	U	0.000050	0.0000035	mg/L		04/02/25 13:29	04/03/25 09:44	1
gamma-BHC (Lindane)	0.0000195	J	0.000050	0.0000015	mg/L		04/02/25 13:29	04/03/25 09:44	1
Heptachlor	0.000050	U	0.000050	0.0000021	mg/L		04/02/25 13:29	04/03/25 09:44	1
Heptachlor epoxide	0.000050	U	0.000050	0.0000013	mg/L		04/02/25 13:29	04/03/25 09:44	1
Methoxychlor	0.0000374	J	0.000050	0.0000035	mg/L		04/02/25 13:29	04/03/25 09:44	1
Toxaphene	0.00050	U	0.00050	0.000030	mg/L		04/02/25 13:29	04/03/25 09:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*102*		*10 - 120*	*04/02/25 13:29*	*04/03/25 09:44*	*1*
DCB Decachlorobiphenyl	*95*		*10 - 120*	*04/02/25 13:29*	*04/03/25 09:44*	*1*
Tetrachloro-m-xylene	*63*		*10 - 120*	*04/02/25 13:29*	*04/03/25 09:44*	*1*
Tetrachloro-m-xylene	*49*		*10 - 120*	*04/02/25 13:29*	*04/03/25 09:44*	*1*

Lab Sample ID: LCS 480-742496/2-A
Matrix: Solid
Analysis Batch: 742563

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 742496

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Endrin			0.000500	0.000517		mg/L		103	63 - 142		
gamma-BHC (Lindane)			0.000500	0.000386		mg/L		77	42 - 128		
Heptachlor			0.000500	0.000403		mg/L		81	44 - 125		
Heptachlor epoxide			0.000500	0.000527		mg/L		105	63 - 142		
Methoxychlor			0.000500	0.000593		mg/L		119	54 - 158		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*96*		*10 - 120*
DCB Decachlorobiphenyl	*87*		*10 - 120*
Tetrachloro-m-xylene	*71*		*10 - 120*
Tetrachloro-m-xylene	*54*		*10 - 120*

Lab Sample ID: LCSD 480-742496/3-A
Matrix: Solid
Analysis Batch: 742563

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 742496

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Endrin			0.000500	0.000525		mg/L		105	63 - 142	1	24
gamma-BHC (Lindane)			0.000500	0.000403		mg/L		81	42 - 128	4	24
Heptachlor			0.000500	0.000422		mg/L		84	44 - 125	5	25
Heptachlor epoxide			0.000500	0.000558		mg/L		112	63 - 142	6	23

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 480-742496/3-A
Matrix: Solid
Analysis Batch: 742563

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 742496

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methoxychlor			0.000500	0.000583		mg/L		117	54 - 158	2	26

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*89*		*10 - 120*
DCB Decachlorobiphenyl	*87*		*10 - 120*
Tetrachloro-m-xylene	*65*		*10 - 120*
Tetrachloro-m-xylene	*50*		*10 - 120*

Lab Sample ID: LB 480-742325/1-D
Matrix: Solid
Analysis Batch: 742563

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 742496

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	0.0020	U	0.0020	0.000029	mg/L		04/02/25 13:29	04/03/25 10:43	1
Endrin	0.00020	U	0.00020	0.000014	mg/L		04/02/25 13:29	04/03/25 10:43	1
gamma-BHC (Lindane)	0.0000638	J	0.00020	0.0000060	mg/L		04/02/25 13:29	04/03/25 10:43	1
Heptachlor	0.00020	U	0.00020	0.0000085	mg/L		04/02/25 13:29	04/03/25 10:43	1
Heptachlor epoxide	0.00020	U	0.00020	0.0000053	mg/L		04/02/25 13:29	04/03/25 10:43	1
Methoxychlor	0.000151	J	0.00020	0.000014	mg/L		04/02/25 13:29	04/03/25 10:43	1
Toxaphene	0.0020	U	0.0020	0.00012	mg/L		04/02/25 13:29	04/03/25 10:43	1

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*85*		*10 - 120*	*04/02/25 13:29*	*04/03/25 10:43*	*1*
DCB Decachlorobiphenyl	*72*		*10 - 120*	*04/02/25 13:29*	*04/03/25 10:43*	*1*
Tetrachloro-m-xylene	*60*		*10 - 120*	*04/02/25 13:29*	*04/03/25 10:43*	*1*
Tetrachloro-m-xylene	*49*		*10 - 120*	*04/02/25 13:29*	*04/03/25 10:43*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 480-742158/1-A
Matrix: Solid
Analysis Batch: 742161

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 742158

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.25	U	0.25	0.049	mg/Kg		03/31/25 06:44	03/31/25 13:58	1
PCB-1221	0.25	U	0.25	0.049	mg/Kg		03/31/25 06:44	03/31/25 13:58	1
PCB-1232	0.25	U	0.25	0.049	mg/Kg		03/31/25 06:44	03/31/25 13:58	1
PCB-1242	0.25	U	0.25	0.049	mg/Kg		03/31/25 06:44	03/31/25 13:58	1
PCB-1248	0.25	U	0.25	0.049	mg/Kg		03/31/25 06:44	03/31/25 13:58	1
PCB-1254	0.25	U	0.25	0.12	mg/Kg		03/31/25 06:44	03/31/25 13:58	1
PCB-1260	0.25	U	0.25	0.12	mg/Kg		03/31/25 06:44	03/31/25 13:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*102*		*60 - 154*	*03/31/25 06:44*	*03/31/25 13:58*	*1*
Tetrachloro-m-xylene	*115*		*60 - 154*	*03/31/25 06:44*	*03/31/25 13:58*	*1*
DCB Decachlorobiphenyl	*112*		*65 - 174*	*03/31/25 06:44*	*03/31/25 13:58*	*1*
DCB Decachlorobiphenyl	*118*		*65 - 174*	*03/31/25 06:44*	*03/31/25 13:58*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 480-742158/2-A
Matrix: Solid
Analysis Batch: 742161

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 742158

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
PCB-1016			2.50	3.26		mg/Kg		130	51 - 185		
PCB-1260			2.50	3.33		mg/Kg		133	61 - 184		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*132*		*60 - 154*
Tetrachloro-m-xylene	*134*		*60 - 154*
DCB Decachlorobiphenyl	*132*		*65 - 174*
DCB Decachlorobiphenyl	*142*		*65 - 174*

Lab Sample ID: 480-228240-10 MS
Matrix: Solid
Analysis Batch: 742161

Client Sample ID: WC-SOIL
Prep Type: Total/NA
Prep Batch: 742158

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
PCB-1016	0.20	U	2.11	2.58		mg/Kg		122	50 - 177		
PCB-1260	0.20	U	2.11	2.72		mg/Kg		129	33 - 200		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*124*		*60 - 154*
Tetrachloro-m-xylene	*127*		*60 - 154*
DCB Decachlorobiphenyl	*130*		*65 - 174*
DCB Decachlorobiphenyl	*132*		*65 - 174*

Lab Sample ID: 480-228240-10 MSD
Matrix: Solid
Analysis Batch: 742161

Client Sample ID: WC-SOIL
Prep Type: Total/NA
Prep Batch: 742158

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
PCB-1016	0.20	U	1.75	2.22		mg/Kg		127	50 - 177	15	50
PCB-1260	0.20	U	1.75	2.28		mg/Kg		130	33 - 200	18	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*129*		*60 - 154*
Tetrachloro-m-xylene	*130*		*60 - 154*
DCB Decachlorobiphenyl	*135*		*65 - 174*
DCB Decachlorobiphenyl	*139*		*65 - 174*

Method: 8151 - TCLP Herbicides

Lab Sample ID: MB 480-742495/1-A
Matrix: Solid
Analysis Batch: 742609

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 742495

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.00050	U	0.00050	0.00010	mg/L		04/02/25 13:24	04/03/25 11:51	1
Silvex (2,4,5-TP)	0.00050	U	0.00050	0.000090	mg/L		04/02/25 13:24	04/03/25 11:51	1

Method: 8151 - TCLP Herbicides (Continued)

Lab Sample ID: MB 480-742495/1-A
Matrix: Solid
Analysis Batch: 742609

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 742495

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	74		21 - 143	04/02/25 13:24	04/03/25 11:51	1
2,4-Dichlorophenylacetic acid	76		21 - 143	04/02/25 13:24	04/03/25 11:51	1

Lab Sample ID: LCS 480-742495/2-A
Matrix: Solid
Analysis Batch: 742609

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 742495

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
2,4-D			0.00200	0.00156		mg/L		78	36 - 150		
Silvex (2,4,5-TP)			0.00200	0.00145		mg/L		73	49 - 150		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4-Dichlorophenylacetic acid	85		21 - 143
2,4-Dichlorophenylacetic acid	72		21 - 143

Lab Sample ID: LCSD 480-742495/3-A
Matrix: Solid
Analysis Batch: 742609

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 742495

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4-D			0.00200	0.00177		mg/L		88	36 - 150	12	50
Silvex (2,4,5-TP)			0.00200	0.00164		mg/L		82	49 - 150	12	50

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4-Dichlorophenylacetic acid	77		21 - 143
2,4-Dichlorophenylacetic acid	84		21 - 143

Lab Sample ID: LB 480-742325/1-C
Matrix: Solid
Analysis Batch: 742609

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 742495

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.0020	U	0.0020	0.00040	mg/L		04/02/25 13:24	04/03/25 13:02	1
Silvex (2,4,5-TP)	0.0020	U	0.0020	0.00036	mg/L		04/02/25 13:24	04/03/25 13:02	1

Surrogate	LB %Recovery	LB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	34		21 - 143	04/02/25 13:24	04/03/25 13:02	1
2,4-Dichlorophenylacetic acid	37		21 - 143	04/02/25 13:24	04/03/25 13:02	1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 480-742436/2-A
Matrix: Solid
Analysis Batch: 742575

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 742436

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.015	U	0.015	0.0056	mg/L		04/02/25 08:38	04/02/25 17:06	1
Barium	1.0	U	1.0	0.10	mg/L		04/02/25 08:38	04/02/25 17:06	1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: MB 480-742436/2-A
Matrix: Solid
Analysis Batch: 742575

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 742436

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.0020	U	0.0020	0.00030	mg/L		04/02/25 08:38	04/02/25 17:06	1
Cadmium	0.0020	U	0.0020	0.00050	mg/L		04/02/25 08:38	04/02/25 17:06	1
Chromium	0.020	U	0.020	0.010	mg/L		04/02/25 08:38	04/02/25 17:06	1
Copper	0.010	U	0.010	0.0016	mg/L		04/02/25 08:38	04/02/25 17:06	1
Lead	0.020	U	0.020	0.0030	mg/L		04/02/25 08:38	04/02/25 17:06	1
Nickel	0.010	U ^5-	0.010	0.0013	mg/L		04/02/25 08:38	04/02/25 17:06	1
Selenium	0.025	U	0.025	0.0087	mg/L		04/02/25 08:38	04/02/25 17:06	1
Silver	0.0060	U ^5-	0.0060	0.0017	mg/L		04/02/25 08:38	04/02/25 17:06	1
Zinc	0.050	U	0.050	0.020	mg/L		04/02/25 08:38	04/02/25 17:06	1

Lab Sample ID: LCS 480-742436/3-A
Matrix: Solid
Analysis Batch: 742575

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 742436

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1.00	0.959		mg/L		96	80 - 120
Barium	1.00	0.977	J	mg/L		98	80 - 120
Beryllium	0.496	0.500		mg/L		101	80 - 120
Cadmium	0.500	0.485		mg/L		97	80 - 120
Chromium	0.500	0.483		mg/L		97	80 - 120
Copper	0.500	0.494		mg/L		99	80 - 120
Lead	0.500	0.503		mg/L		101	80 - 120
Nickel	0.500	0.480	^5-	mg/L		96	80 - 120
Selenium	1.00	0.948		mg/L		95	80 - 120
Silver	0.0500	0.0494	^5-	mg/L		99	80 - 120
Zinc	0.500	0.421		mg/L		84	80 - 120

Lab Sample ID: MB 480-742117/1-A
Matrix: Water
Analysis Batch: 742428

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 742117

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	0.050	U	0.050	0.019	mg/L		03/29/25 09:42	04/01/25 17:18	1

Lab Sample ID: LCS 480-742117/2-A
Matrix: Water
Analysis Batch: 742428

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 742117

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron, Dissolved	5.10	5.32		mg/L		104	80 - 120

Lab Sample ID: 480-228240-1 MS
Matrix: Water
Analysis Batch: 742428

Client Sample ID: PZ-4
Prep Type: Dissolved
Prep Batch: 742117

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron, Dissolved	0.92		5.10	6.55		mg/L		110	75 - 125

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: 480-228240-1 MSD
Matrix: Water
Analysis Batch: 742428

Client Sample ID: PZ-4
Prep Type: Dissolved
Prep Batch: 742117

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron, Dissolved	0.92		5.10	6.19		mg/L		103	75 - 125	6	20

Lab Sample ID: LB 480-742325/1-B
Matrix: Solid
Analysis Batch: 742575

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 742436

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.015	U	0.015	0.0056	mg/L		04/02/25 08:38	04/02/25 17:04	1
Barium	1.0	U	1.0	0.10	mg/L		04/02/25 08:38	04/02/25 17:04	1
Beryllium	0.0020	U	0.0020	0.00030	mg/L		04/02/25 08:38	04/02/25 17:04	1
Cadmium	0.0020	U	0.0020	0.00050	mg/L		04/02/25 08:38	04/02/25 17:04	1
Chromium	0.020	U	0.020	0.010	mg/L		04/02/25 08:38	04/02/25 17:04	1
Copper	0.010	U	0.010	0.0016	mg/L		04/02/25 08:38	04/02/25 17:04	1
Lead	0.00490	J	0.020	0.0030	mg/L		04/02/25 08:38	04/02/25 17:04	1
Nickel	0.010	U	0.010	0.0013	mg/L		04/02/25 08:38	04/02/25 17:04	1
Selenium	0.025	U	0.025	0.0087	mg/L		04/02/25 08:38	04/02/25 17:04	1
Silver	0.0060	U	0.0060	0.0017	mg/L		04/02/25 08:38	04/02/25 17:04	1
Zinc	0.050	U L	0.050	0.020	mg/L		04/02/25 08:38	04/02/25 17:04	1

Lab Sample ID: 480-228240-10 MS
Matrix: Solid
Analysis Batch: 742575

Client Sample ID: WC-SOIL
Prep Type: TCLP
Prep Batch: 742436

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.0060	J	1.00	0.977		mg/L		97	75 - 125
Barium	0.19	J	1.00	1.18		mg/L		99	75 - 125
Beryllium	0.0020	U	0.496	0.494		mg/L		100	75 - 125
Cadmium	0.0020	U	0.500	0.496		mg/L		99	75 - 125
Chromium	0.020	U	0.500	0.470		mg/L		94	75 - 125
Copper	0.022		0.500	0.522		mg/L		100	75 - 125
Lead	0.020	U	0.500	0.515		mg/L		103	75 - 125
Nickel	0.0088	J ^5-	0.500	0.468	^5-	mg/L		92	75 - 125
Selenium	0.025	U	1.00	0.947		mg/L		95	75 - 125
Silver	0.0060	U ^5-	0.0500	0.0506	^5-	mg/L		101	75 - 125
Zinc	0.050	U	0.500	0.410		mg/L		82	75 - 125

Lab Sample ID: 480-228240-10 MSD
Matrix: Solid
Analysis Batch: 742575

Client Sample ID: WC-SOIL
Prep Type: TCLP
Prep Batch: 742436

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	0.0060	J	1.00	0.972		mg/L		97	75 - 125	1	20
Barium	0.19	J	1.00	1.18		mg/L		99	75 - 125	0	20
Beryllium	0.0020	U	0.496	0.492		mg/L		99	75 - 125	0	20
Cadmium	0.0020	U	0.500	0.492		mg/L		98	75 - 125	1	20
Chromium	0.020	U	0.500	0.465		mg/L		93	75 - 125	1	20
Copper	0.022		0.500	0.518		mg/L		99	75 - 125	1	20
Lead	0.020	U	0.500	0.518		mg/L		104	75 - 125	1	20
Nickel	0.0088	J ^5-	0.500	0.465	^5-	mg/L		91	75 - 125	1	20

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: 480-228240-10 MSD
Matrix: Solid
Analysis Batch: 742575

Client Sample ID: WC-SOIL
Prep Type: TCLP
Prep Batch: 742436

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Selenium	0.025	U	1.00	0.933		mg/L		93	75 - 125	1	20
Silver	0.0060	U ^5-	0.0500	0.0502	^5-	mg/L		100	75 - 125	1	20
Zinc	0.050	U	0.500	0.405		mg/L		81	75 - 125	1	20

Method: 7470A - TCLP Mercury

Lab Sample ID: MB 480-742440/2-A
Matrix: Solid
Analysis Batch: 742534

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 742440

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000042	mg/L		04/02/25 12:07	04/02/25 15:03	1

Lab Sample ID: LCS 480-742440/3-A
Matrix: Solid
Analysis Batch: 742534

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 742440

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00670	0.00612		mg/L		91	80 - 120

Lab Sample ID: 480-228240-10 MS
Matrix: Solid
Analysis Batch: 742534

Client Sample ID: WC-SOIL
Prep Type: TCLP
Prep Batch: 742440

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00020	U	0.00670	0.00606		mg/L		90	80 - 120

Lab Sample ID: 480-228240-10 MSD
Matrix: Solid
Analysis Batch: 742534

Client Sample ID: WC-SOIL
Prep Type: TCLP
Prep Batch: 742440

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.00020	U	0.00670	0.00601		mg/L		90	80 - 120	1	20

Method: 1010B - Ignitability, Pensky-Martens Closed-Cup Method

Lab Sample ID: LCS 480-742035/1
Matrix: Solid
Analysis Batch: 742035

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Flashpoint	81.0	82.40		Degrees F		102	97.5 - 102.5

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-742057/28
Matrix: Water
Analysis Batch: 742057

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2.0	U	2.0	0.35	mg/L			03/28/25 18:17	1

Lab Sample ID: LCS 480-742057/29
Matrix: Water
Analysis Batch: 742057

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	50.1	48.49		mg/L		97	90 - 110

Lab Sample ID: 480-228240-3 MS
Matrix: Water
Analysis Batch: 742057

Client Sample ID: PZ-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	5.7		50.1	55.50		mg/L		100	80 - 120

Lab Sample ID: MB 480-742236/4
Matrix: Water
Analysis Batch: 742236

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2.0	U	2.0	0.35	mg/L			03/31/25 15:04	1

Lab Sample ID: LCS 480-742236/5
Matrix: Water
Analysis Batch: 742236

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	50.1	48.60		mg/L		97	90 - 110

Method: 9012 - Cyanide, Reactive

Lab Sample ID: MB 480-742668/1-A
Matrix: Solid
Analysis Batch: 742772

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 742668

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Reactive	10.0	U	10.0	10.0	mg/Kg		04/03/25 17:56	04/04/25 15:31	1

Lab Sample ID: LCS 480-742668/2-A
Matrix: Solid
Analysis Batch: 742772

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 742668

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Reactive	1000	582.3		mg/Kg		58	10 - 100

Method: 9034 - Sulfide, Reactive

Lab Sample ID: MB 480-742669/1-A
Matrix: Solid
Analysis Batch: 742751

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 742669

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Reactive	10.0	U	10.0	10.0	mg/Kg		04/03/25 17:56	04/04/25 13:00	1

Lab Sample ID: LCS 480-742669/2-A
Matrix: Solid
Analysis Batch: 742751

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 742669

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide, Reactive	800	701.3		mg/Kg		88	10 - 100

Method: 9045D - pH

Lab Sample ID: LCS 480-742487/1
Matrix: Solid
Analysis Batch: 742487

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.1		SU		101	99 - 101

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-742168/28
Matrix: Water
Analysis Batch: 742168

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	1.0	U	1.0	0.43	mg/L			03/29/25 03:46	1

Lab Sample ID: MB 480-742168/4
Matrix: Water
Analysis Batch: 742168

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	1.0	U	1.0	0.43	mg/L			03/28/25 16:14	1

Lab Sample ID: LCS 480-742168/29
Matrix: Water
Analysis Batch: 742168

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	30.0	31.30		mg/L		104	90 - 110

Lab Sample ID: LCS 480-742168/5
Matrix: Water
Analysis Batch: 742168

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	30.0	32.04		mg/L		107	90 - 110

GC/MS VOA

Analysis Batch: 742068

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-1	PZ-4	Total/NA	Water	8260C	
480-228240-2	PZ-3	Total/NA	Water	8260C	
480-228240-5	MW-3D	Total/NA	Water	8260C	
MB 480-742068/8	Method Blank	Total/NA	Water	8260C	
LCS 480-742068/6	Lab Control Sample	Total/NA	Water	8260C	

Prep Batch: 742122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	Total/NA	Solid	5035A_L	
MB 480-742122/2-A	Method Blank	Total/NA	Solid	5035A_L	
LCS 480-742122/1-A	Lab Control Sample	Total/NA	Solid	5035A_L	

Analysis Batch: 742123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	Total/NA	Solid	8260C	742122
MB 480-742122/2-A	Method Blank	Total/NA	Solid	8260C	742122
LCS 480-742122/1-A	Lab Control Sample	Total/NA	Solid	8260C	742122

Analysis Batch: 742195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-3	PZ-2	Total/NA	Water	8260C	
480-228240-4	PZ-1	Total/NA	Water	8260C	
480-228240-6	MW-3S	Total/NA	Water	8260C	
480-228240-7	MW-7	Total/NA	Water	8260C	
480-228240-8	TRIP BLANK	Total/NA	Water	8260C	
MB 480-742195/8	Method Blank	Total/NA	Water	8260C	
LCS 480-742195/6	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 742215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-9	WC-WATER	Total/NA	Water	8260C	
MB 480-742215/8	Method Blank	Total/NA	Water	8260C	
LCS 480-742215/6	Lab Control Sample	Total/NA	Water	8260C	

Leach Batch: 742331

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	TCLP	Solid	1311	
LB 480-742331/1-A	Method Blank	TCLP	Solid	1311	

Analysis Batch: 742432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	TCLP	Solid	8260C	742331
LB 480-742331/1-A	Method Blank	TCLP	Solid	8260C	742331
MB 480-742432/8	Method Blank	Total/NA	Solid	8260C	
LCS 480-742432/6	Lab Control Sample	Total/NA	Solid	8260C	

GC/MS Semi VOA

Prep Batch: 742157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	Total/NA	Solid	3550C	

GC/MS Semi VOA (Continued)

Prep Batch: 742157 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-742157/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-742157/2-A	Lab Control Sample	Total/NA	Solid	3550C	

Analysis Batch: 742251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-742157/2-A	Lab Control Sample	Total/NA	Solid	8270D	742157

Leach Batch: 742325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	TCLP	Solid	1311	
LB 480-742325/1-E	Method Blank	TCLP	Solid	1311	

Analysis Batch: 742326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	Total/NA	Solid	8270D	742157
MB 480-742157/1-A	Method Blank	Total/NA	Solid	8270D	742157

Prep Batch: 742501

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	TCLP	Solid	3510C	742325
LB 480-742325/1-E	Method Blank	TCLP	Solid	3510C	742325
MB 480-742501/1-A	Method Blank	Total/NA	Solid	3510C	
LCS 480-742501/2-A	Lab Control Sample	Total/NA	Solid	3510C	
LCSD 480-742501/3-A	Lab Control Sample Dup	Total/NA	Solid	3510C	

Analysis Batch: 742581

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	TCLP	Solid	8270D	742501
LB 480-742325/1-E	Method Blank	TCLP	Solid	8270D	742501
MB 480-742501/1-A	Method Blank	Total/NA	Solid	8270D	742501
LCS 480-742501/2-A	Lab Control Sample	Total/NA	Solid	8270D	742501
LCSD 480-742501/3-A	Lab Control Sample Dup	Total/NA	Solid	8270D	742501

GC VOA

Analysis Batch: 742160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-1	PZ-4	Total/NA	Water	RSK-175	
480-228240-1 - DL	PZ-4	Total/NA	Water	RSK-175	
480-228240-2	PZ-3	Total/NA	Water	RSK-175	
480-228240-2 - DL	PZ-3	Total/NA	Water	RSK-175	
480-228240-3	PZ-2	Total/NA	Water	RSK-175	
480-228240-3 - DL	PZ-2	Total/NA	Water	RSK-175	
480-228240-4	PZ-1	Total/NA	Water	RSK-175	
480-228240-4 - DL	PZ-1	Total/NA	Water	RSK-175	
480-228240-5	MW-3D	Total/NA	Water	RSK-175	
480-228240-5 - DL	MW-3D	Total/NA	Water	RSK-175	
480-228240-6	MW-3S	Total/NA	Water	RSK-175	
480-228240-6 - DL	MW-3S	Total/NA	Water	RSK-175	
480-228240-7	MW-7	Total/NA	Water	RSK-175	
MB 480-742160/5	Method Blank	Total/NA	Water	RSK-175	

GC VOA (Continued)

Analysis Batch: 742160 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-742160/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-742160/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

GC Semi VOA

Prep Batch: 742158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	Total/NA	Solid	3550C	
MB 480-742158/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-742158/2-A	Lab Control Sample	Total/NA	Solid	3550C	
480-228240-10 MS	WC-SOIL	Total/NA	Solid	3550C	
480-228240-10 MSD	WC-SOIL	Total/NA	Solid	3550C	

Analysis Batch: 742161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	Total/NA	Solid	8082A	742158
MB 480-742158/1-A	Method Blank	Total/NA	Solid	8082A	742158
LCS 480-742158/2-A	Lab Control Sample	Total/NA	Solid	8082A	742158
480-228240-10 MS	WC-SOIL	Total/NA	Solid	8082A	742158
480-228240-10 MSD	WC-SOIL	Total/NA	Solid	8082A	742158

Leach Batch: 742325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	TCLP	Solid	1311	
LB 480-742325/1-C	Method Blank	TCLP	Solid	1311	
LB 480-742325/1-D	Method Blank	TCLP	Solid	1311	

Prep Batch: 742495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	TCLP	Solid	8151A	742325
LB 480-742325/1-C	Method Blank	TCLP	Solid	8151A	742325
MB 480-742495/1-A	Method Blank	Total/NA	Solid	8151A	
LCS 480-742495/2-A	Lab Control Sample	Total/NA	Solid	8151A	
LCSD 480-742495/3-A	Lab Control Sample Dup	Total/NA	Solid	8151A	

Prep Batch: 742496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	TCLP	Solid	3510C	742325
LB 480-742325/1-D	Method Blank	TCLP	Solid	3510C	742325
MB 480-742496/1-A	Method Blank	Total/NA	Solid	3510C	
LCS 480-742496/2-A	Lab Control Sample	Total/NA	Solid	3510C	
LCSD 480-742496/3-A	Lab Control Sample Dup	Total/NA	Solid	3510C	

Analysis Batch: 742563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	TCLP	Solid	8081B	742496
LB 480-742325/1-D	Method Blank	TCLP	Solid	8081B	742496
MB 480-742496/1-A	Method Blank	Total/NA	Solid	8081B	742496
LCS 480-742496/2-A	Lab Control Sample	Total/NA	Solid	8081B	742496
LCSD 480-742496/3-A	Lab Control Sample Dup	Total/NA	Solid	8081B	742496

GC Semi VOA

Analysis Batch: 742609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	TCLP	Solid	8151	742495
LB 480-742325/1-C	Method Blank	TCLP	Solid	8151	742495
MB 480-742495/1-A	Method Blank	Total/NA	Solid	8151	742495
LCS 480-742495/2-A	Lab Control Sample	Total/NA	Solid	8151	742495
LCSD 480-742495/3-A	Lab Control Sample Dup	Total/NA	Solid	8151	742495

Metals

Prep Batch: 742117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-1	PZ-4	Dissolved	Water	3005A	
480-228240-2	PZ-3	Dissolved	Water	3005A	
480-228240-3	PZ-2	Dissolved	Water	3005A	
480-228240-4	PZ-1	Dissolved	Water	3005A	
480-228240-5	MW-3D	Dissolved	Water	3005A	
480-228240-6	MW-3S	Dissolved	Water	3005A	
480-228240-7	MW-7	Dissolved	Water	3005A	
MB 480-742117/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 480-742117/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
480-228240-1 MS	PZ-4	Dissolved	Water	3005A	
480-228240-1 MSD	PZ-4	Dissolved	Water	3005A	

Leach Batch: 742325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	TCLP	Solid	1311	
LB 480-742325/1-B	Method Blank	TCLP	Solid	1311	
480-228240-10 MS	WC-SOIL	TCLP	Solid	1311	
480-228240-10 MSD	WC-SOIL	TCLP	Solid	1311	

Analysis Batch: 742428

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-1	PZ-4	Dissolved	Water	6010D	742117
480-228240-2	PZ-3	Dissolved	Water	6010D	742117
480-228240-3	PZ-2	Dissolved	Water	6010D	742117
480-228240-4	PZ-1	Dissolved	Water	6010D	742117
480-228240-5	MW-3D	Dissolved	Water	6010D	742117
480-228240-6	MW-3S	Dissolved	Water	6010D	742117
480-228240-7	MW-7	Dissolved	Water	6010D	742117
MB 480-742117/1-A	Method Blank	Total Recoverable	Water	6010D	742117
LCS 480-742117/2-A	Lab Control Sample	Total Recoverable	Water	6010D	742117
480-228240-1 MS	PZ-4	Dissolved	Water	6010D	742117
480-228240-1 MSD	PZ-4	Dissolved	Water	6010D	742117

Prep Batch: 742436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	TCLP	Solid	3010A	742325
LB 480-742325/1-B	Method Blank	TCLP	Solid	3010A	742325
MB 480-742436/2-A	Method Blank	Total/NA	Solid	3010A	
LCS 480-742436/3-A	Lab Control Sample	Total/NA	Solid	3010A	
480-228240-10 MS	WC-SOIL	TCLP	Solid	3010A	742325
480-228240-10 MSD	WC-SOIL	TCLP	Solid	3010A	742325

Metals

Prep Batch: 742440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	TCLP	Solid	7470A	742325
MB 480-742440/2-A	Method Blank	Total/NA	Solid	7470A	
LCS 480-742440/3-A	Lab Control Sample	Total/NA	Solid	7470A	
480-228240-10 MS	WC-SOIL	TCLP	Solid	7470A	742325
480-228240-10 MSD	WC-SOIL	TCLP	Solid	7470A	742325

Analysis Batch: 742534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	TCLP	Solid	7470A	742440
MB 480-742440/2-A	Method Blank	Total/NA	Solid	7470A	742440
LCS 480-742440/3-A	Lab Control Sample	Total/NA	Solid	7470A	742440
480-228240-10 MS	WC-SOIL	TCLP	Solid	7470A	742440
480-228240-10 MSD	WC-SOIL	TCLP	Solid	7470A	742440

Analysis Batch: 742575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	TCLP	Solid	6010D	742436
LB 480-742325/1-B	Method Blank	TCLP	Solid	6010D	742436
MB 480-742436/2-A	Method Blank	Total/NA	Solid	6010D	742436
LCS 480-742436/3-A	Lab Control Sample	Total/NA	Solid	6010D	742436
480-228240-10 MS	WC-SOIL	TCLP	Solid	6010D	742436
480-228240-10 MSD	WC-SOIL	TCLP	Solid	6010D	742436

General Chemistry

Analysis Batch: 742035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	Total/NA	Solid	1010B	
LCS 480-742035/1	Lab Control Sample	Total/NA	Solid	1010B	

Analysis Batch: 742057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-1	PZ-4	Total/NA	Water	300.0	
480-228240-2	PZ-3	Total/NA	Water	300.0	
480-228240-3	PZ-2	Total/NA	Water	300.0	
MB 480-742057/28	Method Blank	Total/NA	Water	300.0	
LCS 480-742057/29	Lab Control Sample	Total/NA	Water	300.0	
480-228240-3 MS	PZ-2	Total/NA	Water	300.0	

Analysis Batch: 742103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	Total/NA	Solid	Moisture	

Analysis Batch: 742168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-1	PZ-4	Total/NA	Water	9060A	
480-228240-2	PZ-3	Total/NA	Water	9060A	
480-228240-3	PZ-2	Total/NA	Water	9060A	
480-228240-4	PZ-1	Total/NA	Water	9060A	
480-228240-5	MW-3D	Total/NA	Water	9060A	
480-228240-6	MW-3S	Total/NA	Water	9060A	

General Chemistry (Continued)

Analysis Batch: 742168 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-7	MW-7	Total/NA	Water	9060A	
MB 480-742168/28	Method Blank	Total/NA	Water	9060A	
MB 480-742168/4	Method Blank	Total/NA	Water	9060A	
LCS 480-742168/29	Lab Control Sample	Total/NA	Water	9060A	
LCS 480-742168/5	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 742236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-4	PZ-1	Total/NA	Water	300.0	
480-228240-5	MW-3D	Total/NA	Water	300.0	
480-228240-6	MW-3S	Total/NA	Water	300.0	
480-228240-7	MW-7	Total/NA	Water	300.0	
MB 480-742236/4	Method Blank	Total/NA	Water	300.0	
LCS 480-742236/5	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 742487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	Total/NA	Solid	9045D	
LCS 480-742487/1	Lab Control Sample	Total/NA	Solid	9045D	

Prep Batch: 742668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	Total/NA	Solid	7.3.3	
MB 480-742668/1-A	Method Blank	Total/NA	Solid	7.3.3	
LCS 480-742668/2-A	Lab Control Sample	Total/NA	Solid	7.3.3	

Prep Batch: 742669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	Total/NA	Solid	7.3.4	
MB 480-742669/1-A	Method Blank	Total/NA	Solid	7.3.4	
LCS 480-742669/2-A	Lab Control Sample	Total/NA	Solid	7.3.4	

Analysis Batch: 742751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	Total/NA	Solid	9034	742669
MB 480-742669/1-A	Method Blank	Total/NA	Solid	9034	742669
LCS 480-742669/2-A	Lab Control Sample	Total/NA	Solid	9034	742669

Analysis Batch: 742772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-10	WC-SOIL	Total/NA	Solid	9012	742668
MB 480-742668/1-A	Method Blank	Total/NA	Solid	9012	742668
LCS 480-742668/2-A	Lab Control Sample	Total/NA	Solid	9012	742668

Field Service / Mobile Lab

Analysis Batch: 742645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-228240-9	WC-WATER	Total/NA	Water	Field Sampling	

Lab Chronicle

Client: Arcadis U.S., Inc.
Job ID: 480-228240-1
Project/Site: BMS Krutulis GW Sampling Project

Client Sample ID: PZ-4
Lab Sample ID: 480-228240-1
Date Collected: 03/26/25 10:50
Matrix: Water
Date Received: 03/28/25 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		20	742068	LCH	EET BUF	03/28/25 17:03
Total/NA	Analysis	RSK-175		1	742160	MAN	EET BUF	03/31/25 09:47
Total/NA	Analysis	RSK-175	DL	22	742160	MAN	EET BUF	03/31/25 11:59
Dissolved	Prep	3005A			742117	EMO	EET BUF	03/29/25 09:42
Dissolved	Analysis	6010D		1	742428	BMB	EET BUF	04/01/25 17:22
Total/NA	Analysis	300.0		1	742057	AF	EET BUF	03/28/25 22:41
Total/NA	Analysis	9060A		1	742168	AF	EET BUF	03/29/25 00:22

Client Sample ID: PZ-3
Lab Sample ID: 480-228240-2
Date Collected: 03/26/25 11:00
Matrix: Water
Date Received: 03/28/25 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		10	742068	LCH	EET BUF	03/28/25 17:25
Total/NA	Analysis	RSK-175		1	742160	MAN	EET BUF	03/31/25 10:06
Total/NA	Analysis	RSK-175	DL	22	742160	MAN	EET BUF	03/31/25 12:18
Dissolved	Prep	3005A			742117	EMO	EET BUF	03/29/25 09:42
Dissolved	Analysis	6010D		1	742428	BMB	EET BUF	04/01/25 17:37
Total/NA	Analysis	300.0		1	742057	AF	EET BUF	03/28/25 22:55
Total/NA	Analysis	9060A		1	742168	AF	EET BUF	03/29/25 00:52

Client Sample ID: PZ-2
Lab Sample ID: 480-228240-3
Date Collected: 03/26/25 12:20
Matrix: Water
Date Received: 03/28/25 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		100	742195	ERS	EET BUF	03/31/25 18:55
Total/NA	Analysis	RSK-175		1	742160	MAN	EET BUF	03/31/25 10:25
Total/NA	Analysis	RSK-175	DL	22	742160	MAN	EET BUF	03/31/25 12:37
Dissolved	Prep	3005A			742117	EMO	EET BUF	03/29/25 09:42
Dissolved	Analysis	6010D		1	742428	BMB	EET BUF	04/01/25 17:39
Total/NA	Analysis	300.0		1	742057	AF	EET BUF	03/28/25 23:10
Total/NA	Analysis	9060A		1	742168	AF	EET BUF	03/29/25 01:21

Client Sample ID: PZ-1
Lab Sample ID: 480-228240-4
Date Collected: 03/26/25 12:35
Matrix: Water
Date Received: 03/28/25 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		1	742195	ERS	EET BUF	03/31/25 19:19
Total/NA	Analysis	RSK-175		1	742160	MAN	EET BUF	03/31/25 10:44
Total/NA	Analysis	RSK-175	DL	220	742160	MAN	EET BUF	03/31/25 13:52

Lab Chronicle

Client: Arcadis U.S., Inc.
Job ID: 480-228240-1
Project/Site: BMS Krutulis GW Sampling Project

Client Sample ID: PZ-1
Lab Sample ID: 480-228240-4
Date Collected: 03/26/25 12:35
Matrix: Water
Date Received: 03/28/25 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3005A			742117	EMO	EET BUF	03/29/25 09:42
Dissolved	Analysis	6010D		1	742428	BMB	EET BUF	04/01/25 17:41
Total/NA	Analysis	300.0		1	742236	AF	EET BUF	03/31/25 15:48
Total/NA	Analysis	9060A		1	742168	AF	EET BUF	03/29/25 01:49

Client Sample ID: MW-3D
Lab Sample ID: 480-228240-5
Date Collected: 03/27/25 10:05
Matrix: Water
Date Received: 03/28/25 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		4	742068	LCH	EET BUF	03/28/25 18:33
Total/NA	Analysis	RSK-175		1	742160	MAN	EET BUF	03/31/25 11:03
Total/NA	Analysis	RSK-175	DL	22	742160	MAN	EET BUF	03/31/25 13:15
Dissolved	Prep	3005A			742117	EMO	EET BUF	03/29/25 09:42
Dissolved	Analysis	6010D		1	742428	BMB	EET BUF	04/01/25 17:42
Total/NA	Analysis	300.0		1	742236	AF	EET BUF	03/31/25 16:03
Total/NA	Analysis	9060A		1	742168	AF	EET BUF	03/29/25 02:18

Client Sample ID: MW-3S
Lab Sample ID: 480-228240-6
Date Collected: 03/27/25 10:10
Matrix: Water
Date Received: 03/28/25 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		50	742195	ERS	EET BUF	03/31/25 19:43
Total/NA	Analysis	RSK-175		1	742160	MAN	EET BUF	03/31/25 11:22
Total/NA	Analysis	RSK-175	DL	22	742160	MAN	EET BUF	03/31/25 13:34
Dissolved	Prep	3005A			742117	EMO	EET BUF	03/29/25 09:42
Dissolved	Analysis	6010D		1	742428	BMB	EET BUF	04/01/25 17:44
Total/NA	Analysis	300.0		1	742236	AF	EET BUF	03/31/25 16:17
Total/NA	Analysis	9060A		1	742168	AF	EET BUF	03/29/25 06:40

Client Sample ID: MW-7
Lab Sample ID: 480-228240-7
Date Collected: 03/27/25 11:56
Matrix: Water
Date Received: 03/28/25 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		1	742195	ERS	EET BUF	03/31/25 20:07
Total/NA	Analysis	RSK-175		1	742160	MAN	EET BUF	03/31/25 11:40
Dissolved	Prep	3005A			742117	EMO	EET BUF	03/29/25 09:42
Dissolved	Analysis	6010D		1	742428	BMB	EET BUF	04/01/25 17:46
Total/NA	Analysis	300.0		1	742236	AF	EET BUF	03/31/25 16:32
Total/NA	Analysis	9060A		1	742168	AF	EET BUF	03/29/25 07:09

Lab Chronicle

Client: Arcadis U.S., Inc.
Job ID: 480-228240-1
Project/Site: BMS Krutulis GW Sampling Project

Client Sample ID: TRIP BLANK
Lab Sample ID: 480-228240-8
Date Collected: 03/27/25 00:00
Matrix: Water
Date Received: 03/28/25 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		1	742195	ERS	EET BUF	03/31/25 20:31

Client Sample ID: WC-WATER
Lab Sample ID: 480-228240-9
Date Collected: 03/27/25 12:10
Matrix: Water
Date Received: 03/28/25 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		5	742215	AXK	EET BUF	04/01/25 04:31
Total/NA	Analysis	Field Sampling		1	742645	JRS1	EET BUF	03/27/25 12:10

Client Sample ID: WC-SOIL
Lab Sample ID: 480-228240-10
Date Collected: 03/27/25 12:00
Matrix: Solid
Date Received: 03/28/25 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			742331	SMP	EET BUF	04/01/25 09:14 - 04/02/25 09:04 [1]
TCLP	Analysis	8260C		10	742432	LCH	EET BUF	04/02/25 15:37
TCLP	Leach	1311			742325	SMP	EET BUF	04/01/25 09:09 - 04/02/25 08:21 [1]
TCLP	Prep	3510C			742501	LSC	EET BUF	04/02/25 13:37
TCLP	Analysis	8270D		1	742581	JMM	EET BUF	04/03/25 14:15
TCLP	Leach	1311			742325	SMP	EET BUF	04/01/25 09:09 - 04/02/25 08:21 [1]
TCLP	Prep	3510C			742496	LSC	EET BUF	04/02/25 13:29
TCLP	Analysis	8081B		1	742563	JLS	EET BUF	04/03/25 11:41
Total/NA	Prep	3550C			742158	DP	EET BUF	03/31/25 06:44
Total/NA	Analysis	8082A		1	742161	W1T	EET BUF	03/31/25 15:11
TCLP	Leach	1311			742325	SMP	EET BUF	04/01/25 09:09 - 04/02/25 08:21 [1]
TCLP	Prep	8151A			742495	LSC	EET BUF	04/02/25 13:24
TCLP	Analysis	8151		1	742609	MAN	EET BUF	04/03/25 13:58
TCLP	Leach	1311			742325	SMP	EET BUF	04/01/25 09:09 - 04/02/25 08:21 [1]
TCLP	Prep	3010A			742436	EMO	EET BUF	04/02/25 08:38
TCLP	Analysis	6010D		1	742575	BMB	EET BUF	04/02/25 17:09
TCLP	Leach	1311			742325	SMP	EET BUF	04/01/25 09:09 - 04/02/25 08:21 [1]
TCLP	Prep	7470A			742440	ESB	EET BUF	04/02/25 12:07
TCLP	Analysis	7470A		1	742534	ESB	EET BUF	04/02/25 15:08
Total/NA	Analysis	1010B		1	742035	KM	EET BUF	03/28/25 11:38
Total/NA	Prep	7.3.3			742668	GW	EET BUF	04/03/25 17:56
Total/NA	Analysis	9012		1	742772	AM	EET BUF	04/04/25 15:43
Total/NA	Prep	7.3.4			742669	GW	EET BUF	04/03/25 17:56
Total/NA	Analysis	9034		1	742751	AM	EET BUF	04/04/25 13:00
Total/NA	Analysis	9045D		1	742487	CG	EET BUF	04/02/25 09:15
Total/NA	Analysis	Moisture		1	742103	AF	EET BUF	03/28/25 15:19

Lab Chronicle

Client: Arcadis U.S., Inc.
Job ID: 480-228240-1
Project/Site: BMS Krutulis GW Sampling Project

Client Sample ID: WC-SOIL
Lab Sample ID: 480-228240-10

Date Collected: 03/27/25 12:00
Matrix: Solid
Date Received: 03/28/25 08:30
Percent Solids: 81.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035A_L			742122	CDC	EET BUF	03/29/25 07:04
Total/NA	Analysis	8260C		1	742123	CDC	EET BUF	03/29/25 17:35
Total/NA	Prep	3550C			742157	DP	EET BUF	03/31/25 06:36
Total/NA	Analysis	8270D		1	742326	AF	EET BUF	04/01/25 20:43

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Accreditation/Certification Summary

Client: Arcadis U.S., Inc.
Job ID: 480-228240-1
Project/Site: BMS Krutulis GW Sampling Project

Laboratory: Eurofins Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	03-31-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
7470A	7470A	Solid	Mercury
9012	7.3.3	Solid	Cyanide, Reactive
9034	7.3.4	Solid	Sulfide, Reactive
9045D		Solid	Temperature
Field Sampling		Water	Field pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Arcadis U.S., Inc.
Project/Site: BMS Krutulis GW Sampling Project

Job ID: 480-228240-1

Method	Method Description	Protocol	Laboratory
8260C	TCLP Volatiles	SW846	EET BUF
8260C	Volatile Organic Compounds by GC/MS	SW846	EET BUF
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET BUF
RSK-175	Dissolved Gases (GC)	RSK	EET BUF
8081B	Organochlorine Pesticides (GC)	SW846	EET BUF
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET BUF
8151	TCLP Herbicides	SW846	EET BUF
6010D	Metals (ICP)	SW846	EET BUF
7470A	TCLP Mercury	SW846	EET BUF
1010B	Ignitability, Pensky-Martens Closed-Cup Method	SW846	EET BUF
300.0	Anions, Ion Chromatography	EPA	EET BUF
9012	Cyanide, Reactive	SW846	EET BUF
9034	Sulfide, Reactive	SW846	EET BUF
9045D	pH	SW846	EET BUF
9060A	Organic Carbon, Total (TOC)	SW846	EET BUF
Moisture	Percent Moisture	EPA	EET BUF
Field Sampling	Field Sampling	EPA	EET BUF
1311	TCLP Extraction	SW846	EET BUF
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET BUF
3010A	Preparation, Total Metals	SW846	EET BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET BUF
3550C	Ultrasonic Extraction	SW846	EET BUF
5030C	Purge and Trap	SW846	EET BUF
5035A_L	Closed System Purge and Trap	SW846	EET BUF
7.3.3	Cyanide, Reactive	SW846	EET BUF
7.3.4	Sulfide, Reactive	SW846	EET BUF
7470A	Preparation, Mercury	SW846	EET BUF
8151A	Extraction (Herbicides)	SW846	EET BUF

Protocol References:

EPA = US Environmental Protection Agency

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: Arcadis U.S., Inc.
Job ID: 480-228240-1
Project/Site: BMS Krutulis GW Sampling Project

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-228240-1	PZ-4	Water	03/26/25 10:50	03/28/25 08:30
480-228240-2	PZ-3	Water	03/26/25 11:00	03/28/25 08:30
480-228240-3	PZ-2	Water	03/26/25 12:20	03/28/25 08:30
480-228240-4	PZ-1	Water	03/26/25 12:35	03/28/25 08:30
480-228240-5	MW-3D	Water	03/27/25 10:05	03/28/25 08:30
480-228240-6	MW-3S	Water	03/27/25 10:10	03/28/25 08:30
480-228240-7	MW-7	Water	03/27/25 11:56	03/28/25 08:30
480-228240-8	TRIP BLANK	Water	03/27/25 00:00	03/28/25 08:30
480-228240-9	WC-WATER	Water	03/27/25 12:10	03/28/25 08:30
480-228240-10	WC-SOIL	Solid	03/27/25 12:00	03/28/25 08:30

Eurofins Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins Environment Testing

Syracuse #225

Client Information	Sampler: D. Acanzo	Lab PM: Schove, John R	Carrier Tracking No(s):	COC No: 480-203685-41607.1
Client Contact: Carla DaParma	Phone: 315-992-0568	E-Mail: John.Schove@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: Arcadis U.S., Inc.	PWSID:			Job #:
Address: Arcadis 2100 Georgetown Drive, Suite 402	Due Date Requested:			
City: Sewickley	TAT Requested (days): 10 Day Standard			
State, Zip: PA, 15143	Compliance Project: Δ Yes Δ No			
Phone: 724-742-9180(Tel) 724-742-9189(Fax)	PO #: 30239951.01			
Email: Carla.DaParma@arcadis-us.com	WO #: 30239951-090623			
Project Name: BMS Krutulis GW Sampling Project	Project #: 48027987			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
N - None
D - HNO3
A - HCL
S - H2SO4

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300.0_28D - Sulfate	6010D - Dissolved Iron (Field Filtered)	RSK_175 - Methane, Ethane, Ethene	8260C - VOCs - Site Specific List	9060A - Organic Carbon, Total (TOC)	TCL VOC - 8260C (Full list)	9010 Reactive CN 9034 Reactive	6010D, 7470A, 8081B, 8151A, 8270D (Full list)	8260C - TCLP Volatiles (Full list)	1010B, 9045D	8082A - TCL PCBs	8270D - TCL SVOC (Full list)	8260C - TCL VOC (Full list)	Total Number of containers	Special Instructions/Note:
				Preservation Code:			N	D	A	A	A	A	N	N	N	N	N	N	N		
PZ-4	3-26-25	1050	G	Water	X		X	X	X	X	X									11	Metals Filtered
PZ-3	3-26-25	1100	G	Water	X		X	X	X	X	X									11	"
PZ-2	3-26-25	1220	G	Water	X		X	X	X	X	X									11	"
PZ-1	3-26-25	1235	G	Water	X		X	X	X	X	X									11	"
MW-3D	3-27-25	1005	G	Water	X		X	X	X	X	X									11	"
MW-3S	3-27-25	1010	G	Water	X		X	X	X	X	X									11	"
MW-7	3-27-25	1156	G	Water	X		X	X	X	X	X									11	"
TRIP BLANK	–	–	G	Water						X										3	"
WC-Water	3-27-25	1210	G	Water								X								3	(Full list)
WC-Soil	3-27-25	1200	G	Soil									X	X	X	X	X	X	X	7	(Full list)

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ________ Months

Deliverable Requested: I, (II), III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:	
Relinquished by: D. Mahr	Date/Time: 3-27-25 1315	Company: ANA	Received by: K. English	Date/Time: 3-27-25, 1315	Company: Syr
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		

Ver: 10/10/2024

Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins Environment Testing

480-228240 Chain of Custody

#225

Client Information	Sampler: D. Ascanio	Lab PM: Schove, John R	COC No: 480-203685-41607.1
Client Contact: Carla DaParma	Phone: 315-992-0568	E-Mail: John.Schove@et.eurofinsus.com	Page: Page 1 of 1
Company: Arcadis U.S., Inc.	PWSID:		Job #:
Address: Arcadis 2100 Georgetown Drive, Suite 402	Due Date Requested:		Preservation Codes: N - None, D - HNO3, A - HCL, S - H2SO4
City: Sewickley	TAT Requested (days): 10 Day Standard		
State, Zip: PA, 15143	Compliance Project: Δ Yes Δ No		
Phone: 724-742-9180(Tel) 724-742-9189(Fax)	PO #: 30239951.01		
Email: Carla.DaParma@arcadis-us.com	WO #: 30239951-090623		
Project Name: BMS Krutulis GW Sampling Project	Project #: 48027987		
Site:	SSOW#:		Other:

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300.0_28D - Sulfate	6010D - Dissolved Iron (Field Filtered)	RSK_175 - Methane, Ethane, Ethene	8260C - VOCs - Site Specific List	9060A - Organic Carbon, Total (TOC)	TCL VOC - 8260C (Full list)	9010, Reactive CN 9034, Reactive	6010D, 7470A, 8081B, 8151A, 8270D	9260C - TCLP Volatiles (Full list)	1010B, 9045D	8082A - TCL PCBs	8270D - TCL SVOC (Full list)	8260C - TCL VOC (Full list)	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	N	D	A	A	A	A	N	N	N	N	N	N	N	X	
PZ-4	3-26-25	1050	G	Water	X		X	X	X	X	X									11	Metals Filtered
PZ-3	3-26-25	1100	G	Water	X		X	X	X	X	X									11	"
PZ-2	3-26-25	1220	G	Water	X		X	X	X	X	X									11	"
PZ-1	3-26-25	1235	G	Water	X		X	X	X	X	X									11	"
MW-3D	3-27-25	1005	G	Water	X		X	X	X	X	X									11	"
MW-3S	3-27-25	1010	G	Water	X		X	X	X	X	X									11	"
MW-7	3-27-25	1156	G	Water	X		X	X	X	X	X									11	"
TRIP BLANK	-	-	G	Water						X										3	"
WC-Water	3-27-25	1210	G	Water								X								3	(Full list)
WC-Soil	3-27-25	1200	G	Soil									X	X	X	X	X	X	X	7	(Full list)
-		Re-																			

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested: I, (II), III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	3-27-25 1315	ANA	R. English	3-27-25, 1315	[illegible]
R English	3-27-25 1900	[illegible]			
			[signature]	3/28/25 830	TAB

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 3.2 ICE IR#SC

Ver: 10/10/2024

Login Sample Receipt Checklist

Client: Arcadis U.S., Inc.

Job Number: 480-228240-1

Login Number: 228240
List Number: 1
Creator: Stopa, Erik S

List Source: Eurofins Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	ANA
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Bristol-Myers Squibb – Krutulis

Data Usability Summary Report

Kirkville, New York

Volatile Organic Compound (VOC), Dissolved Gases, Metals, and General Chemistry Analyses

SDG #480-228240-1

Analyses Performed By:
Eurofins Buffalo
Amherst, New York

Report #58697R
Review Level: Tier III
Project: 30238141.02

Summary

This Data Usability Summary Report (DUSR) summarizes the review of Sample Delivery Group (SDG) #480-228240-1 for samples collected in association with the with the Bristol-Myers Squibb Krutulis Site. The review was conducted as a Tier III evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis			
					VOC	GAS	MET	GEN CHEM
PZ-4	480-228240-1	Water	3/26/2025		X	X	X	X
PZ-3	480-228240-2	Water	3/26/2025		X	X	X	X
PZ-2	480-228240-3	Water	3/26/2025		X	X	X	X
PZ-1	480-228240-4	Water	3/26/2025		X	X	X	X
MW-3D	480-228240-5	Water	3/27/2025		X	X	X	X
MW-3S	480-228240-6	Water	3/27/2025		X	X	X	X
MW-7	480-228240-7	Water	3/27/2025		X	X	X	X
TRIP BLANK	480-228240-8	Water	3/27/2025		X			

Notes:

1. General Chemistry (GEN CHEM) analysis includes sulfate and total organic carbon.
2. Samples WC-WATER and WC-SOIL did not require data validation.

Analytical Data Package Documentation

The table below evaluates the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed chain-of-custody form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data package completeness and compliance		X		X	

Note:
QA = quality assurance

Organic Analysis Introduction

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 8260C and USEPA Method RSK-175. Data were reviewed in accordance with USEPA National Functional Guidelines for Organic Superfund Methods Data Review, EPA 540-R-20-005, November 2020 (with reference to the historical USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, OSWER 9240.1-05A-P, October 1999, as appropriate).

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers
  - U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
  - B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- Quantitation (Q) Qualifiers
  - E The compound was quantitated above the calibration range.
  - D Concentration is based on a diluted sample analysis.
- Validation Qualifiers
  - J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
  - UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
  - JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
  - UB Compound is considered non-detect at the listed value due to associated blank contamination.
  - N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
  - R The sample results are rejected.

The “R” flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. “R” values should not appear on data tables because they cannot be relied upon, even as a last resort. The second

fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Volatile Organic Compound (VOC) Analyses

1. Holding Times

The specified holding times for the following methods are presented in the table below.

Method	Matrix	Holding Time	Preservation
SW-846 8260C	Water	14 days from collection to analysis (preserved) 7 days from collection to analysis (non-preserved)	Cool to <6 °C; preserved to a pH of less than 2 s.u.

Note:
s.u. = standard units

All samples were analyzed within the specified holding time criterion.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

VOCs were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (20%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05). All target compounds associated with the initial calibration verification (ICV) standard must exhibit a percent difference (%D) less than the control limit (30%) and RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration verification (CCV) standard must exhibit a %D less than the control limit (20%) and RRF value greater than control limit (0.05).

The initial calibration, ICV, and CCV were within the specified control limits.

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria ensure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria require the internal standard compounds associated with the VOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

MS/MSD analysis was not performed using a sample from this SDG.

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water.

A field duplicate sample was not collected in association with this SDG.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist for VOCs

VOCs: SW-846 8260C	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks	X				X
C. Trip blanks		X		X	
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate (LCSD) %R	X				X
LCS/LCSD Precision (RPD)	X				X
Matrix Spike (MS) %R	X				X
Matrix Spike Duplicate (MSD) %R	X				X
MS/MSD Precision (RPD)	X				X
Field/Lab Duplicate (RPD)	X				X
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content	X				X
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X		X	
Instrument tune and performance check		X		X	

VOCs: SW-846 8260C	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Ion abundance criteria for each instrument used		X		X	
Internal standard		X		X	
Compound identification and quantitation					
A. Reconstructed ion chromatograms		X		X	
B. Quantitation Reports		X		X	
C. RT of sample compounds within the established RT windows		X		X	
D. Transcription/calculation errors present		X		X	
E. Reporting limits adjusted to reflect sample dilutions		X		X	

Notes:

%RSD Relative standard deviation
%R Percent recovery
RPD Relative percent difference
%D Percent difference

Dissolved Gases Analyses

1. Holding Times

The specified holding times for the following methods are presented in the table below.

Method	Matrix	Holding Time	Preservation
RSK-175	Water	14 days from collection to analysis (preserved) 7 days from collection to analysis (non-preserved)	Cool to <6 °C; preserved to a pH of less than 2 s.u.

Note:
s.u. = standard units

All samples were analyzed within the specified holding time criterion.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Dissolved gases were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. System Performance

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (20%) or a correlation coefficient greater than 0.99.

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%).

The initial calibration and continuing calibration results were within the specified control limits.

5. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

MS/MSD analysis was not performed using a sample from this SDG.

6. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The RPDs between the LCS and LCSD results must be within the laboratory-established acceptance limits.

The LCS/LCSD analysis exhibited recoveries and RPDs within the control limits.

7. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water.

A field duplicate sample was not collected in association with this SDG.

8. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows.

All identified compounds met the specified criteria.

9. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist for Dissolved Gases

Dissolved Gases: RSK-175	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/FLAME IONIZATION DETECTOR (GC/FID)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks	X				X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate (LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R	X				X
Matrix Spike Duplicate (MSD) %R	X				X
MS/MSD Precision (RPD)	X				X
Field/Lab Duplicate (RPD)	X				X
Dilution Factor		X		X	
Moisture Content	X				X
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration %Ds		X		X	
Compound identification and quantitation					
A. Quantitation Reports		X		X	
B. RT of sample compounds within the established RT windows		X		X	
C. Transcription/calculation errors present		X		X	

Dissolved Gases: RSK-175	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/FLAME IONIZATION DETECTOR (GC/FID)					
D. Reporting limits adjusted to reflect sample dilutions		X		X	

Notes:

%RSD Relative standard deviation
%R Percent recovery
RPD Relative percent difference
%D Percent difference

Inorganic Analysis Introduction

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Methods 6010D and 9060A and USEPA Method 300.0. Data were reviewed in accordance with USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, EPA 542-R-20-006, November 2020 (with reference to the historical USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, OSWER 9240.1-45, October 2004, as appropriate).

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and that it was already subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with the Ohio EPA and USEPA National Functional Guidelines:

- Concentration (C) Qualifiers
    - U The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.
    - J The reported value was obtained from a reading less than the reporting limit (RL), but greater than or equal to the method detection limit (MDL).
- Quantitation (Q) Qualifiers
    - E The reported value is estimated due to the presence of interference.
    - N Spiked sample recovery is not within control limits.
    - * Duplicate analysis is not within control limits.
- Validation Qualifiers
    - J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.
    - UJ The analyte was not detected above the reporting limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.
    - UB Analyte considered non-detect at the listed value due to associated blank contamination.
    - R The sample results are rejected.

Two facts should be noted by all data users. First, the “R” flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. “R” values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Metals Analyses

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 6010D	Water	180 days from collection to analysis	Preserved to a pH of less than 2 s.u.

Note:
s.u. = standard units

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Dissolved iron was not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. Calibration

Satisfactory instrument calibration is established to provide that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument's continuing performance is satisfactory.

3.1 Initial Calibration and Continuing Calibration

The correct number and type of standards were analyzed. The correlation coefficient of the initial calibration was greater than 0.995 for all non-ICP analytes and all initial calibration verification standard recoveries were within control limits.

All initial and continuing calibration verification standard recoveries were within the control limit.

3.2 Lower Limit of Quantitation Check Standard

The lower limit of quantitation check (LLQC) check standard serves to verify the linearity of calibration of the analysis at the reporting limit. The LLQC recoveries must be within 70 to 130%, and 50 to 150% for antimony (Sb), lead (Pb), and thallium (Tl). The LLQC standard is not required for the analysis of aluminum (Al), barium

(Ba), calcium (Ca), iron (Fe), magnesium (Mg), sodium (Na), and potassium (K). The criteria used to evaluate the LLQC standard analysis are presented below in the LLQC standards evaluation table (if applicable).

All LLQC standard recoveries were within control limits.

3.3 ICP Interference Control Sample (ICS)

The ICS verifies the laboratory interelement and background correction factors. In general, ICP-AES sample data can be accepted if the concentrations of Aluminum (Al), Calcium (Ca), Iron (Fe), and Magnesium (Mg) in the sample are found to be less than or equal to their respective concentrations in the ICS.

All ICS exhibited recoveries within the control limits of 80 to 120%.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD)/Laboratory Duplicate Analysis

MS/MSD and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

4.1 MS/MSD Analysis

All metal analytes must exhibit a percent recovery within the established acceptance limits of 75% to 125%. The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the analyte's concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater. In instance where this is true, the data will not be qualified even if the percent recovery does not meet the control limits and the laboratory flag will be removed.

The MS/MSD analysis performed on sample location PZ-4 exhibited recoveries within the control limits.

4.2 Laboratory Duplicate Analysis

The laboratory duplicate relative percent difference (RPD) criterion is applied when parent and duplicate sample concentrations are greater than or equal to 5 times the RL. A control limit of 20% for water matrices is applied when the criteria above is true. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of one time the RL is applied for water matrices.

MS/MSD analysis was performed in replacement of the laboratory duplicate analysis on sample location PZ-4. The MS/MSD recoveries exhibited acceptable RPD.

5. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

A field duplicate sample was not collected in association with this SDG.

6. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the accuracy of the analytical method independent of matrix interferences. The analytes associated with the LCS analysis must exhibit a percent recovery between the control limits of 80% and 120%.

The LCS analysis exhibited recoveries within the control limits.

7. Serial Dilution

The serial dilution analysis is used to assess if a significant physical or chemical interference exists due to sample matrix. Analytes exhibiting concentrations greater than 50 times the MDL in the undiluted sample are evaluated to determine if matrix interference exists. These analytes are required to have less than a 10% difference (%D) between sample results from the undiluted (parent) sample and results associated with the same sample analyzed with a five-fold dilution.

The serial dilution analysis performed on sample location PZ-4 exhibited %D within the control limit.

8. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist for Metals

METALS: SW-846 6010D	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
INDUCTIVELY COUPLED PLASMA-ATOMIC EMISSION SPECTROMETRY (ICP-AES)					
Tier II Validation					
Holding Times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Instrument Blanks		X		X	
B. Method Blanks		X		X	
C. Equipment/Field Blanks	X				X
Laboratory Control Sample (LCS)		X		X	
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate (MSD) %R		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)	X				X
ICP Serial Dilution %D		X		X	
Reporting Limit Verification		X		X	
Tier III Validation					
Initial Calibration Verification		X		X	
Continuing Calibration Verification		X		X	
LLQC Standard Recovery		X		X	
ICP Interference Check		X		X	
Transcription/calculations acceptable		X		X	
Raw Data		X		X	
Reporting limits adjusted to reflect sample dilutions		X		X	

Notes:

%R Percent recovery

RPD Relative percent difference

General Chemistry Analyses

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
Sulfate by USEPA 300.0	Water	28 days from collection to analysis	Cool to <6°C
Total Organic Carbon (TOC) by SW-846 9060A	Water	28 days from collection to analysis	Cool to <6 °C; preserved to a pH of less than 2 s.u.

Note:
s.u. = Standard units

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method blanks, equipment blanks, and trip blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks assess contamination introduced during sample preparation activities. Equipment blanks assess the adequacy of the decontamination process and assess contamination from sampling, sample preparation, and measurement processes.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Analytes were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. Calibration

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

The correct number and type of standards were analyzed. The correlation coefficient of the initial calibration was greater than 0.995 and all continuing calibration verification standard recoveries were within control limits.

4. Matrix Spike/Matrix Spik Duplicate (MS/MSD)/Laboratory Duplicate Analysis

MS/MSD and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

4.1 MS/MSD Analysis

All analytes must exhibit a percent recovery within the established acceptance limits of 75% to 125%. The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the analyte's concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater. In instance where this is true, the data will not be qualified even if the percent recovery does not meet the control limits and the laboratory flag will be removed.

The MS analysis performed on sample location PZ-2 in association with sulfate analysis exhibited recovery within the control limits.

MS/MSD analysis was not performed using a sample from this SDG in association with TOC analysis.

4.2 Laboratory Duplicate Analysis

The laboratory duplicate relative percent difference (RPD) criterion is applied when parent and duplicate sample concentrations are greater than or equal to 5 times the RL. A control limit of 20% for water matrices is applied when the criteria above is true. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of one time the RL is applied for water matrices.

Laboratory duplicate analysis was not performed using a sample from this SDG.

5. Field Duplicate Analysis

Field duplicate analysis is used to assess the overall precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

A field duplicate sample was not collected in association with this SDG.

6. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

The LCS analysis exhibited recoveries within the control limits.

7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

Data Validation Checklist for General Chemistry

GENERAL CHEMISTRY: USEPA 300.0 and SW-846 9060A	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
MISCELLANEOUS INSTRUMENTATION					
Tier II Validation					
Holding Times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Instrument Blanks		X		X	
B. Method Blanks		X		X	
C. Equipment/Field Blanks	X				X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate (LCSD) %R	X				X
LCS/LCSD Precision (RPD)	X				X
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate (MSD) %R	X				X
MS/MSD Precision (RPD)	X				X
Field/Lab Duplicate (RPD)	X				X
Tier III Validation					
Initial calibration %RSD or correlation coefficient		X		X	
Continuing calibration %R		X		X	
Raw Data					
Transcription/calculation errors present		X		X	
Reporting limits adjusted to reflect sample dilutions		X		X	

Notes:

%R Percent recovery

RPD Relative percent difference

SAMPLE COMPLIANCE REPORT

Sample Delivery Group (SDG)	Sampling Date	Protocol	Sample ID	Matrix	Compliancy[1]				Noncompliance
					VOC	GAS	MET	GEN CHEM	
480-228240-1	3/26/2025	SW-846	PZ-4	Water	Yes	Yes	Yes	Yes	
	3/26/2025	SW-846	PZ-3	Water	Yes	Yes	Yes	Yes	
	3/26/2025	SW-846	PZ-2	Water	Yes	Yes	Yes	Yes	
	3/26/2025	SW-846	PZ-1	Water	Yes	Yes	Yes	Yes	
	3/27/2025	SW-846	MW-3D	Water	Yes	Yes	Yes	Yes	
	3/27/2025	SW-846	MW-3S	Water	Yes	Yes	Yes	Yes	
	3/27/2025	SW-846	MW-7	Water	Yes	Yes	Yes	Yes	
	3/27/2025	SW-846	TRIP BLANK	Water	Yes	--	--	--	

Note:

[1] Samples which are compliant with no added validation qualifiers are listed as “yes”. Samples which are non-compliant or which have added qualifiers are listed as “no”. A “no” designation does not necessarily indicate that the data have been rejected or are otherwise unusable.

VALIDATION PERFORMED BY: Jennifer Singer

SIGNATURE: 

DATE: April 14, 2025

PEER REVIEW: Joseph C. Houser

DATE: April 15, 2025

Chain of Custody and Sample Analysis Data Sheets

Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

480-228240 Chain of Custody

eurofins Environment Testing

#225

Client Information	Sampler: D. Mearn?so
Client Contact: Carla DaParma	Phone: 315-992-0568
Company: Arcadis U.S., Inc.	PWSID:
Address: Arcadis 2100 Georgetown Drive, Suite 402	Due Date Requested:
City: Sewickley	TAT Requested (days): 10 Day Standard
State, Zip: PA, 15143	Compliance Project: Δ Yes Δ No
Phone: 724-742-9180(Tel) 724-742-9189(Fax)	PO #: 30239951.01
Email: Carla.DaParma@arcadis-us.com	WO #: 30239951-090623
Project Name: BMS Krutulis GW Sampling Project	Project #: 48027987
Site:	SSOW#:

Lab PM: Schove, John R
E-Mail: John.Schove@et.eurofinsus.com

COC No: 480-203685-41607.1
Page: Page 1 of 1
Job #:

Preservation Codes:
N - None
D - HNO3
A - HCL
S - H2SO4

Other:

Analysis Requested

Columns: (1) Field Filtered Sample (Yes or No); (2) Perform MS/MSD (Yes or No); (3) 300.0_28D - Sulfate; (4) 6010D - Dissolved Iron (Field Filtered); (5) RSK_175 - Methane, Ethane, Ethene; (6) 8260C - VOCs - Site Specific List; (7) 9060A - Organic Carbon, Total (TOC); (8) TCL VOC - 8260C (Full list); (9) 9012 Reactive CN 9034 Reactive; (10) 6010D_7470A, 8081B, 8151A, 8270D (Full list); (11) 8260C - TCLP Volatiles; (12) 1010_9045D; (13) 8082A - TCL PCBs; (14) 8270D - TCL SVOC (Full list); (15) 8260C - TCL VOC (Full list)

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total Number of containers	Special Instructions/Note:
Preservation Code:							N	D	A	A	S A	A	N	N	N	N	N	N	N		
PZ-4	3-26-25	1050	G	Water	X		X	X	X	X	X									11	Metals Filtered
PZ-3	3-26-25	1100	G	Water	X		X	X	X	X	X									11	"
PZ-2	3-26-25	1220	G	Water	X		X	X	X	X	X									11	"
PZ-1	3-26-25	1235	G	Water	X		X	X	X	X	X									11	"
MW-3D	3-27-25	1005	G	Water	X		X	X	X	X	X									11	"
MW-3S	3-27-25	1010	G	Water	X		X	X	X	X	X									11	"
MW-7	3-27-25	1156	G	Water	X		X	X	X	X	X									11	"
TRIP BLANK	–	–	G	Water						X										3	"
WC-Water	3-27-25	1210	G	Water								X								3	(Full list)
WC-Soil	3-27-25	1200	G	Soil									X	X	X	X	X	X	X	7	(Full list)
	–	Re–																			

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ______ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:
Relinquished by: D. Mahr	Date/Time: 3-27-25 1315	Company: ANA	Received by: R. English		Date/Time: 3-27-25, 1315	Company: Eyn
Relinquished by: R. English	Date/Time: 3-27-25, 1900	Company: Eyn	Received by:		Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by: [signature]		Date/Time: 3/28/25 830	Company: TA/O

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 3.2 ICE IR#SC

Ver: 10/10/2024

Page 67 of 68

4/7/2025

Definitions/Glossary

Client: Arcadis U.S., Inc. Job ID: 480-228240-1
Project/Site: BMS Krutulis GW Sampling Project

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.
vs	Reported analyte concentrations are below 200 ug/kg and may be biased low due to the sample not being collected according to 5035A-L low-level specifications.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
^5-	Linear Range Check (LRC) is outside acceptance limits, low biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
L	A negative instrument reading had an absolute value greater than the reporting limit
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number

Client Sample ID: PZ-4
Date Collected: 03/26/25 10:50
Date Received: 03/28/25 08:30

Lab Sample ID: 480-228240-1
Matrix: Water

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	20	U	20	5.8	ug/L			03/28/25 17:03	20
4-Methyl-2-pentanone (MIBK)	100	U	100	42	ug/L			03/28/25 17:03	20
Acetone	200	U	200	60	ug/L			03/28/25 17:03	20
Benzene	20	U	20	8.2	ug/L			03/28/25 17:03	20
Chloroform	20	U	20	6.8	ug/L			03/28/25 17:03	20
cis-1,2-Dichloroethene	**1200**		20	16	ug/L			03/28/25 17:03	20
Tetrachloroethene	20	U	20	7.2	ug/L			03/28/25 17:03	20
Toluene	**18**	**J**	20	10	ug/L			03/28/25 17:03	20
trans-1,2-Dichloroethene	**270**		20	18	ug/L			03/28/25 17:03	20
Trichloroethene	20	U	20	9.2	ug/L			03/28/25 17:03	20
Vinyl chloride	**73**		20	18	ug/L			03/28/25 17:03	20
Xylenes, Total	40	U	40	13	ug/L			03/28/25 17:03	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*77 - 120*		*03/28/25 17:03*	*20*
Dibromofluoromethane (Surr)	*95*		*75 - 123*		*03/28/25 17:03*	*20*
Toluene-d8 (Surr)	*96*		*80 - 120*		*03/28/25 17:03*	*20*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**1.7**	**J**	7.5	1.5	ug/L			03/31/25 09:47	1
Ethene	**1.5**	**J**	7.0	1.5	ug/L			03/31/25 09:47	1

Method: RSK-175 - Dissolved Gases (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**840**		88	22	ug/L			03/31/25 11:59	22

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**0.92**		0.050	0.019	mg/L		03/29/25 09:42	04/01/25 17:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (EPA 300.0)	**4.2**		2.0	0.35	mg/L			03/28/25 22:41	1
Total Organic Carbon (SW846 9060A)	**4.6**		1.0	0.43	mg/L			03/29/25 00:22	1

Client: Arcadis U.S., Inc.
Job ID: 480-228240-1
Project/Site: BMS Krutulis GW Sampling Project

Client Sample ID: PZ-3
Lab Sample ID: 480-228240-2
Date Collected: 03/26/25 11:00
Matrix: Water
Date Received: 03/28/25 08:30

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	10	U	10	2.9	ug/L			03/28/25 17:25	10
4-Methyl-2-pentanone (MIBK)	50	U	50	21	ug/L			03/28/25 17:25	10
Acetone	100	U	100	30	ug/L			03/28/25 17:25	10
Benzene	10	U	10	4.1	ug/L			03/28/25 17:25	10
Chloroform	10	U	10	3.4	ug/L			03/28/25 17:25	10
cis-1,2-Dichloroethene	**100**		10	8.1	ug/L			03/28/25 17:25	10
Tetrachloroethene	10	U	10	3.6	ug/L			03/28/25 17:25	10
Toluene	10	U	10	5.1	ug/L			03/28/25 17:25	10
trans-1,2-Dichloroethene	**69**		10	9.0	ug/L			03/28/25 17:25	10
Trichloroethene	**450**		10	4.6	ug/L			03/28/25 17:25	10
Vinyl chloride	10	U	10	9.0	ug/L			03/28/25 17:25	10
Xylenes, Total	20	U	20	6.6	ug/L			03/28/25 17:25	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*77 - 120*		*03/28/25 17:25*	*10*
Dibromofluoromethane (Surr)	*101*		*75 - 123*		*03/28/25 17:25*	*10*
Toluene-d8 (Surr)	*97*		*80 - 120*		*03/28/25 17:25*	*10*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**3.0**	**J**	7.5	1.5	ug/L			03/31/25 10:06	1
Ethene	7.0	U	7.0	1.5	ug/L			03/31/25 10:06	1

Method: RSK-175 - Dissolved Gases (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**6600**		88	22	ug/L			03/31/25 12:18	22

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**0.18**		0.050	0.019	mg/L		03/29/25 09:42	04/01/25 17:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (EPA 300.0)	**9.1**		2.0	0.35	mg/L			03/28/25 22:55	1
Total Organic Carbon (SW846 9060A)	**0.52**	**J**	1.0	0.43	mg/L			03/29/25 00:52	1

Client Sample ID: PZ-2
Lab Sample ID: 480-228240-3
Date Collected: 03/26/25 12:20
Matrix: Water
Date Received: 03/28/25 08:30

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	100	U	100	29	ug/L			03/31/25 18:55	100
4-Methyl-2-pentanone (MIBK)	500	U	500	210	ug/L			03/31/25 18:55	100
Acetone	1000	U	1000	300	ug/L			03/31/25 18:55	100
Benzene	100	U	100	41	ug/L			03/31/25 18:55	100
Chloroform	100	U	100	34	ug/L			03/31/25 18:55	100
cis-1,2-Dichloroethene	**3500**		100	81	ug/L			03/31/25 18:55	100
Tetrachloroethene	100	U	100	36	ug/L			03/31/25 18:55	100
Toluene	100	U	100	51	ug/L			03/31/25 18:55	100
trans-1,2-Dichloroethene	**290**		100	90	ug/L			03/31/25 18:55	100
Trichloroethene	**92**	**J**	100	46	ug/L			03/31/25 18:55	100
Vinyl chloride	**100**		100	90	ug/L			03/31/25 18:55	100
Xylenes, Total	200	U	200	66	ug/L			03/31/25 18:55	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*77 - 120*		*03/31/25 18:55*	*100*
Dibromofluoromethane (Surr)	*100*		*75 - 123*		*03/31/25 18:55*	*100*
Toluene-d8 (Surr)	*97*		*80 - 120*		*03/31/25 18:55*	*100*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	7.5	U	7.5	1.5	ug/L			03/31/25 10:25	1
Ethene	**2.5**	**J**	7.0	1.5	ug/L			03/31/25 10:25	1

Method: RSK-175 - Dissolved Gases (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**3800**		88	22	ug/L			03/31/25 12:37	22

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**0.80**		0.050	0.019	mg/L		03/29/25 09:42	04/01/25 17:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (EPA 300.0)	**5.7**		2.0	0.35	mg/L			03/28/25 23:10	1
Total Organic Carbon (SW846 9060A)	**23.8**		1.0	0.43	mg/L			03/29/25 01:21	1

Client Sample ID: PZ-1
Lab Sample ID: 480-228240-4

Date Collected: 03/26/25 12:35
Matrix: Water
Date Received: 03/28/25 08:30

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			03/31/25 19:19	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			03/31/25 19:19	1
Acetone	10	U	10	3.0	ug/L			03/31/25 19:19	1
Benzene	1.0	U	1.0	0.41	ug/L			03/31/25 19:19	1
Chloroform	1.0	U	1.0	0.34	ug/L			03/31/25 19:19	1
cis-1,2-Dichloroethene	**58**		1.0	0.81	ug/L			03/31/25 19:19	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			03/31/25 19:19	1
Toluene	1.0	U	1.0	0.51	ug/L			03/31/25 19:19	1
trans-1,2-Dichloroethene	**2.9**		1.0	0.90	ug/L			03/31/25 19:19	1
Trichloroethene	**8.3**		1.0	0.46	ug/L			03/31/25 19:19	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			03/31/25 19:19	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			03/31/25 19:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*77 - 120*		*03/31/25 19:19*	*1*
Dibromofluoromethane (Surr)	*100*		*75 - 123*		*03/31/25 19:19*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*03/31/25 19:19*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**29**		7.5	1.5	ug/L			03/31/25 10:44	1
Ethene	7.0	U	7.0	1.5	ug/L			03/31/25 10:44	1

Method: RSK-175 - Dissolved Gases (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**28000**		880	220	ug/L			03/31/25 13:52	220

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**0.81**		0.050	0.019	mg/L		03/29/25 09:42	04/01/25 17:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (EPA 300.0)	**7.2**		2.0	0.35	mg/L			03/31/25 15:48	1
Total Organic Carbon (SW846 9060A)	**23.0**		1.0	0.43	mg/L			03/29/25 01:49	1

Client Sample ID: MW-3D
Date Collected: 03/27/25 10:05
Date Received: 03/28/25 08:30

Lab Sample ID: 480-228240-5
Matrix: Water

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	4.0	U	4.0	1.2	ug/L			03/28/25 18:33	4
4-Methyl-2-pentanone (MIBK)	20	U	20	8.4	ug/L			03/28/25 18:33	4
Acetone	40	U	40	12	ug/L			03/28/25 18:33	4
Benzene	4.0	U	4.0	1.6	ug/L			03/28/25 18:33	4
Chloroform	4.0	U	4.0	1.4	ug/L			03/28/25 18:33	4
cis-1,2-Dichloroethene	**84**		4.0	3.2	ug/L			03/28/25 18:33	4
Tetrachloroethene	4.0	U	4.0	1.4	ug/L			03/28/25 18:33	4
Toluene	4.0	U	4.0	2.0	ug/L			03/28/25 18:33	4
trans-1,2-Dichloroethene	**17**		4.0	3.6	ug/L			03/28/25 18:33	4
Trichloroethene	4.0	U	4.0	1.8	ug/L			03/28/25 18:33	4
Vinyl chloride	**32**		4.0	3.6	ug/L			03/28/25 18:33	4
Xylenes, Total	8.0	U	8.0	2.6	ug/L			03/28/25 18:33	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*77 - 120*		*03/28/25 18:33*	*4*
Dibromofluoromethane (Surr)	*105*		*75 - 123*		*03/28/25 18:33*	*4*
Toluene-d8 (Surr)	*97*		*80 - 120*		*03/28/25 18:33*	*4*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**3.8**	**J**	7.5	1.5	ug/L			03/31/25 11:03	1
Ethene	**2.0**	**J**	7.0	1.5	ug/L			03/31/25 11:03	1

Method: RSK-175 - Dissolved Gases (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**6400**		88	22	ug/L			03/31/25 13:15	22

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**0.17**		0.050	0.019	mg/L		03/29/25 09:42	04/01/25 17:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (EPA 300.0)	**6.4**		2.0	0.35	mg/L			03/31/25 16:03	1
Total Organic Carbon (SW846 9060A)	**1.1**		1.0	0.43	mg/L			03/29/25 02:18	1

Client: Arcadis U.S., Inc.
Job ID: 480-228240-1
Project/Site: BMS Krutulis GW Sampling Project

Client Sample ID: MW-3S
Date Collected: 03/27/25 10:10
Date Received: 03/28/25 08:30

Lab Sample ID: 480-228240-6
Matrix: Water

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	50	U	50	15	ug/L			03/31/25 19:43	50
4-Methyl-2-pentanone (MIBK)	250	U	250	110	ug/L			03/31/25 19:43	50
Acetone	500	U	500	150	ug/L			03/31/25 19:43	50
Benzene	50	U	50	21	ug/L			03/31/25 19:43	50
Chloroform	50	U	50	17	ug/L			03/31/25 19:43	50
cis-1,2-Dichloroethene	**2400**		50	41	ug/L			03/31/25 19:43	50
Tetrachloroethene	50	U	50	18	ug/L			03/31/25 19:43	50
Toluene	50	U	50	26	ug/L			03/31/25 19:43	50
trans-1,2-Dichloroethene	**84**		50	45	ug/L			03/31/25 19:43	50
Trichloroethene	50	U	50	23	ug/L			03/31/25 19:43	50
Vinyl chloride	**1600**		50	45	ug/L			03/31/25 19:43	50
Xylenes, Total	100	U	100	33	ug/L			03/31/25 19:43	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*77 - 120*		*03/31/25 19:43*	*50*
Dibromofluoromethane (Surr)	*102*		*75 - 123*		*03/31/25 19:43*	*50*
Toluene-d8 (Surr)	*97*		*80 - 120*		*03/31/25 19:43*	*50*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**6.5**	**J**	7.5	1.5	ug/L			03/31/25 11:22	1
Ethene	**220**		7.0	1.5	ug/L			03/31/25 11:22	1

Method: RSK-175 - Dissolved Gases (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**6600**		88	22	ug/L			03/31/25 13:34	22

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**2.2**		0.050	0.019	mg/L		03/29/25 09:42	04/01/25 17:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (EPA 300.0)	**5.0**		2.0	0.35	mg/L			03/31/25 16:17	1
Total Organic Carbon (SW846 9060A)	**32.4**		1.0	0.43	mg/L			03/29/25 06:40	1

Client: Arcadis U.S., Inc.
Job ID: 480-228240-1
Project/Site: BMS Krutulis GW Sampling Project

Client Sample ID: MW-7
Date Collected: 03/27/25 11:56
Date Received: 03/28/25 08:30

Lab Sample ID: 480-228240-7
Matrix: Water

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			03/31/25 20:07	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			03/31/25 20:07	1
Acetone	10	U	10	3.0	ug/L			03/31/25 20:07	1
Benzene	1.0	U	1.0	0.41	ug/L			03/31/25 20:07	1
Chloroform	1.0	U	1.0	0.34	ug/L			03/31/25 20:07	1
cis-1,2-Dichloroethene	**0.82**	**J**	1.0	0.81	ug/L			03/31/25 20:07	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			03/31/25 20:07	1
Toluene	1.0	U	1.0	0.51	ug/L			03/31/25 20:07	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			03/31/25 20:07	1
Trichloroethene	**2.0**		1.0	0.46	ug/L			03/31/25 20:07	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			03/31/25 20:07	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			03/31/25 20:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*77 - 120*		*03/31/25 20:07*	*1*
Dibromofluoromethane (Surr)	*103*		*75 - 123*		*03/31/25 20:07*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*03/31/25 20:07*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**73**		4.0	1.0	ug/L			03/31/25 11:40	1
Ethane	7.5	U	7.5	1.5	ug/L			03/31/25 11:40	1
Ethene	7.0	U	7.0	1.5	ug/L			03/31/25 11:40	1

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	0.050	U	0.050	0.019	mg/L		03/29/25 09:42	04/01/25 17:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate (EPA 300.0)	**10.8**		2.0	0.35	mg/L			03/31/25 16:32	1
Total Organic Carbon (SW846 9060A)	**0.60**	**J**	1.0	0.43	mg/L			03/29/25 07:09	1

Client: Arcadis U.S., Inc.
Job ID: 480-228240-1
Project/Site: BMS Krutulis GW Sampling Project

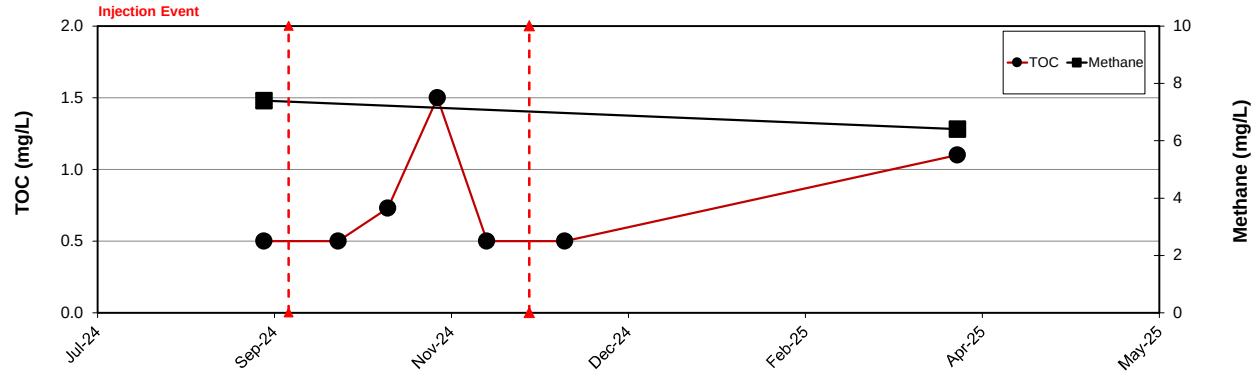
Client Sample ID: TRIP BLANK
Lab Sample ID: 480-228240-8
Date Collected: 03/27/25 00:00
Matrix: Water
Date Received: 03/28/25 08:30

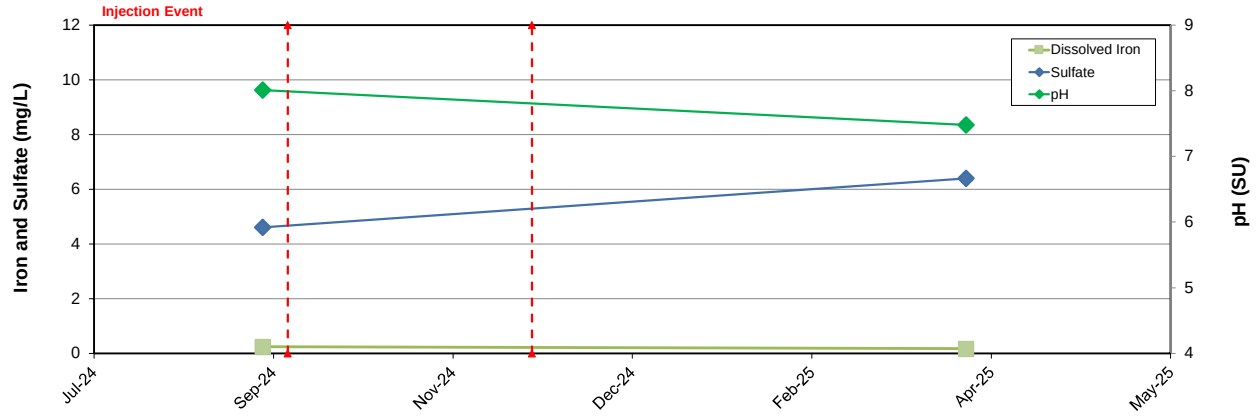
Method: SW846 8260C - Volatile Organic Compounds by GC/MS

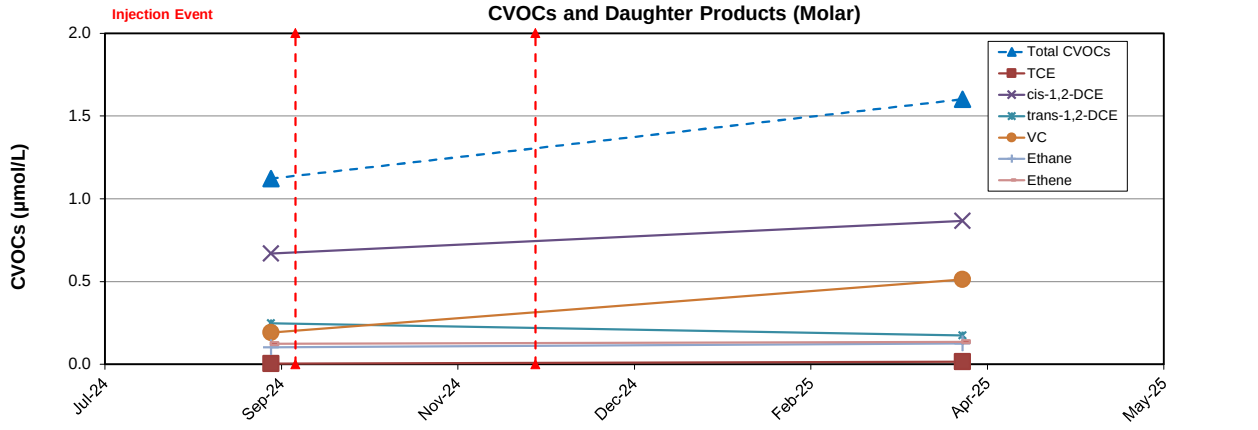
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	0.29	ug/L			03/31/25 20:31	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	2.1	ug/L			03/31/25 20:31	1
Acetone	10	U	10	3.0	ug/L			03/31/25 20:31	1
Benzene	1.0	U	1.0	0.41	ug/L			03/31/25 20:31	1
Chloroform	1.0	U	1.0	0.34	ug/L			03/31/25 20:31	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.81	ug/L			03/31/25 20:31	1
Tetrachloroethene	1.0	U	1.0	0.36	ug/L			03/31/25 20:31	1
Toluene	1.0	U	1.0	0.51	ug/L			03/31/25 20:31	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.90	ug/L			03/31/25 20:31	1
Trichloroethene	1.0	U	1.0	0.46	ug/L			03/31/25 20:31	1
Vinyl chloride	1.0	U	1.0	0.90	ug/L			03/31/25 20:31	1
Xylenes, Total	2.0	U	2.0	0.66	ug/L			03/31/25 20:31	1

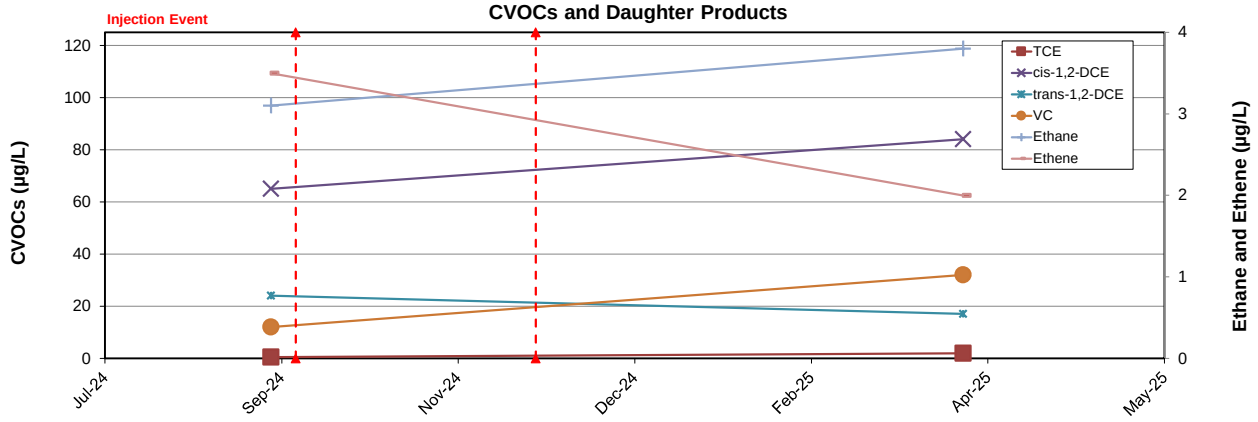
Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*77 - 120*		*03/31/25 20:31*	*1*
Dibromofluoromethane (Surr)	*102*		*75 - 123*		*03/31/25 20:31*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*03/31/25 20:31*	*1*

ATTACHMENT 4





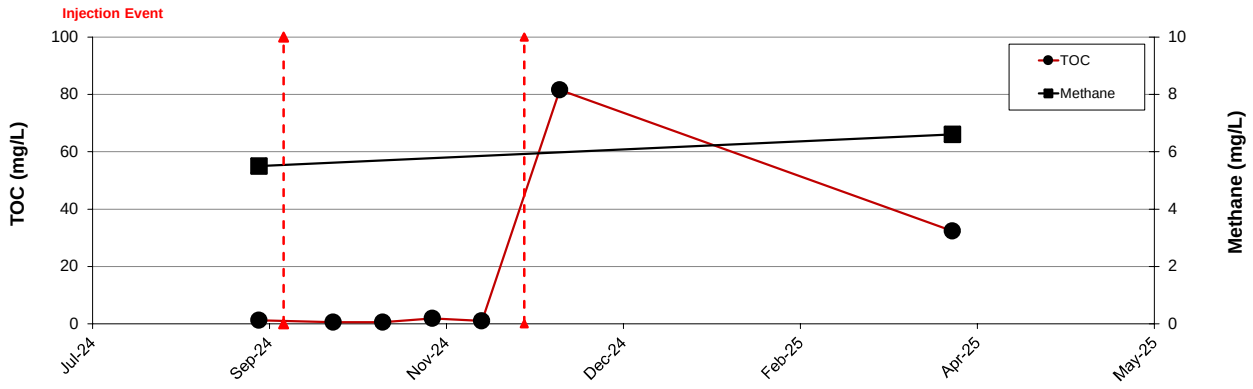


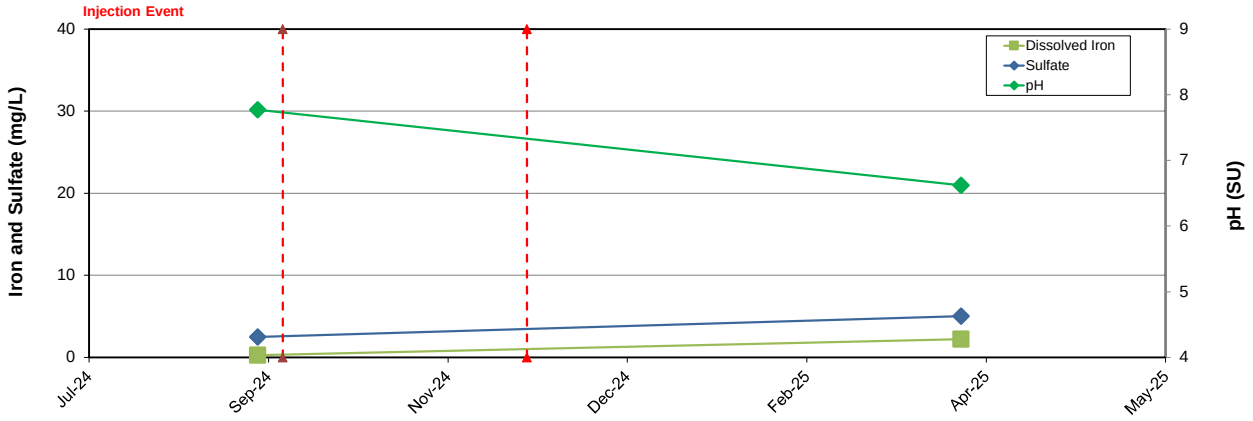


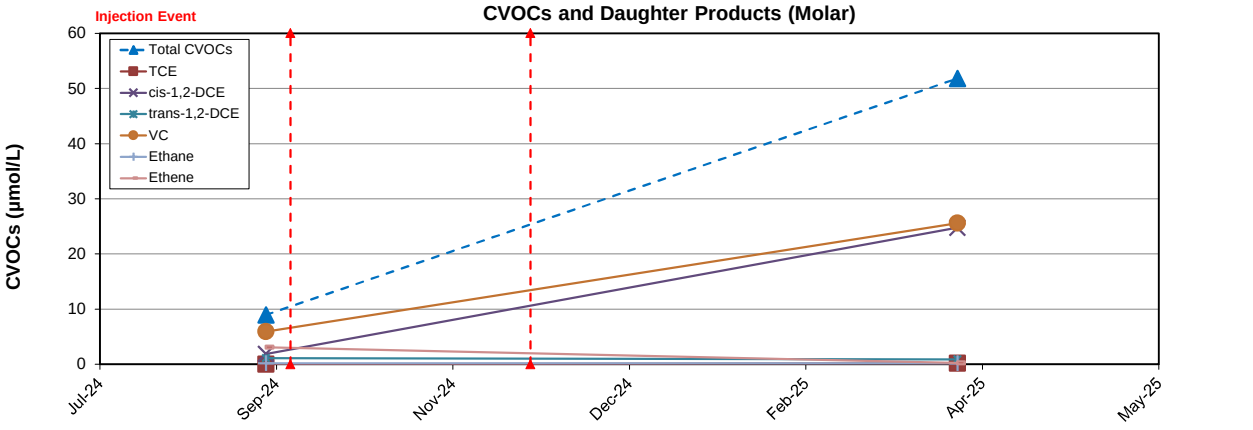
Notes:
Injections were perfoemd between September 19 and December 5, 2024.
Total CVOCs = TCE + cis-1,2-DCE + trans-1,2-DCE + VC.

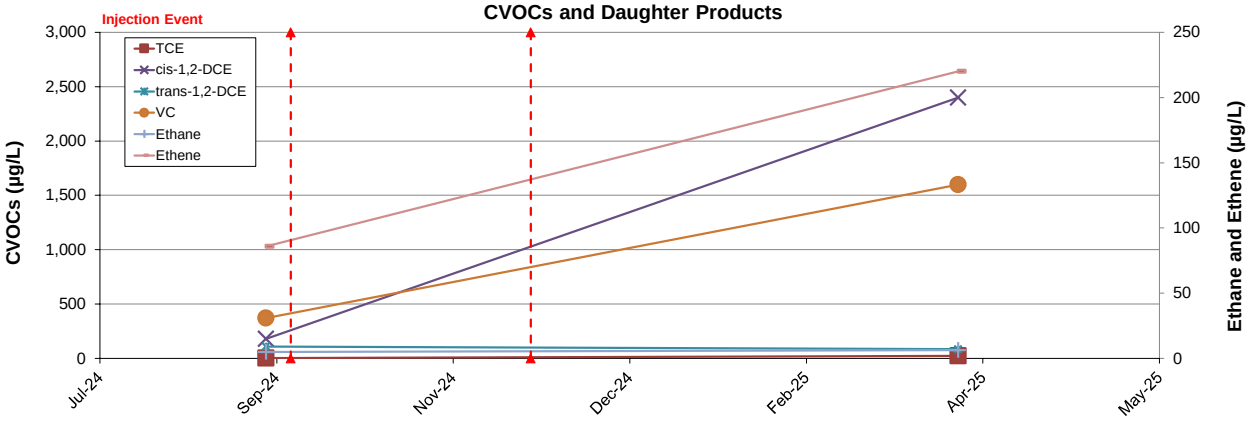
Acronyms and Abbreviations:
µg/L = micrograms per liter
µmol/L = micromoles per liter
CVOC = chlorited volatile organic compound
DCE = dichloroethene
mg/L = milligrams per liter
NYSDEC = New York State Department of Environmental Conservation
SU = standard units
TCE = trichloroethene
TOC = total organic carbon
VC = vinyl chloride

NYSDEC Groundwater Quality Standard
TCE = 5 µg/L
cis-1,2-DCE = 5 µg/L
trans-1,2-DCE = 5 µg/L
VC = 2 µg/L





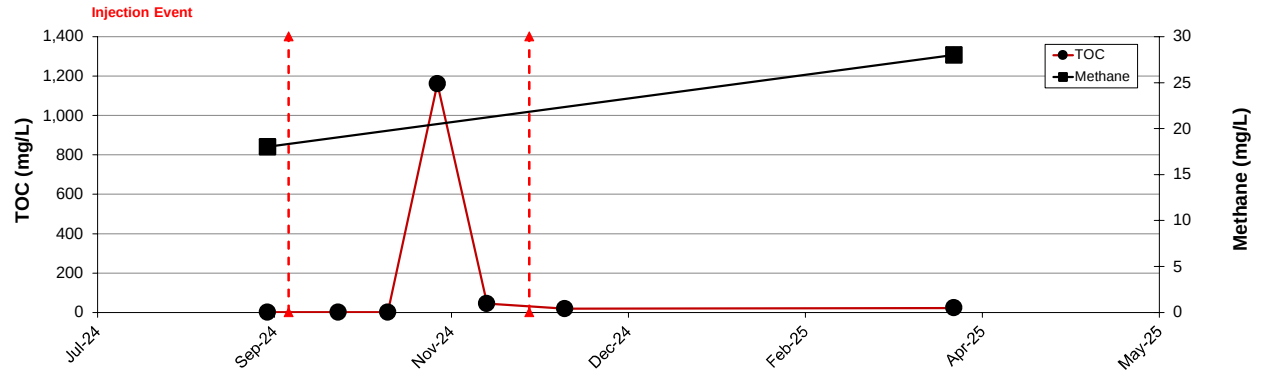


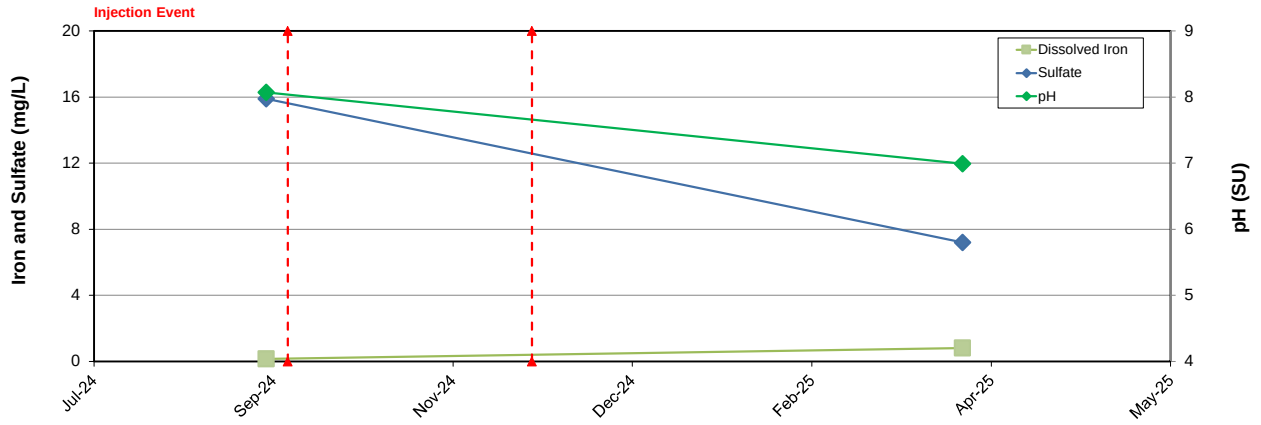


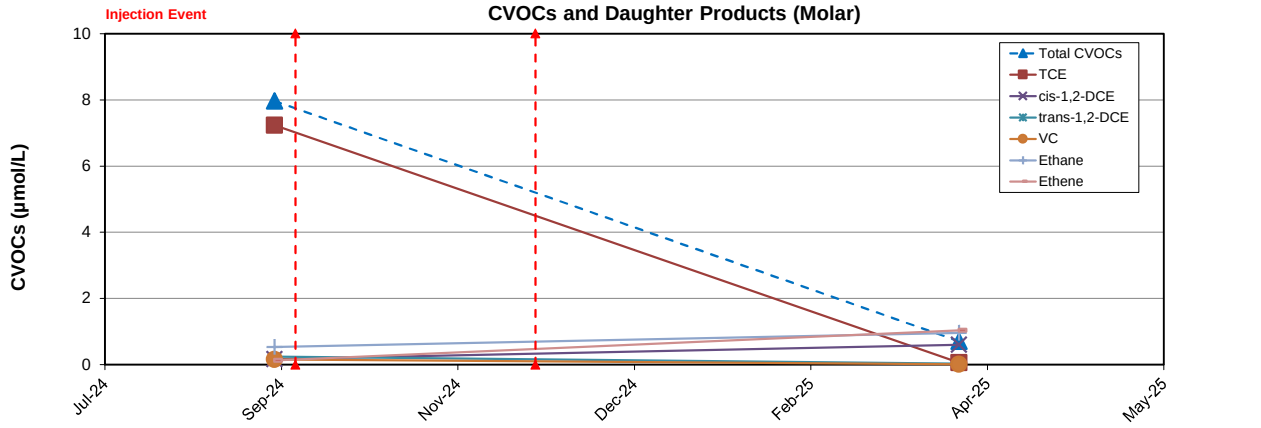
Notes:
Injections were perfoemd between September 19 and December 5, 2024.
Total CVOCs = TCE + cis-1,2-DCE + trans-1,2-DCE + VC.

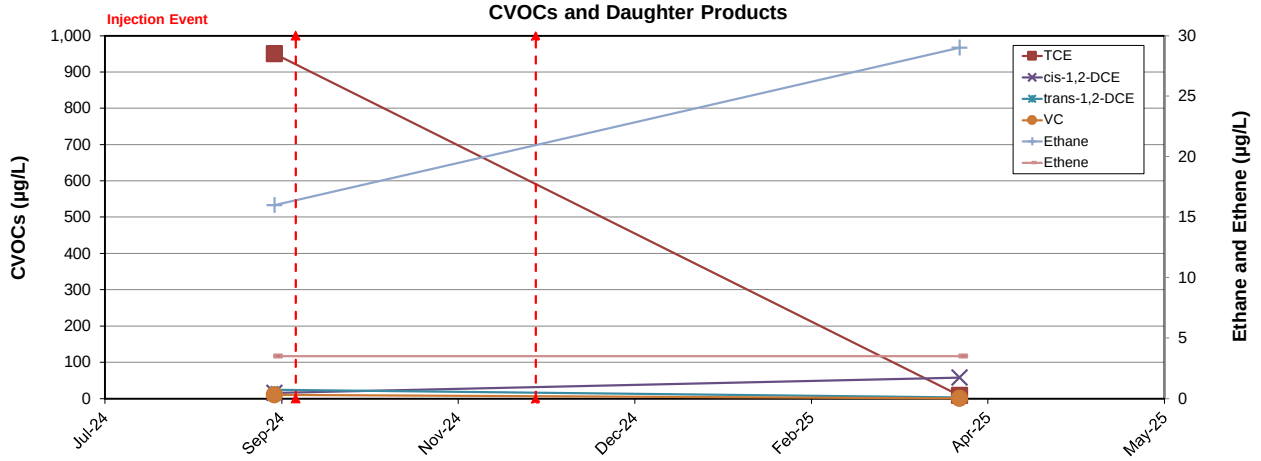
Acronyms and Abbreviations:
µg/L = micrograms per liter
µmol/L = micromoles per liter
CVOC = chlorited volatile organic compound
DCE = dichloroethene
mg/L = milligrams per liter
NYSDEC = New York State Department of Environmental Conservation
SU = standard units
TCE = trichloroethene
TOC = total organic carbon
VC = vinyl chloride

NYSDEC Groundwater Quality Standard
TCE = 5 µg/L
cis-1,2-DCE = 5 µg/L
trans-1,2-DCE = 5 µg/L
VC = 2 µg/L





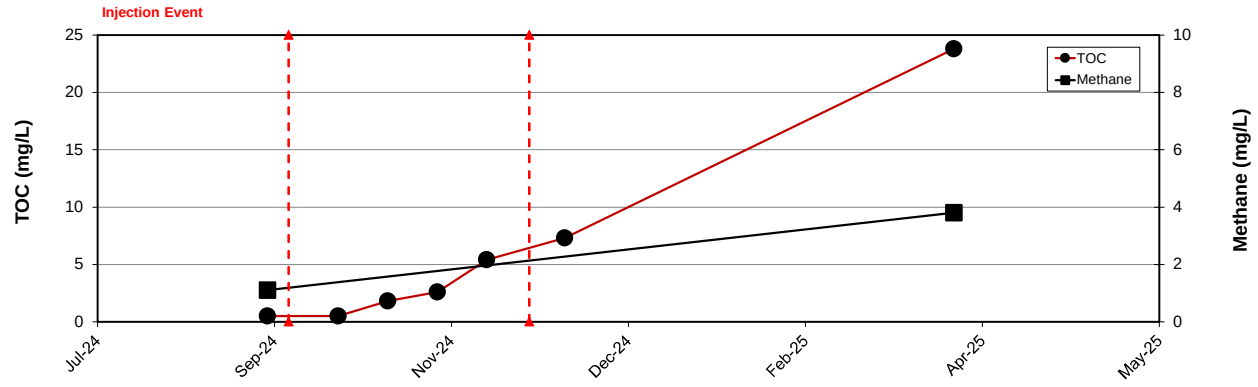


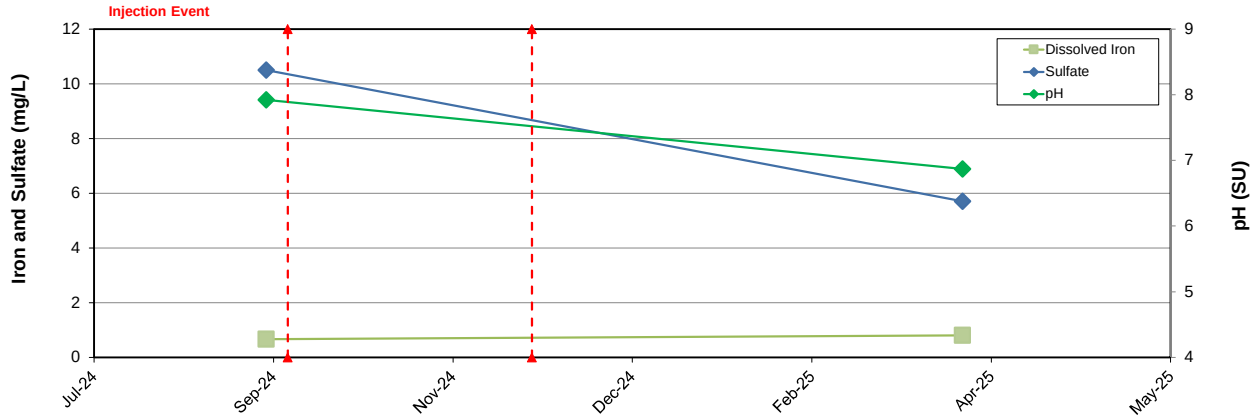


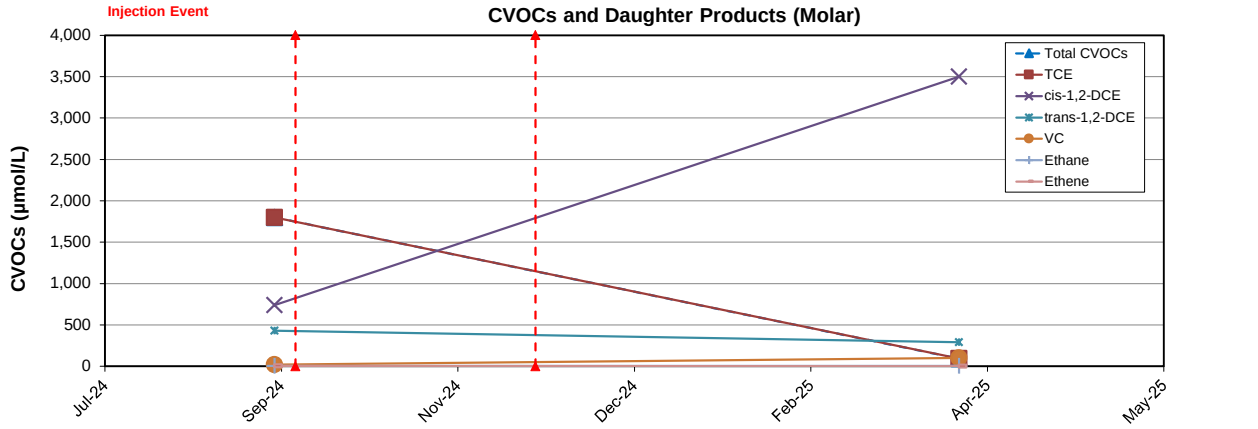
Notes:
Injections were perfoemd between September 19 and December 5, 2024.
Total CVOCs = TCE + cis-1,2-DCE + trans-1,2-DCE + VC.

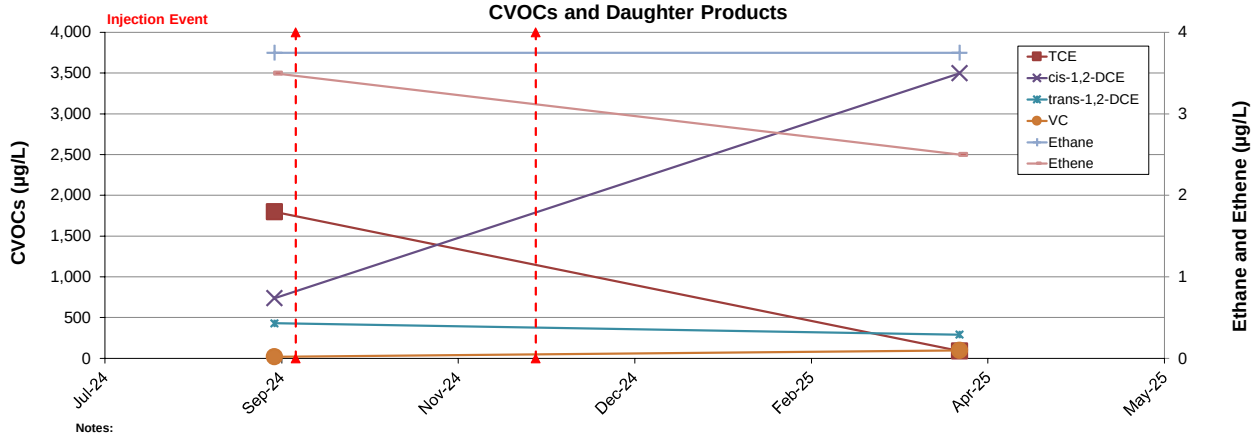
Acronyms and Abbreviations:
µg/L = micrograms per liter
µmol/L = micromoles per liter
CVOC = chlorited volatile organic compound
DCE = dichloroethene
mg/L = milligrams per liter
NYSDEC = New York State Department of Environmental Conservation
SU = standard units
TCE = trichloroethene
TOC = total organic carbon
VC = vinyl chloride

NYSDEC Groundwater Quality Standard
TCE = 5 µg/L
cis-1,2-DCE = 5 µg/L
trans-1,2-DCE = 5 µg/L
VC = 2 µg/L





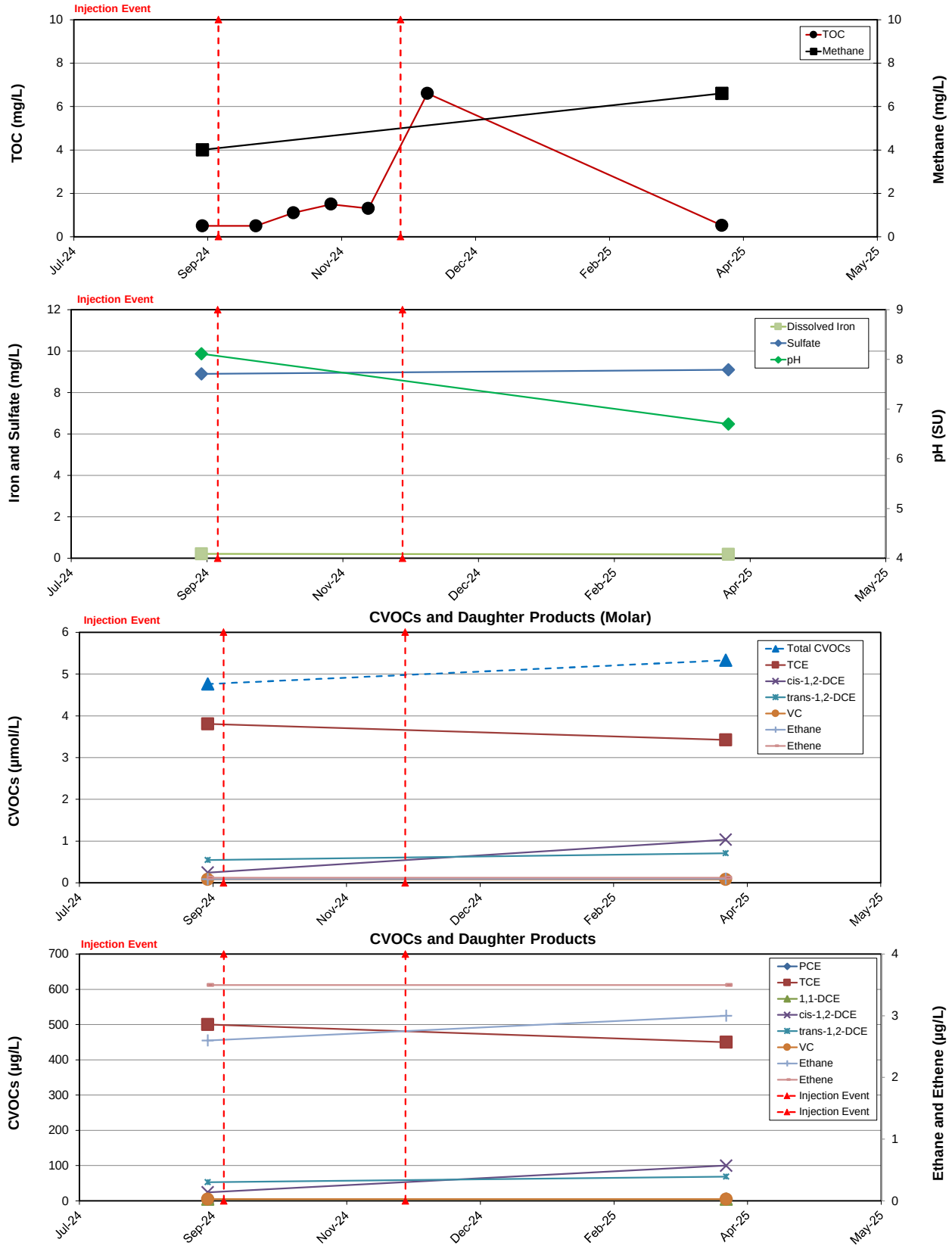




Notes:
Injections were perfoemd between September 19 and December 5, 2024.
Total CVOCs = TCE + cis-1,2-DCE + trans-1,2-DCE + VC.

Acronyms and Abbreviations:
µg/L = micrograms per liter
µmol/L = micromoles per liter
CVOC = chlorited volatile organic compound
DCE = dichloroethene
mg/L = milligrams per liter
NYSDEC = New York State Department of Environmental Conservation
SU = standard units
TCE = trichloroethene
TOC = total organic carbon
VC = vinyl chloride

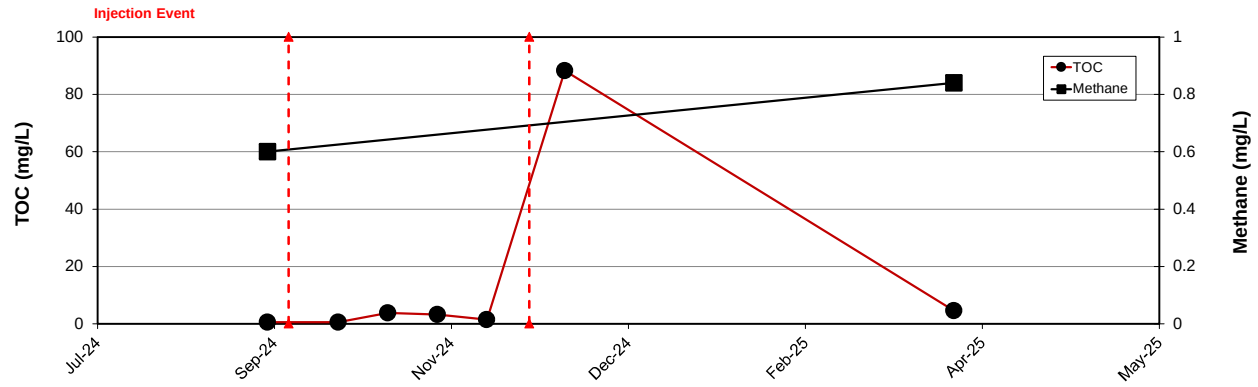
NYSDEC Groundwater Quality Standard
TCE = 5 µg/L
cis-1,2-DCE = 5 µg/L
trans-1,2-DCE = 5 µg/L
VC = 2 µg/L

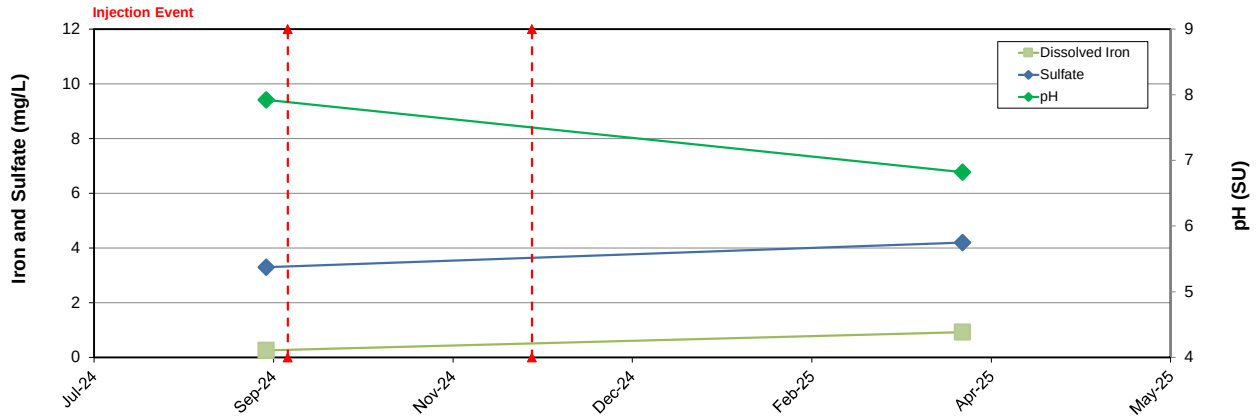


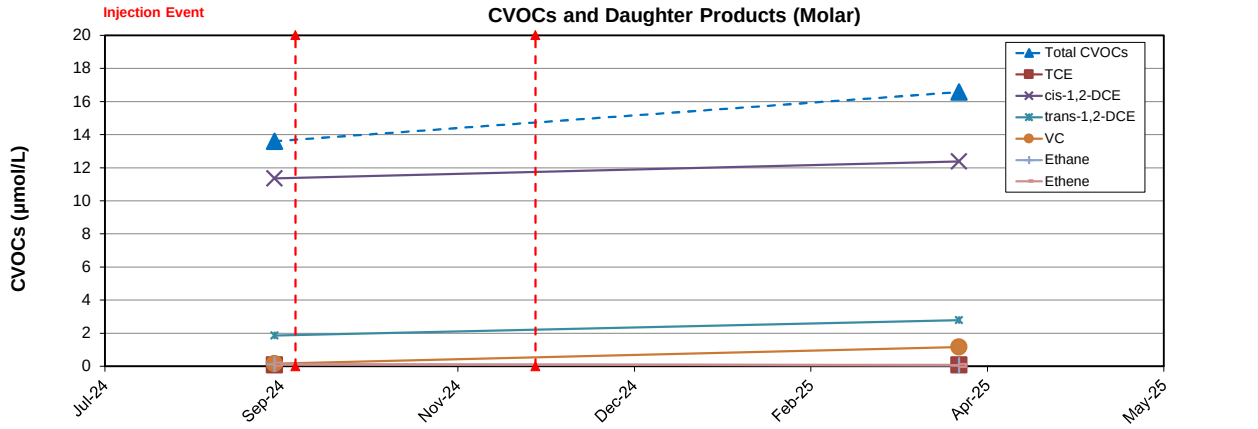
Notes:
Injections were perfoemd between September 19 and December 5, 2024.
Total CVOCs = TCE + cis-1,2-DCE + trans-1,2-DCE + VC.

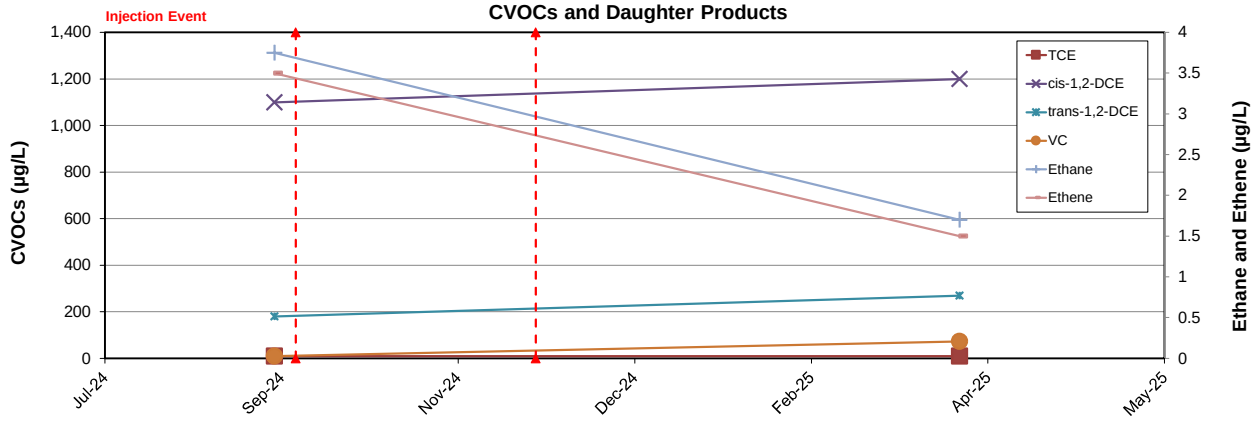
Acronyms and Abbreviations:
µg/L = micrograms per liter
µmol/L = micromoles per liter
CVOC = chlorited volatile organic compound
DCE = dichloroethene
mg/L = milligrams per liter
NYSDEC = New York State Department of Environmental Conservation
SU = standard units
TCE = trichloroethene
TOC = total organic carbon
VC = vinyl chloride

NYSDEC Groundwater Quality Standard
TCE = 5 µg/L
cis-1,2-DCE = 5 µg/L
trans-1,2-DCE = 5 µg/L
VC = 2 µg/L









Notes:
Injections were perfoemd between September 19 and December 5, 2024.
Total CVOCs = TCE + cis-1,2-DCE + trans-1,2-DCE + VC.

Acronyms and Abbreviations:
µg/L = micrograms per liter
µmol/L = micromoles per liter
CVOC = chlorited volatile organic compound
DCE = dichloroethene
mg/L = milligrams per liter
NYSDEC = New York State Department of Environmental Conservation
SU = standard units
TCE = trichloroethene
TOC = total organic carbon
VC = vinyl chloride

NYSDEC Groundwater Quality Standard
TCE = 5 µg/L
cis-1,2-DCE = 5 µg/L
trans-1,2-DCE = 5 µg/L
VC = 2 µg/L