INVENTUM ENGINEERING, PC

October 5, 2023

Benjamin McPherson, P.E.
Professional Engineer 1 (Environmental)
Division of Environmental Remediation
New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, New York 14203

Subject: Carbon Efficiency
In Situ Solidification
Riverview Innovation & Technology Campus
3875 River Road
Town of Tonawanda, New York
Site No. C915353

Dear Mr. McPherson,

As you are aware, the bench-scale testing being conducted for the Pre-design Investigations is well underway. To date, combinations of Lime Kiln Dust (LKD) and breeze and Portland cement and breeze have been effective for all samples except those from the Tar Management Area (Source Area Solidification Interim Remedial Measure Work Plan [Solidification Work Plan], October 5, 2023). Additional testing of samples from the Tar Management Area will be conducted in the near future.

Breeze has been a critical component of the bench-scale tests as both an absorbent and aggregate. The New York State Department of Environmental Conservation (NYSDEC) requested testing of the breeze for total organic carbon to investigate whether the breeze is adsorbing organic compounds into the materials matrix as well as absorbing liquid phases.

Analytical testing of the breeze showed the total organic carbon content was 78-percent (Attachment A). The availability of total organic carbon in the breeze as an adsorption agent is unknown. To determine if there is a third mechanism (in addition to hydration of the binding agent and absorption) affecting the efficiency of the stabilization process, Inventum conducted adsorption trials. The tests allowed evaluation of the effect of direct contact between site groundwater and the breeze, absent the hydration and binding agent mechanisms.

A bulk sample was collected from Sump #2 adjacent to the light oil area. An aliquot of the bulk sample and a sample of breeze were submitted for Volatile Organic Compounds (VOC) via EPA method 8260, Semi-volatile Organic Compounds (SVOC) via EPA method 8270, Ammonia (350.1) and Cyanide (335.1) analyses.

Photograph No. 1
Test Setup

The breeze in each sample vessel was saturated with groundwater from the Sump #2 bulk sample. Multiple trials were tested as in the initial tests the breeze absorbed all the liquid, producing no sample for analytical testing. This result in itself was informative in demonstrating the high capacity of the breeze to absorb and hold liquid.

As a basis for comparison five samples were tested:

- BreezeTest-01-09132023 – Raw water from Sump 2
- BreezeTest-02-09152023 – Sump 2 water after 24-hours in contact with breeze
- BreezeTest-03-09152023 – Sump 2 water after 24-hours in contact with breeze
- BreezeTest-04-09152023 – Sump 2 water after 24-hours in contact with clean gravel
- BreezeTest-05-09152023 – Distilled water after 24-hours in contact with clean gravel

The laboratory report is presented in Attachment A. A summary table of the pre- and post-testing groundwater quality (detections only) is shown below:

Analytes	Class GA Ambient Water Quality Standards and Guidance Values	Units	BreezeTest-01-09132023		BreezeTest-02-09152023		BreezeTest-03-09152023		BreezeTest-04-09152023		BreezeTest-05-09152023	
	Sample Date		9/13/2023		9/15/2023		9/15/2023		9/15/2023		9/15/2023	
	Sample Description		Sump 2		Sump 2 & Breeze Sample 01		Sump 2 & Breeze Sample 02		Sump 2 & Gravel		Distilled Water & Gravel	
TCL VOCs (SW8260C)												
Acetone	50	ug/l	**236**		**19.4**		**17.1**		**24.4**		**14.1**	
Benzene	1	ug/l	**519**		<1.00	U	<1.00	U	<1.00	U	<1.00	U
Toluene	5	ug/l	**67.2**		<2.00	U	<2.00	U	<2.00	U	<2.00	
m,p-Xylene	5	ug/l	**44.8**		<2.00	U	<2.00	U	<2.00	U	<2.00	U
Total VOCs	-	ug/l	**867**		**19.4**		**17.1**		**24.4**		**14.1**	
Percent Difference	-	%	-		**97.8**		**98.0**		**97.2**		-	
TCL SVOCs (SW8270D)												
Phenanthrene	-	ug/l	<10.0	U	<10.0	U	<10.0	U	<10.0	U	**17.5**	
Cyanide (SW9012B)												
Cyanide	0.20	mg/l	**0.200**		**0.0560**		**0.0930**		**0.140**		<0.010	U
Percent Difference	-	%	-		**72.0**		**53.5**		**30.0**		-	
Ammonia (SM4500)												
Ammonia, as N	2	mg/l	**7.7**		**1.2**		**1.5**		**4.0**		<0.1	U
Percent Difference	-	%	-		**84.4**		**80.5**		**48.1**		-	

The testing demonstrates that introduction of the water into either the breeze or gravel matrix reduces the concentrations of VOCs. The fact the laboratory detected acetone in the distilled water sample suggests laboratory contamination and effectively 100% removal of VOCs associated with the coke and by-product processing at the Site. The effectiveness of the breeze over an inert aggregate is demonstrated by more effective removal of cyanide and ammonia.

A summary of the breeze analyses (detections only) is shown below.

- Breeze-08172023 – Coke breeze used in the initial solidification testing trials.
- BreezeTest-06-09152023 – Coke breeze used in the adsorption trials.

ANALYTE	SAMPLE ID:		BREEZE-08172023		BREEZETEST-06-09152023	
	LAB ID:		L2347700-01		234271	
	COLLECTION DATE:		8/17/2023		9/15/2023	
	SAMPLE DEPTH:		0 - 2' BGS		0 - 2' BGS	
	SAMPLE MATRIX:		Coke Breeze		Coke Breeze	
	NY-RESC (mg/kg)	NY-RESI (mg/kg)	Breeze used in all solidification bench scales.		Breeze used in Adsorption bench scale.	
VOLATILE ORGANICS BY GC/MS						
cis-1,2-Dichloroethene	500	1000	**0.0032**		<0.008	U
Ethylbenzene	390	780	**0.00028**	J	<0.008	U
o-Xylene			**0.00036**	J	<0.008	U
p/m-Xylene			**0.00084**	J	<0.008	U
Toluene	500	1000	**0.0012**		<0.008	U
SEMIVOLATILE ORGANICS BY GC/MS						
2-Methylnaphthalene			**1.3**		**0.765**	
3-Methylphenol/4-Methylphenol	500	1000	**0.15**	J	<0.272	U
Acenaphthene	500	1000	**0.64**	J	**1.13**	
Acenaphthylene	500	1000	**2.7**		<0.272	U
Anthracene	500	1000	**4**		**0.985**	
Benzo(a)anthracene	5.6	11	**9.1**		**3.43**	
Benzo(a)pyrene	1	1.1	**9.5**		**6.43**	
Benzo(b)fluoranthene	5.6	11	**12**		**6.32**	
Benzo(ghi)perylene	500	1000	**6**		**5.01**	
Benzo(k)fluoranthene	56	110	**2.9**		**3.05**	
Biphenyl			**0.34**	J	<0.272	U
Carbazole			**1.3**		**0.32**	
Chrysene	56	110	**9.8**		**4.21**	
Dibenzo(a,h)anthracene	0.56	1.1	**1.5**		**1.5**	
Dibenzofuran	350	1000	**1.7**		**0.326**	
Fluoranthene	500	1000	**24**		<0.272	U
Fluorene	500	1000	**2.9**		<0.272	U
Indeno(1,2,3-cd)pyrene	5.6	11	**5.6**		**3.78**	
Naphthalene	500	1000	**5**		**1.19**	
Phenanthrene	500	1000	**18**		**2.8**	
Phenol	500	1000	**0.15**	J	<0.272	U
Pyrene	500	1000	**18**		**4.52**	
TOTAL METALS						
Aluminum, Total			**1760**		NS	
Arsenic, Total	16	16	**5.38**		NS	
Barium, Total	400	10000	**35.5**		NS	
Beryllium, Total	590	2700	**0.268**	J	NS	
Calcium, Total			**4740**		NS	
Chromium, Total			**5.44**		NS	
Cobalt, Total			**2.36**		NS	
Copper, Total	270	10000	**17.1**		NS	
Iron, Total			**6210**		NS	
Lead, Total	1000	3900	**8.57**		NS	
Magnesium, Total			**991**		NS	
Manganese, Total	10000	10000	**76.2**		NS	
Mercury, Total	2.8	5.7	**0.075**	J	NS	
Nickel, Total	310	10000	**5.17**		NS	
Potassium, Total			**233**		NS	
Selenium, Total	1500	6800	**1.12**	J	NS	
Sodium, Total			**116**	J	NS	
Vanadium, Total			**4.08**		NS	
Zinc, Total	10000	10000	**23.6**		NS	
GENERAL CHEMISTRY						
Cyanide, Total	27	10000	**0.75**	J	<0.50	U
Nitrogen, Ammonia			**9.1**		<10.0	U
Solids, Total			**85.3**		NS	
TOTAL ORGANIC CARBON						
Total Organic Carbon (%)			**78**		NS	

The breeze contains numerous SVOCs, none of which were detected in the effluent water of the adsorption testing. This confirms that the SVOCs are immobile and do not leach from the breeze when in contact with water.

The benefit of using breeze is that it will provide both immediate and long-term absorption of coal related compounds in the solidified mass. The material is available and will be tested in accordance with the Solidification Work Plan prior to use.

Please let us know if you have any comments or questions.

Sincerely yours,

John P. Black
Partner

Attachment

Ecc: John Yensan, OSC
Dan Flanagan, OSC
Roxanne Birx, Inventum
Peter Zaffram, Inventum
Angela Martin, NYSDOH
Andrea Caprio, NYSDEC

Engineering Certification

I, John P. Black certify that I am currently a NYS registered professional engineer as defined in 6 NYCRR Part 375 and that this report of the Carbon Efficiency testing was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Respectfully Submitted,

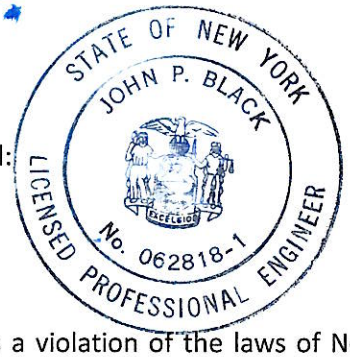
Inventum Engineering, P.C.

Date: 10/5/2023

John P. Black, P.E.

License No: 062918-1

Seal:



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Attachment A – Laboratory Reports

ANALYTICAL REPORT

Lab Number:	L2347700
Client:	Inventum Engineering 441 Carlisle Drive Suite C Herndon, NY 20170
ATTN:	John Black
Phone:	(571) 752-6562
Project Name:	RITC
Project Number:	BENCH SCALE-TOC
Report Date:	08/31/23

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2347700-01	BREEZE-08172023	SEDIMENT	3875 RIVER ROAD	08/17/23 11:35	08/17/23
L2347700-02	SS-BCP-24-02-08172023	SEDIMENT	3875 RIVER ROAD	08/17/23 11:45	08/17/23
L2347700-03	SS-BCP-24-04-08172023	SEDIMENT	3875 RIVER ROAD	08/17/23 11:45	08/17/23
L2347700-04	SS-BCP-24-06-08172023	SEDIMENT	3875 RIVER ROAD	08/17/23 11:48	08/17/23

Project Name:	RITC	**Lab Number:**	L2347700
Project Number:	BENCH SCALE-TOC	**Report Date:**	08/31/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	RITC	**Lab Number:**	L2347700
Project Number:	BENCH SCALE-TOC	**Report Date:**	08/31/23

Case Narrative (continued)

Report Submission

August 31, 2023: This final report includes the results of all requested analyses.

August 28, 2023: This is a preliminary report.

August 24, 2023: This is a preliminary report.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Volatile Organics

Any reported concentrations that are below 200 ug/kg may be biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

Total Metals

L2347700-01: The sample has elevated detection limits for all elements, with the exception of mercury, due to the dilution required by the sample matrix.

Cyanide, Total

The WG1817873-3 LCSD recovery for cyanide, total (77%), associated with L2347700-01 and -02, is outside our in-house acceptance criteria, but within the vendor-certified acceptance limits. The results of the original analyses are reported.

The WG1817875-3 LCSD recovery for cyanide, total (76%), associated with L2347700-03 and -04, is outside our in-house acceptance criteria, but within the vendor-certified acceptance limits. The results of the original analyses are reported.

Nitrogen, Ammonia

The WG1817932-3 Laboratory Duplicate RPD for nitrogen, ammonia (150%), performed on L2347700-01, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the

Project Name:	RITC	**Lab Number:**	L2347700
Project Number:	BENCH SCALE-TOC	**Report Date:**	08/31/23

Case Narrative (continued)

native sample.

Total Organic Carbon

WG1820886: The required batch QC was prepared; however, the native sample required a different reporting method; therefore, the associated QC results could not be reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Cristin Walker

Title: Technical Director/Representative Date: 08/31/23

ORGANICS

VOLATILES

Project Name: RITC
Project Number: BENCH SCALE-TOC
Lab Number: L2347700
Report Date: 08/31/23

SAMPLE RESULTS

Lab ID: L2347700-01
Client ID: BREEZE-08172023
Sample Location: 3875 RIVER ROAD
Date Collected: 08/17/23 11:35
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8260D
Analytical Date: 08/23/23 14:03
Analyst: AJK
Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	5.8	2.6	1
1,1-Dichloroethane	ND		ug/kg	1.2	0.17	1
Chloroform	ND		ug/kg	1.7	0.16	1
Carbon tetrachloride	ND		ug/kg	1.2	0.27	1
1,2-Dichloropropane	ND		ug/kg	1.2	0.14	1
Dibromochloromethane	ND		ug/kg	1.2	0.16	1
1,1,2-Trichloroethane	ND		ug/kg	1.2	0.31	1
Tetrachloroethene	ND		ug/kg	0.58	0.23	1
Chlorobenzene	ND		ug/kg	0.58	0.15	1
Trichlorofluoromethane	ND		ug/kg	4.6	0.80	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.30	1
1,1,1-Trichloroethane	ND		ug/kg	0.58	0.19	1
Bromodichloromethane	ND		ug/kg	0.58	0.13	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.32	1
cis-1,3-Dichloropropene	ND		ug/kg	0.58	0.18	1
Bromoform	ND		ug/kg	4.6	0.28	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.58	0.19	1
Benzene	ND		ug/kg	0.58	0.19	1
Toluene	1.2		ug/kg	1.2	0.63	1
Ethylbenzene	0.28	J	ug/kg	1.2	0.16	1
Chloromethane	ND		ug/kg	4.6	1.1	1
Bromomethane	ND		ug/kg	2.3	0.67	1
Vinyl chloride	ND		ug/kg	1.2	0.39	1
Chloroethane	ND		ug/kg	2.3	0.52	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.28	1
trans-1,2-Dichloroethene	ND		ug/kg	1.7	0.16	1
Trichloroethene	ND		ug/kg	0.58	0.16	1
1,2-Dichlorobenzene	ND		ug/kg	2.3	0.17	1

Project Name: RITC **Lab Number:** L2347700

Project Number: BENCH SCALE-TOC **Report Date:** 08/31/23

SAMPLE RESULTS

Lab ID: L2347700-01 Date Collected: 08/17/23 11:35

Client ID: BREEZE-08172023 Date Received: 08/17/23

Sample Location: 3875 RIVER ROAD Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	2.3	0.17	1
1,4-Dichlorobenzene	ND		ug/kg	2.3	0.20	1
Methyl tert butyl ether	ND		ug/kg	2.3	0.23	1
p/m-Xylene	0.84	J	ug/kg	2.3	0.65	1
o-Xylene	0.36	J	ug/kg	1.2	0.34	1
cis-1,2-Dichloroethene	3.2		ug/kg	1.2	0.20	1
Styrene	ND		ug/kg	1.2	0.23	1
Dichlorodifluoromethane	ND		ug/kg	12	1.0	1
Acetone	ND		ug/kg	12	5.6	1
Carbon disulfide	ND		ug/kg	12	5.3	1
2-Butanone	ND		ug/kg	12	2.6	1
4-Methyl-2-pentanone	ND		ug/kg	12	1.5	1
2-Hexanone	ND		ug/kg	12	1.4	1
Bromochloromethane	ND		ug/kg	2.3	0.24	1
1,2-Dibromoethane	ND		ug/kg	1.2	0.32	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.5	1.2	1
Isopropylbenzene	ND		ug/kg	1.2	0.13	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.3	0.37	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.3	0.32	1
Methyl Acetate	ND		ug/kg	4.6	1.1	1
Cyclohexane	ND		ug/kg	12	0.63	1
1,4-Dioxane	ND		ug/kg	93	41.	1
Freon-113	ND		ug/kg	4.6	0.80	1
Methyl cyclohexane	ND		ug/kg	4.6	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	101		70-130

Project Name: RITC
Project Number: BENCH SCALE-TOC
Lab Number: L2347700
Report Date: 08/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 08/23/23 08:25
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1819331-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	ND		ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15

Project Name: RITC
Project Number: BENCH SCALE-TOC
Lab Number: L2347700
Report Date: 08/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 08/23/23 08:25
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1819331-5					
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Isopropylbenzene	ND		ug/kg	1.0	0.11
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
Methyl Acetate	ND		ug/kg	4.0	0.95
Cyclohexane	ND		ug/kg	10	0.54
1,4-Dioxane	ND		ug/kg	80	35.
Freon-113	ND		ug/kg	4.0	0.69
Methyl cyclohexane	ND		ug/kg	4.0	0.60

Project Name: RITC
Project Number: BENCH SCALE-TOC
Lab Number: L2347700
Report Date: 08/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 08/23/23 08:25
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1819331-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	107		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1819331-3 WG1819331-4								
Methylene chloride	97		91		70-130	6		30
1,1-Dichloroethane	102		93		70-130	9		30
Chloroform	88		81		70-130	8		30
Carbon tetrachloride	95		83		70-130	13		30
1,2-Dichloropropane	97		92		70-130	5		30
Dibromochloromethane	102		98		70-130	4		30
1,1,2-Trichloroethane	106		102		70-130	4		30
Tetrachloroethene	115		101		70-130	13		30
Chlorobenzene	102		97		70-130	5		30
Trichlorofluoromethane	112		96		70-139	15		30
1,2-Dichloroethane	96		93		70-130	3		30
1,1,1-Trichloroethane	98		87		70-130	12		30
Bromodichloromethane	94		89		70-130	5		30
trans-1,3-Dichloropropene	99		98		70-130	1		30
cis-1,3-Dichloropropene	98		98		70-130	0		30
Bromoform	93		92		70-130	1		30
1,1,2,2-Tetrachloroethane	97		92		70-130	5		30
Benzene	99		93		70-130	6		30
Toluene	103		94		70-130	9		30
Ethylbenzene	106		97		70-130	9		30
Chloromethane	108		95		52-130	13		30
Bromomethane	95		86		57-147	10		30
Vinyl chloride	114		94		67-130	19		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1819331-3 WG1819331-4								
Chloroethane	101		91		50-151	10		30
1,1-Dichloroethene	106		92		65-135	14		30
trans-1,2-Dichloroethene	102		94		70-130	8		30
Trichloroethene	108		99		70-130	9		30
1,2-Dichlorobenzene	101		94		70-130	7		30
1,3-Dichlorobenzene	105		98		70-130	7		30
1,4-Dichlorobenzene	103		98		70-130	5		30
Methyl tert butyl ether	96		94		66-130	2		30
p/m-Xylene	110		101		70-130	9		30
o-Xylene	106		99		70-130	7		30
cis-1,2-Dichloroethene	97		79		70-130	20		30
Styrene	110		105		70-130	5		30
Dichlorodifluoromethane	115		96		30-146	18		30
Acetone	95		97		54-140	2		30
Carbon disulfide	104		90		59-130	14		30
2-Butanone	86		90		70-130	5		30
4-Methyl-2-pentanone	95		90		70-130	5		30
2-Hexanone	94		91		70-130	3		30
Bromochloromethane	98		84		70-130	15		30
1,2-Dibromoethane	104		102		70-130	2		30
1,2-Dibromo-3-chloropropane	108		100		68-130	8		30
Isopropylbenzene	107		95		70-130	12		30
1,2,3-Trichlorobenzene	98		97		70-130	1		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1819331-3 WG1819331-4								
1,2,4-Trichlorobenzene	99		98		70-130	1		30
Methyl Acetate	102		94		51-146	8		30
Cyclohexane	110		72		59-142	**42**	Q	30
1,4-Dioxane	99		88		65-136	12		30
Freon-113	112		96		50-139	15		30
Methyl cyclohexane	107		92		70-130	15		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	96		96		70-130
Toluene-d8	102		102		70-130
4-Bromofluorobenzene	96		94		70-130
Dibromofluoromethane	90		90		70-130

SEMIVOLATILES

Project Name: RITC
Project Number: BENCH SCALE-TOC
Lab Number: L2347700
Report Date: 08/31/23

SAMPLE RESULTS

Lab ID: L2347700-01 D
Client ID: BREEZE-08172023
Sample Location: 3875 RIVER ROAD

Date Collected: 08/17/23 11:35
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Analytical Method: 1,8270E
Analytical Date: 08/21/23 16:03
Analyst: JG
Percent Solids: 85%

Extraction Method: EPA 3546
Extraction Date: 08/20/23 04:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	640	J	ug/kg	770	99.	5
Hexachlorobenzene	ND		ug/kg	580	110	5
Bis(2-chloroethyl)ether	ND		ug/kg	860	130	5
2-Chloronaphthalene	ND		ug/kg	960	95.	5
3,3'-Dichlorobenzidine	ND		ug/kg	960	260	5
2,4-Dinitrotoluene	ND		ug/kg	960	190	5
2,6-Dinitrotoluene	ND		ug/kg	960	160	5
Fluoranthene	24000		ug/kg	580	110	5
4-Chlorophenyl phenyl ether	ND		ug/kg	960	100	5
4-Bromophenyl phenyl ether	ND		ug/kg	960	150	5
Bis(2-chloroisopropyl)ether	ND		ug/kg	1200	160	5
Bis(2-chloroethoxy)methane	ND		ug/kg	1000	96.	5
Hexachlorobutadiene	ND		ug/kg	960	140	5
Hexachlorocyclopentadiene	ND		ug/kg	2700	870	5
Hexachloroethane	ND		ug/kg	770	160	5
Isophorone	ND		ug/kg	860	120	5
Naphthalene	5000		ug/kg	960	120	5
Nitrobenzene	ND		ug/kg	860	140	5
NDPA/DPA	ND		ug/kg	770	110	5
n-Nitrosodi-n-propylamine	ND		ug/kg	960	150	5
Bis(2-ethylhexyl)phthalate	ND		ug/kg	960	330	5
Butyl benzyl phthalate	ND		ug/kg	960	240	5
Di-n-butylphthalate	ND		ug/kg	960	180	5
Di-n-octylphthalate	ND		ug/kg	960	330	5
Diethyl phthalate	ND		ug/kg	960	89.	5
Dimethyl phthalate	ND		ug/kg	960	200	5
Benzo(a)anthracene	9100		ug/kg	580	110	5
Benzo(a)pyrene	9500		ug/kg	770	230	5

Project Name: RITC **Lab Number:** L2347700

Project Number: BENCH SCALE-TOC **Report Date:** 08/31/23

SAMPLE RESULTS

Lab ID: L2347700-01 D
Client ID: BREEZE-08172023
Sample Location: 3875 RIVER ROAD

Date Collected: 08/17/23 11:35
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(b)fluoranthene	12000		ug/kg	580	160	5
Benzo(k)fluoranthene	2900		ug/kg	580	150	5
Chrysene	9800		ug/kg	580	100	5
Acenaphthylene	2700		ug/kg	770	150	5
Anthracene	4000		ug/kg	580	190	5
Benzo(ghi)perylene	6000		ug/kg	770	110	5
Fluorene	2900		ug/kg	960	93.	5
Phenanthrene	18000		ug/kg	580	120	5
Dibenzo(a,h)anthracene	1500		ug/kg	580	110	5
Indeno(1,2,3-cd)pyrene	5600		ug/kg	770	130	5
Pyrene	18000		ug/kg	580	95.	5
Biphenyl	340	J	ug/kg	2200	120	5
4-Chloroaniline	ND		ug/kg	960	170	5
2-Nitroaniline	ND		ug/kg	960	180	5
3-Nitroaniline	ND		ug/kg	960	180	5
4-Nitroaniline	ND		ug/kg	960	400	5
Dibenzofuran	1700		ug/kg	960	91.	5
2-Methylnaphthalene	1300		ug/kg	1200	120	5
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	960	100	5
Acetophenone	ND		ug/kg	960	120	5
2,4,6-Trichlorophenol	ND		ug/kg	580	180	5
p-Chloro-m-cresol	ND		ug/kg	960	140	5
2-Chlorophenol	ND		ug/kg	960	110	5
2,4-Dichlorophenol	ND		ug/kg	860	150	5
2,4-Dimethylphenol	ND		ug/kg	960	320	5
2-Nitrophenol	ND		ug/kg	2100	360	5
4-Nitrophenol	ND		ug/kg	1300	390	5
2,4-Dinitrophenol	ND		ug/kg	4600	450	5
4,6-Dinitro-o-cresol	ND		ug/kg	2500	460	5
Pentachlorophenol	ND		ug/kg	770	210	5
Phenol	150	J	ug/kg	960	140	5
2-Methylphenol	ND		ug/kg	960	150	5
3-Methylphenol/4-Methylphenol	150	J	ug/kg	1400	150	5
2,4,5-Trichlorophenol	ND		ug/kg	960	180	5
Carbazole	1300		ug/kg	960	93.	5
Atrazine	ND		ug/kg	770	340	5
Benzaldehyde	ND		ug/kg	1300	260	5

Project Name: RITC **Lab Number:** L2347700

Project Number: BENCH SCALE-TOC **Report Date:** 08/31/23

SAMPLE RESULTS

Lab ID: L2347700-01 D
Client ID: BREEZE-08172023
Sample Location: 3875 RIVER ROAD

Date Collected: 08/17/23 11:35
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Caprolactam	ND		ug/kg	960	290	5
2,3,4,6-Tetrachlorophenol	ND		ug/kg	960	190	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	28		25-120
Phenol-d6	36		10-120
Nitrobenzene-d5	69		23-120
2-Fluorobiphenyl	86		30-120
2,4,6-Tribromophenol	51		10-136
4-Terphenyl-d14	77		18-120

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 08/21/23 14:06
Analyst: MG

Extraction Method: EPA 3546
Extraction Date: 08/20/23 04:30

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1817942-1					
Acenaphthene	ND		ug/kg	130	17.
Hexachlorobenzene	ND		ug/kg	99	18.
Bis(2-chloroethyl)ether	ND		ug/kg	150	22.
2-Chloronaphthalene	ND		ug/kg	160	16.
3,3'-Dichlorobenzidine	ND		ug/kg	160	44.
2,4-Dinitrotoluene	ND		ug/kg	160	33.
2,6-Dinitrotoluene	ND		ug/kg	160	28.
Fluoranthene	ND		ug/kg	99	19.
4-Chlorophenyl phenyl ether	ND		ug/kg	160	18.
4-Bromophenyl phenyl ether	ND		ug/kg	160	25.
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	28.
Bis(2-chloroethoxy)methane	ND		ug/kg	180	17.
Hexachlorobutadiene	ND		ug/kg	160	24.
Hexachlorocyclopentadiene	ND		ug/kg	470	150
Hexachloroethane	ND		ug/kg	130	27.
Isophorone	ND		ug/kg	150	22.
Naphthalene	ND		ug/kg	160	20.
Nitrobenzene	ND		ug/kg	150	24.
NDPA/DPA	ND		ug/kg	130	19.
n-Nitrosodi-n-propylamine	ND		ug/kg	160	26.
Bis(2-ethylhexyl)phthalate	ND		ug/kg	160	57.
Butyl benzyl phthalate	ND		ug/kg	160	42.
Di-n-butylphthalate	ND		ug/kg	160	31.
Di-n-octylphthalate	ND		ug/kg	160	56.
Diethyl phthalate	ND		ug/kg	160	15.
Dimethyl phthalate	ND		ug/kg	160	35.
Benzo(a)anthracene	ND		ug/kg	99	19.
Benzo(a)pyrene	ND		ug/kg	130	40.
Benzo(b)fluoranthene	ND		ug/kg	99	28.

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 08/21/23 14:06
Analyst: MG

Extraction Method: EPA 3546
Extraction Date: 08/20/23 04:30

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1817942-1					
Benzo(k)fluoranthene	ND		ug/kg	99	26.
Chrysene	ND		ug/kg	99	17.
Acenaphthylene	ND		ug/kg	130	26.
Anthracene	ND		ug/kg	99	32.
Benzo(ghi)perylene	ND		ug/kg	130	19.
Fluorene	ND		ug/kg	160	16.
Phenanthrene	ND		ug/kg	99	20.
Dibenzo(a,h)anthracene	ND		ug/kg	99	19.
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	23.
Pyrene	ND		ug/kg	99	16.
Biphenyl	ND		ug/kg	380	22.
4-Chloroaniline	ND		ug/kg	160	30.
2-Nitroaniline	ND		ug/kg	160	32.
3-Nitroaniline	ND		ug/kg	160	31.
4-Nitroaniline	ND		ug/kg	160	68.
Dibenzofuran	ND		ug/kg	160	16.
2-Methylnaphthalene	ND		ug/kg	200	20.
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	160	17.
Acetophenone	ND		ug/kg	160	20.
2,4,6-Trichlorophenol	ND		ug/kg	99	31.
p-Chloro-m-cresol	ND		ug/kg	160	25.
2-Chlorophenol	ND		ug/kg	160	20.
2,4-Dichlorophenol	ND		ug/kg	150	27.
2,4-Dimethylphenol	ND		ug/kg	160	55.
2-Nitrophenol	ND		ug/kg	360	62.
4-Nitrophenol	ND		ug/kg	230	68.
2,4-Dinitrophenol	ND		ug/kg	800	77.
4,6-Dinitro-o-cresol	ND		ug/kg	430	80.
Pentachlorophenol	ND		ug/kg	130	36.

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 08/21/23 14:06
Analyst: MG

Extraction Method: EPA 3546
Extraction Date: 08/20/23 04:30

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1817942-1					
Phenol	ND		ug/kg	160	25.
2-Methylphenol	ND		ug/kg	160	26.
3-Methylphenol/4-Methylphenol	ND		ug/kg	240	26.
2,4,5-Trichlorophenol	ND		ug/kg	160	32.
Carbazole	ND		ug/kg	160	16.
Atrazine	ND		ug/kg	130	58.
Benzaldehyde	ND		ug/kg	220	45.
Caprolactam	ND		ug/kg	160	50.
2,3,4,6-Tetrachlorophenol	ND		ug/kg	160	33.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	94		25-120
Phenol-d6	97		10-120
Nitrobenzene-d5	83		23-120
2-Fluorobiphenyl	113		30-120
2,4,6-Tribromophenol	119		10-136
4-Terphenyl-d14	119		18-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1817942-2 WG1817942-3								
Acenaphthene	72		87		31-137	19		50
Hexachlorobenzene	88		101		40-140	14		50
Bis(2-chloroethyl)ether	64		76		40-140	17		50
2-Chloronaphthalene	83		95		40-140	13		50
3,3'-Dichlorobenzidine	90		102		40-140	13		50
2,4-Dinitrotoluene	89		103		40-132	15		50
2,6-Dinitrotoluene	91		100		40-140	9		50
Fluoranthene	80		90		40-140	12		50
4-Chlorophenyl phenyl ether	82		96		40-140	16		50
4-Bromophenyl phenyl ether	85		98		40-140	14		50
Bis(2-chloroisopropyl)ether	62		76		40-140	20		50
Bis(2-chloroethoxy)methane	66		77		40-117	15		50
Hexachlorobutadiene	83		104		40-140	22		50
Hexachlorocyclopentadiene	92		110		40-140	18		50
Hexachloroethane	60		72		40-140	18		50
Isophorone	67		76		40-140	13		50
Naphthalene	72		88		40-140	20		50
Nitrobenzene	66		76		40-140	14		50
NDPA/DPA	80		92		36-157	14		50
n-Nitrosodi-n-propylamine	67		78		32-121	15		50
Bis(2-ethylhexyl)phthalate	81		96		40-140	17		50
Butyl benzyl phthalate	76		87		40-140	13		50
Di-n-butylphthalate	77		91		40-140	17		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1817942-2 WG1817942-3								
Di-n-octylphthalate	82		97		40-140	17		50
Diethyl phthalate	77		89		40-140	14		50
Dimethyl phthalate	84		93		40-140	10		50
Benzo(a)anthracene	81		95		40-140	16		50
Benzo(a)pyrene	83		107		40-140	25		50
Benzo(b)fluoranthene	75		93		40-140	21		50
Benzo(k)fluoranthene	76		100		40-140	27		50
Chrysene	79		95		40-140	18		50
Acenaphthylene	83		93		40-140	11		50
Anthracene	79		92		40-140	15		50
Benzo(ghi)perylene	82		103		40-140	23		50
Fluorene	78		92		40-140	16		50
Phenanthrene	77		91		40-140	17		50
Dibenzo(a,h)anthracene	84		105		40-140	22		50
Indeno(1,2,3-cd)pyrene	85		106		40-140	22		50
Pyrene	79		90		35-142	13		50
Biphenyl	86		97		37-127	12		50
4-Chloroaniline	63		73		40-140	15		50
2-Nitroaniline	95		106		47-134	11		50
3-Nitroaniline	81		91		26-129	12		50
4-Nitroaniline	83		94		41-125	12		50
Dibenzofuran	80		95		40-140	17		50
2-Methylnaphthalene	79		92		40-140	15		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1817942-2 WG1817942-3								
1,2,4,5-Tetrachlorobenzene	89		106		40-117	17		50
Acetophenone	72		85		14-144	17		50
2,4,6-Trichlorophenol	94		108		30-130	14		50
p-Chloro-m-cresol	74		82		26-103	10		50
2-Chlorophenol	75		87		25-102	15		50
2,4-Dichlorophenol	90		100		30-130	11		50
2,4-Dimethylphenol	73		81		30-130	10		50
2-Nitrophenol	87		103		30-130	17		50
4-Nitrophenol	70		80		11-114	13		50
2,4-Dinitrophenol	66		75		4-130	13		50
4,6-Dinitro-o-cresol	107		120		10-130	11		50
Pentachlorophenol	99		108		17-109	9		50
Phenol	74		82		26-90	10		50
2-Methylphenol	76		86		30-130.	12		50
3-Methylphenol/4-Methylphenol	75		86		30-130	14		50
2,4,5-Trichlorophenol	101		108		30-130	7		50
Carbazole	78		90		54-128	14		50
Atrazine	80		86		40-140	7		50
Benzaldehyde	103		126		40-140	20		50
Caprolactam	71		79		15-130	11		50
2,3,4,6-Tetrachlorophenol	91		103		40-140	12		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1817942-2 WG1817942-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	76		84		25-120
Phenol-d6	79		86		10-120
Nitrobenzene-d5	69		79		23-120
2-Fluorobiphenyl	90		98		30-120
2,4,6-Tribromophenol	108		119		10-136
4-Terphenyl-d14	83		91		18-120

METALS

Project Name: RITC
Project Number: BENCH SCALE-TOC
Lab Number: L2347700
Report Date: 08/31/23

SAMPLE RESULTS

Lab ID: L2347700-01
Client ID: BREEZE-08172023
Sample Location: 3875 RIVER ROAD
Date Collected: 08/17/23 11:35
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment
Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	1760		mg/kg	9.15	2.47	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Antimony, Total	ND		mg/kg	4.58	0.348	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Arsenic, Total	5.38		mg/kg	0.915	0.190	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Barium, Total	35.5		mg/kg	0.915	0.159	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Beryllium, Total	0.268	J	mg/kg	0.458	0.030	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Cadmium, Total	ND		mg/kg	0.915	0.090	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Calcium, Total	4740		mg/kg	9.15	3.20	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Chromium, Total	5.44		mg/kg	0.915	0.088	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Cobalt, Total	2.36		mg/kg	1.83	0.152	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Copper, Total	17.1		mg/kg	0.915	0.236	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Iron, Total	6210		mg/kg	4.58	0.826	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Lead, Total	8.57		mg/kg	4.58	0.245	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Magnesium, Total	991		mg/kg	9.15	1.41	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Manganese, Total	76.2		mg/kg	0.915	0.146	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Mercury, Total	0.075	J	mg/kg	0.086	0.056	1	08/22/23 17:18	08/28/23 17:42	EPA 7471B	1,7471B	DMB
Nickel, Total	5.17		mg/kg	2.29	0.221	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Potassium, Total	233		mg/kg	229	13.2	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Selenium, Total	1.12	J	mg/kg	1.83	0.236	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Silver, Total	ND		mg/kg	0.458	0.259	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Sodium, Total	116	J	mg/kg	183	2.88	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Thallium, Total	ND		mg/kg	1.83	0.288	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Vanadium, Total	4.08		mg/kg	0.915	0.186	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS
Zinc, Total	23.6		mg/kg	4.58	0.268	2	08/22/23 16:43	08/30/23 19:02	EPA 3050B	1,6010D	JTS

Project Name: RITC **Lab Number:** L2347700

Project Number: BENCH SCALE-TOC **Report Date:** 08/31/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1818746-1										
Aluminum, Total	ND		mg/kg	4.00	1.08	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Antimony, Total	0.922	J	mg/kg	2.00	0.152	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Arsenic, Total	ND		mg/kg	0.400	0.083	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Barium, Total	ND		mg/kg	0.400	0.070	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Beryllium, Total	ND		mg/kg	0.200	0.013	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Cadmium, Total	ND		mg/kg	0.400	0.039	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Calcium, Total	ND		mg/kg	4.00	1.40	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Chromium, Total	ND		mg/kg	0.400	0.038	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Cobalt, Total	0.091	J	mg/kg	0.800	0.066	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Copper, Total	ND		mg/kg	0.400	0.103	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Iron, Total	0.751	J	mg/kg	2.00	0.361	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Lead, Total	ND		mg/kg	2.00	0.107	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Magnesium, Total	ND		mg/kg	4.00	0.616	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Manganese, Total	ND		mg/kg	0.400	0.064	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Nickel, Total	ND		mg/kg	1.00	0.097	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Potassium, Total	ND		mg/kg	100	5.76	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Selenium, Total	ND		mg/kg	0.800	0.103	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Silver, Total	ND		mg/kg	0.200	0.113	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Sodium, Total	1.46	J	mg/kg	80.0	1.26	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Thallium, Total	0.198	J	mg/kg	0.800	0.126	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Vanadium, Total	ND		mg/kg	0.400	0.081	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS
Zinc, Total	ND		mg/kg	2.00	0.117	1	08/22/23 16:43	08/30/23 18:55	1,6010D	JTS

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1818748-1										
Mercury, Total	ND		mg/kg	0.083	0.054	1	08/22/23 17:18	08/28/23 17:22	1,7471B	DMB

Project Name: RITC
Project Number: BENCH SCALE-TOC
Lab Number: L2347700
Report Date: 08/31/23

Method Blank Analysis
Batch Quality Control

Prep Information

Digestion Method: EPA 7471B

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC

Project Number: BENCH SCALE-TOC

Lab Number: L2347700

Report Date: 08/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1818746-2 SRM Lot Number: D119-540								
Aluminum, Total	79		-		48-152	-		
Antimony, Total	174		-		10-190	-		
Arsenic, Total	104		-		83-117	-		
Barium, Total	102		-		82-118	-		
Beryllium, Total	102		-		83-117	-		
Cadmium, Total	94		-		82-117	-		
Calcium, Total	101		-		81-118	-		
Chromium, Total	104		-		82-119	-		
Cobalt, Total	100		-		83-117	-		
Copper, Total	96		-		84-116	-		
Iron, Total	110		-		60-140	-		
Lead, Total	102		-		82-118	-		
Magnesium, Total	92		-		76-124	-		
Manganese, Total	115		-		82-118	-		
Nickel, Total	98		-		82-117	-		
Potassium, Total	92		-		70-130	-		
Selenium, Total	106		-		79-121	-		
Silver, Total	102		-		80-120	-		
Sodium, Total	99		-		74-126	-		
Thallium, Total	100		-		81-119	-		
Vanadium, Total	98		-		79-121	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC

Project Number: BENCH SCALE-TOC

Lab Number: L2347700

Report Date: 08/31/23

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1818746-2 SRM Lot Number: D119-540					
Zinc, Total	104	-	80-120	-	
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1818748-2 SRM Lot Number: D119-540					
Mercury, Total	100	-	73-127	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1818746-3 QC Sample: L2347595-01 Client ID: MS Sample												
Aluminum, Total	6260	183	8150	**1030**	Q	-	-		75-125	-		20
Antimony, Total	ND	45.8	47.6	104		-	-		75-125	-		20
Arsenic, Total	5.05	11	16.6	105		-	-		75-125	-		20
Barium, Total	66.5	183	246	98		-	-		75-125	-		20
Beryllium, Total	0.507	4.58	5.11	100		-	-		75-125	-		20
Cadmium, Total	ND	4.85	4.39	90		-	-		75-125	-		20
Calcium, Total	2310	915	3350	114		-	-		75-125	-		20
Chromium, Total	28.2	18.3	41.1	**70**	Q	-	-		75-125	-		20
Cobalt, Total	6.15	45.8	49.1	94		-	-		75-125	-		20
Copper, Total	11.5	22.9	34.7	101		-	-		75-125	-		20
Iron, Total	12400	91.5	12700	**328**	Q	-	-		75-125	-		20
Lead, Total	60.5	48.5	116	114		-	-		75-125	-		20
Magnesium, Total	3790	915	2410	**0**	Q	-	-		75-125	-		20
Manganese, Total	240	45.8	252	**26**	Q	-	-		75-125	-		20
Nickel, Total	42.2	45.8	54.4	**27**	Q	-	-		75-125	-		20
Potassium, Total	580	915	1550	106		-	-		75-125	-		20
Selenium, Total	0.219J	11	10.9	99		-	-		75-125	-		20
Silver, Total	ND	4.58	4.69	102		-	-		75-125	-		20
Sodium, Total	55.7J	915	941	103		-	-		75-125	-		20
Thallium, Total	ND	11	10.9	99		-	-		75-125	-		20
Vanadium, Total	25.6	45.8	69.9	97		-	-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1818746-3 QC Sample: L2347595-01 Client ID: MS Sample									
Zinc, Total	51.2	45.8	94.3	94	-	-	75-125	-	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1818748-3 QC Sample: L2347595-01 Client ID: MS Sample									
Mercury, Total	ND	1.7	1.77	104	-	-	80-120	-	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1818746-4 QC Sample: L2347595-01 Client ID: DUP Sample						
Aluminum, Total	6260	6160	mg/kg	2		20
Antimony, Total	ND	ND	mg/kg	NC		20
Arsenic, Total	5.05	4.99	mg/kg	1		20
Barium, Total	66.5	63.9	mg/kg	4		20
Beryllium, Total	0.507	0.486	mg/kg	4		20
Cadmium, Total	ND	ND	mg/kg	NC		20
Chromium, Total	28.2	20.1	mg/kg	**34**	Q	20
Cobalt, Total	6.15	4.40	mg/kg	**33**	Q	20
Copper, Total	11.5	15.8	mg/kg	**32**	Q	20
Iron, Total	12400	11700	mg/kg	6		20
Lead, Total	60.5	56.7	mg/kg	6		20
Manganese, Total	240	219	mg/kg	9		20
Nickel, Total	42.2	9.12	mg/kg	**129**	Q	20
Selenium, Total	0.219J	0.261J	mg/kg	NC		20
Silver, Total	ND	0.160J	mg/kg	NC		20
Thallium, Total	ND	ND	mg/kg	NC		20
Vanadium, Total	25.6	25.9	mg/kg	1		20
Zinc, Total	51.2	45.1	mg/kg	13		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: RITC

Project Number: BENCH SCALE-TOC

Lab Number: L2347700

Report Date: 08/31/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1818748-4 QC Sample: L2347595-01 Client ID: DUP Sample					
Mercury, Total	ND	ND	mg/kg	NC	20

INORGANICS
&
MISCELLANEOUS

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

SAMPLE RESULTS

Lab ID: L2347700-01
Client ID: BREEZE-08172023
Sample Location: 3875 RIVER ROAD

Date Collected: 08/17/23 11:35
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon	78.0		%	0.010	0.010	1	-	08/28/23 08:43	1,9060A	SPP
General Chemistry - Westborough Lab										
Solids, Total	85.3		%	0.100	NA	1	-	08/18/23 13:45	121,2540G	ROI
Cyanide, Total	0.75	J	mg/kg	1.1	0.24	1	08/19/23 16:00	08/21/23 15:14	1,9010C/9012B	KEP
Nitrogen, Ammonia	9.1		mg/kg	8.3	3.1	1	08/20/23 10:40	08/20/23 17:22	121,4500NH3-BH	AVT

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

SAMPLE RESULTS

Lab ID: L2347700-02
Client ID: SS-BCP-24-02-08172023
Sample Location: 3875 RIVER ROAD

Date Collected: 08/17/23 11:45
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	93.0		%	0.100	NA	1	-	08/18/23 13:45	121,2540G	ROI
Cyanide, Total	29		mg/kg	2.0	0.43	2	08/19/23 16:00	08/21/23 16:11	1,9010C/9012B	KEP
Nitrogen, Ammonia	9.9		mg/kg	8.0	3.0	1	08/20/23 10:40	08/20/23 17:25	121,4500NH3-BH	AVT

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

SAMPLE RESULTS

Lab ID: L2347700-03
Client ID: SS-BCP-24-04-08172023
Sample Location: 3875 RIVER ROAD

Date Collected: 08/17/23 11:45
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.0		%	0.100	NA	1	-	08/18/23 13:45	121,2540G	ROI
Cyanide, Total	53		mg/kg	5.3	1.1	5	08/19/23 16:00	08/21/23 16:13	1,9010C/9012B	KEP
Nitrogen, Ammonia	150		mg/kg	7.3	2.7	1	08/20/23 10:40	08/20/23 17:26	121,4500NH3-BH	AVT

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

SAMPLE RESULTS

Lab ID: L2347700-04
Client ID: SS-BCP-24-06-08172023
Sample Location: 3875 RIVER ROAD

Date Collected: 08/17/23 11:48
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	91.9		%	0.100	NA	1	-	08/18/23 13:45	121,2540G	ROI
Cyanide, Total	25		mg/kg	2.0	0.43	2	08/19/23 16:00	08/21/23 16:14	1,9010C/9012B	KEP
Nitrogen, Ammonia	20		mg/kg	6.4	2.4	1	08/20/23 10:40	08/20/23 17:27	121,4500NH3-BH	AVT

Project Name: RITC
Project Number: BENCH SCALE-TOC
Lab Number: L2347700
Report Date: 08/31/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1817873-1										
Cyanide, Total	ND		mg/kg	0.86	0.18	1	08/19/23 16:00	08/21/23 15:10	1,9010C/9012B	KEP
General Chemistry - Westborough Lab for sample(s): 03-04 Batch: WG1817875-1										
Cyanide, Total	ND		mg/kg	0.86	0.18	1	08/19/23 16:00	08/21/23 15:10	1,9010C/9012B	KEP
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1817932-1										
Nitrogen, Ammonia	ND		mg/kg	7.5	0.02	1	08/20/23 10:40	08/20/23 17:19	121,4500NH3-BH	AVT
Total Organic Carbon - Mansfield Lab for sample(s): 01 Batch: WG1820886-1										
Total Organic Carbon	ND		%	0.010	0.010	1	-	08/28/23 08:43	1,9060A	SPP

Lab Control Sample Analysis

Batch Quality Control

Project Name: RITC

Project Number: BENCH SCALE-TOC

Lab Number: L2347700

Report Date: 08/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1817873-2 WG1817873-3								
Cyanide, Total	87		**77**	Q	80-120	15		35
General Chemistry - Westborough Lab Associated sample(s): 03-04 Batch: WG1817875-2 WG1817875-3								
Cyanide, Total	87		**76**	Q	80-120	15		35
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1817932-2								
Nitrogen, Ammonia	93		-		83-115	-		20
Total Organic Carbon - Mansfield Lab Associated sample(s): 01 Batch: WG1820886-2								
Total Organic Carbon	96		-		75-125	-		25

Matrix Spike Analysis
Batch Quality Control

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1817873-4 WG1817873-5 QC Sample: L2347700-01 Client ID: BREEZE-08172023												
Cyanide, Total	0.75J	12	12	97		12	98		75-125	0		35
General Chemistry - Westborough Lab Associated sample(s): 03-04 QC Batch ID: WG1817875-4 WG1817875-5 QC Sample: L2347803-04 Client ID: MS Sample												
Cyanide, Total	ND	10	9.8	96		10	95		75-125	2		35
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1817932-4 QC Sample: L2347700-01 Client ID: BREEZE-08172023												
Nitrogen, Ammonia	9.1	390	350	88		-	-		55-144	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: RITC

Project Number: BENCH SCALE-TOC

Lab Number: L2347700

Report Date: 08/31/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1817424-1 QC Sample: L2347609-01 Client ID: DUP Sample						
Solids, Total	88.3	88.6	%	0		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1817932-3 QC Sample: L2347700-01 Client ID: BREEZE-08172023						
Nitrogen, Ammonia	9.1	63	mg/kg	**150**	Q	20

Project Name: RITC
Project Number: BENCH SCALE-TOC

Lab Number: L2347700
Report Date: 08/31/23

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2347700-01A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.3	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),AL-TI(180),SB-TI(180),ZN-TI(180),PB-TI(180),SE-TI(180),CU-TI(180),CO-TI(180),V-TI(180),FE-TI(180),HG-T(28),MN-TI(180),MG-TI(180),CA-TI(180),NA-TI(180),K-TI(180),CD-TI(180)
L2347700-01B	Vial Large Septa unpreserved (4oz)	A	NA		2.3	Y	Absent		NYTCL-8260-R2(14)
L2347700-01C	Glass 120ml/4oz unpreserved	A	NA		2.3	Y	Absent		A2-TOC-9060(28)
L2347700-01D	Glass 250ml/8oz unpreserved	A	NA		2.3	Y	Absent		TCN-9010(14),NYTCL-8270(14),TS(7),NH3-4500(28)
L2347700-01E	Glass 250ml/8oz unpreserved	A	NA		2.3	Y	Absent		TCN-9010(14),NYTCL-8270(14),TS(7),NH3-4500(28)
L2347700-01X	Vial MeOH preserved split	A	NA		2.3	Y	Absent		NYTCL-8260-R2(14)
L2347700-01Y	Vial Water preserved split	A	NA		2.3	Y	Absent	18-AUG-23 13:49	NYTCL-8260-R2(14)
L2347700-01Z	Vial Water preserved split	A	NA		2.3	Y	Absent	18-AUG-23 13:49	NYTCL-8260-R2(14)
L2347700-02A	Glass 120ml/4oz unpreserved	A	NA		2.3	Y	Absent		TCN-9010(14),TS(7),NH3-4500(28)
L2347700-02B	Glass 120ml/4oz unpreserved	A	NA		2.3	Y	Absent		TCN-9010(14),TS(7),NH3-4500(28)
L2347700-03A	Glass 120ml/4oz unpreserved	A	NA		2.3	Y	Absent		TCN-9010(14),TS(7),NH3-4500(28)
L2347700-03B	Glass 120ml/4oz unpreserved	A	NA		2.3	Y	Absent		TCN-9010(14),TS(7),NH3-4500(28)
L2347700-04A	Glass 120ml/4oz unpreserved	A	NA		2.3	Y	Absent		TCN-9010(14),TS(7),NH3-4500(28)
L2347700-04B	Glass 120ml/4oz unpreserved	A	NA		2.3	Y	Absent		TCN-9010(14),TS(7),NH3-4500(28)

*Values in parentheses indicate holding time in days

Project Name:	RITC	**Lab Number:**	L2347700
Project Number:	BENCH SCALE-TOC	**Report Date:**	08/31/23

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	RITC	**Lab Number:**	L2347700
Project Number:	BENCH SCALE-TOC	**Report Date:**	08/31/23

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers

Project Name:	RITC	**Lab Number:**	L2347700
Project Number:	BENCH SCALE-TOC	**Report Date:**	08/31/23

Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 8/18/23

ALPHA Job #: L2347100

Client Information
Client: INVENTUM ENG.
Address: 441 Carlisle Drive C.
HERNDON VA
Phone: 716-553-5129
Fax:
Email: Roxanne.Bisk@inventumeng.com

Project Information
Project Name: RITC
Project Location: 3875 River Road
Project #: BENCH SCALE - TOC
(Use Project name as Project #) ☐
Project Manager: JOHN BLACK
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☒ # of Days: 5

Deliverables
☐ ASP-A ☐ ASP-B
☒ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information
☒ Same as Client Info
PO #

Regulatory Requirement
☐ NY TOGS ☒ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☒ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
*NEED REPORT BY MONDAY 8/28
TAL METALS DO not Require Rush

Please specify Metals or TAL.

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TOTAL ORGANIC CARBON	TCL VOCS 8260	TCL SVOCS 8270	TAL METALS, Hg 6010	AMMONIA - 350.1	T. CYANIDE 9012			Total Bottle
47708-01	BREEZE-08172023	8/17/23	1135	RB	SD	X	X	X	X	X	X			
-02	SS-BCP-24-02-08172023	8/17/23	1145	SD	RB					X	X			
-03	SS-BCP-24-04-08172023	8/17/23	1145	SD	RB					X	X			
-04	SS-BCP-24-06-08172023	8/17/23	1148	SD	RB					X	X			

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type	A	A												
Preservative	A	A												

Relinquished By:	Date/Time	Received By:	Date/Time
	8/17/23 1755		8/17/23 1253
	8/17/23 1255		8/18/23 0100

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

PARADIGM

PARADIGM
ENVIRONMENTAL SERVICES, INC

Analytical Report For

Inventum Engineering, P.C.

For Lab Project ID

234271

Referencing

Breeze Water Testing

Prepared

Monday, September 25, 2023

Any noncompliant QC parameters or other notes impacting data interpretation are flagged or documented on the final report or are noted below.

Emily Laumen

Certifies that this report has been approved by the Technical Director or Designee

179 Lake Avenue • Rochester, NY 14608 • (585) 647-2530 • Fax (585) 647-3311 • ELAP ID# 10958

Sample Identifier:	BreezeTest-01-09132023		
Lab Sample ID:	234271-01	**Date Sampled:** 9/13/2023	16:15
Matrix:	Groundwater	**Date Received** 9/15/2023	

Ammonia-N

Analyte	Result	Units	Qualifier	Date Analyzed
Ammonia	**7.7**	mg/L		9/19/2023

Method Reference(s): EPA 350.1 Rev 2.0
Subcontractor ELAP ID: 10709

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.200**	mg/L		9/19/2023

Method Reference(s): EPA 335.4 Rev 1.0
Subcontractor ELAP ID: 10709

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 10.0	ug/L		9/20/2023 17:23
1,2,4,5-Tetrachlorobenzene	< 10.0	ug/L		9/20/2023 17:23
1,2,4-Trichlorobenzene	< 10.0	ug/L		9/20/2023 17:23
1,2-Dichlorobenzene	< 10.0	ug/L		9/20/2023 17:23
1,3-Dichlorobenzene	< 10.0	ug/L		9/20/2023 17:23
1,4-Dichlorobenzene	< 10.0	ug/L		9/20/2023 17:23
2,2-Oxybis (1-chloropropane)	< 10.0	ug/L		9/20/2023 17:23
2,3,4,6-Tetrachlorophenol	< 10.0	ug/L		9/20/2023 17:23
2,4,5-Trichlorophenol	< 10.0	ug/L		9/20/2023 17:23
2,4,6-Trichlorophenol	< 20.0	ug/L		9/20/2023 17:23
2,4-Dichlorophenol	< 10.0	ug/L		9/20/2023 17:23
2,4-Dimethylphenol	< 10.0	ug/L		9/20/2023 17:23
2,4-Dinitrophenol	< 20.0	ug/L		9/20/2023 17:23
2,4-Dinitrotoluene	< 10.0	ug/L		9/20/2023 17:23
2,6-Dinitrotoluene	< 10.0	ug/L		9/20/2023 17:23
2-Chloronaphthalene	< 10.0	ug/L		9/20/2023 17:23
2-Chlorophenol	< 10.0	ug/L		9/20/2023 17:23

Sample Identifier:	BreezeTest-01-09132023		
Lab Sample ID:	234271-01	**Date Sampled:** 9/13/2023	16:15
Matrix:	Groundwater	**Date Received** 9/15/2023	

2-Methylnapthalene	< 10.0	ug/L	9/20/2023	17:23
2-Methylphenol	< 10.0	ug/L	9/20/2023	17:23
2-Nitroaniline	< 20.0	ug/L	9/20/2023	17:23
2-Nitrophenol	< 10.0	ug/L	9/20/2023	17:23
3&4-Methylphenol	< 10.0	ug/L	9/20/2023	17:23
3,3'-Dichlorobenzidine	< 10.0	ug/L	9/20/2023	17:23
3-Nitroaniline	< 20.0	ug/L	9/20/2023	17:23
4,6-Dinitro-2-methylphenol	< 20.0	ug/L	9/20/2023	17:23
4-Bromophenyl phenyl ether	< 10.0	ug/L	9/20/2023	17:23
4-Chloro-3-methylphenol	< 10.0	ug/L	9/20/2023	17:23
4-Chloroaniline	< 10.0	ug/L	9/20/2023	17:23
4-Chlorophenyl phenyl ether	< 10.0	ug/L	9/20/2023	17:23
4-Nitroaniline	< 20.0	ug/L	9/20/2023	17:23
4-Nitrophenol	< 20.0	ug/L	9/20/2023	17:23
Acenaphthene	< 10.0	ug/L	9/20/2023	17:23
Acenaphthylene	< 10.0	ug/L	9/20/2023	17:23
Acetophenone	< 10.0	ug/L	9/20/2023	17:23
Anthracene	< 10.0	ug/L	9/20/2023	17:23
Atrazine	< 25.0	ug/L	9/20/2023	17:23
Benzaldehyde	< 10.0	ug/L	9/20/2023	17:23
Benzo (a) anthracene	< 10.0	ug/L	9/20/2023	17:23
Benzo (a) pyrene	< 10.0	ug/L	9/20/2023	17:23
Benzo (b) fluoranthene	< 10.0	ug/L	9/20/2023	17:23
Benzo (g,h,i) perylene	< 10.0	ug/L	9/20/2023	17:23
Benzo (k) fluoranthene	< 10.0	ug/L	9/20/2023	17:23
Bis (2-chloroethoxy) methane	< 10.0	ug/L	9/20/2023	17:23
Bis (2-chloroethyl) ether	< 10.0	ug/L	9/20/2023	17:23
Bis (2-ethylhexyl) phthalate	< 10.0	ug/L	9/20/2023	17:23
Butylbenzylphthalate	< 10.0	ug/L	9/20/2023	17:23
Caprolactam	< 10.0	ug/L	9/20/2023	17:23

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier:	BreezeTest-01-09132023		
Lab Sample ID:	234271-01	**Date Sampled:** 9/13/2023	16:15
Matrix:	Groundwater	**Date Received** 9/15/2023	

Carbazole	< 10.0	ug/L	9/20/2023	17:23
Chrysene	< 10.0	ug/L	9/20/2023	17:23
Dibenz (a,h) anthracene	< 10.0	ug/L	9/20/2023	17:23
Dibenzofuran	< 10.0	ug/L	9/20/2023	17:23
Diethyl phthalate	< 10.0	ug/L	9/20/2023	17:23
Dimethyl phthalate	< 20.0	ug/L	9/20/2023	17:23
Di-n-butyl phthalate	< 10.0	ug/L	9/20/2023	17:23
Di-n-octylphthalate	< 10.0	ug/L	9/20/2023	17:23
Fluoranthene	< 10.0	ug/L	9/20/2023	17:23
Fluorene	< 10.0	ug/L	9/20/2023	17:23
Hexachlorobenzene	< 10.0	ug/L	9/20/2023	17:23
Hexachlorobutadiene	< 10.0	ug/L	9/20/2023	17:23
Hexachlorocyclopentadiene	< 10.0	ug/L	9/20/2023	17:23
Hexachloroethane	< 10.0	ug/L	9/20/2023	17:23
Indeno (1,2,3-cd) pyrene	< 10.0	ug/L	9/20/2023	17:23
Isophorone	< 10.0	ug/L	9/20/2023	17:23
Naphthalene	< 10.0	ug/L	9/20/2023	17:23
Nitrobenzene	< 10.0	ug/L	9/20/2023	17:23
N-Nitroso-di-n-propylamine	< 10.0	ug/L	9/20/2023	17:23
N-Nitrosodiphenylamine	< 10.0	ug/L	9/20/2023	17:23
Pentachlorophenol	< 20.0	ug/L	9/20/2023	17:23
Phenanthrene	< 10.0	ug/L	9/20/2023	17:23
Phenol	< 10.0	ug/L	9/20/2023	17:23
Pyrene	< 10.0	ug/L	9/20/2023	17:23

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier: BreezeTest-01-09132023
Lab Sample ID: 234271-01 **Date Sampled:** 9/13/2023 16:15
Matrix: Groundwater **Date Received** 9/15/2023

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	**70.0**	49 - 127		9/20/2023 17:23
2-Fluorobiphenyl	**36.7**	10 - 107		9/20/2023 17:23
2-Fluorophenol	**28.1**	10.6 - 109		9/20/2023 17:23
Nitrobenzene-d5	**57.5**	41 - 106		9/20/2023 17:23
Phenol-d5	**21.4**	10 - 109		9/20/2023 17:23
Terphenyl-d14	**67.1**	49.6 - 120		9/20/2023 17:23

Method Reference(s): EPA 8270D
EPA 3510C
Preparation Date: 9/20/2023
Data File: B66927.D

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 40.0	ug/L		9/20/2023 19:04
1,1,2,2-Tetrachloroethane	< 40.0	ug/L		9/20/2023 19:04
1,1,2-Trichloroethane	< 40.0	ug/L		9/20/2023 19:04
1,1-Dichloroethane	< 40.0	ug/L		9/20/2023 19:04
1,1-Dichloroethene	< 40.0	ug/L		9/20/2023 19:04
1,2,3-Trichlorobenzene	< 100	ug/L		9/20/2023 19:04
1,2,4-Trichlorobenzene	< 100	ug/L		9/20/2023 19:04
1,2-Dibromo-3-Chloropropane	< 200	ug/L		9/20/2023 19:04
1,2-Dibromoethane	< 40.0	ug/L		9/20/2023 19:04
1,2-Dichlorobenzene	< 40.0	ug/L		9/20/2023 19:04
1,2-Dichloroethane	< 40.0	ug/L		9/20/2023 19:04
1,2-Dichloropropane	< 40.0	ug/L		9/20/2023 19:04
1,3-Dichlorobenzene	< 40.0	ug/L		9/20/2023 19:04
1,4-Dichlorobenzene	< 40.0	ug/L		9/20/2023 19:04
1,4-Dioxane	< 200	ug/L		9/20/2023 19:04
2-Butanone	< 200	ug/L		9/20/2023 19:04
2-Hexanone	< 100	ug/L		9/20/2023 19:04
4-Methyl-2-pentanone	< 100	ug/L		9/20/2023 19:04

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier:	BreezeTest-01-09132023		
Lab Sample ID:	234271-01	**Date Sampled:** 9/13/2023	16:15
Matrix:	Groundwater	**Date Received** 9/15/2023	

Acetone	**236**	ug/L	9/20/2023	19:04
Benzene	**519**	ug/L	9/20/2023	19:04
Bromochloromethane	< 100	ug/L	9/20/2023	19:04
Bromodichloromethane	< 40.0	ug/L	9/20/2023	19:04
Bromoform	< 100	ug/L	9/20/2023	19:04
Bromomethane	< 40.0	ug/L	9/20/2023	19:04
Carbon disulfide	< 40.0	ug/L	9/20/2023	19:04
Carbon Tetrachloride	< 40.0	ug/L	9/20/2023	19:04
Chlorobenzene	< 40.0	ug/L	9/20/2023	19:04
Chloroethane	< 40.0	ug/L	9/20/2023	19:04
Chloroform	< 40.0	ug/L	9/20/2023	19:04
Chloromethane	< 40.0	ug/L	9/20/2023	19:04
cis-1,2-Dichloroethene	< 40.0	ug/L	9/20/2023	19:04
cis-1,3-Dichloropropene	< 40.0	ug/L	9/20/2023	19:04
Cyclohexane	< 200	ug/L	9/20/2023	19:04
Dibromochloromethane	< 40.0	ug/L	9/20/2023	19:04
Dichlorodifluoromethane	< 40.0	ug/L	9/20/2023	19:04
Ethylbenzene	< 40.0	ug/L	9/20/2023	19:04
Freon 113	< 40.0	ug/L	9/20/2023	19:04
Isopropylbenzene	< 40.0	ug/L	9/20/2023	19:04
m,p-Xylene	**44.8**	ug/L	9/20/2023	19:04
Methyl acetate	< 40.0	ug/L	9/20/2023	19:04
Methyl tert-butyl Ether	< 40.0	ug/L	9/20/2023	19:04
Methylcyclohexane	< 40.0	ug/L	9/20/2023	19:04
Methylene chloride	< 100	ug/L	9/20/2023	19:04
o-Xylene	< 40.0	ug/L	9/20/2023	19:04
Styrene	< 100	ug/L	9/20/2023	19:04
Tetrachloroethene	< 40.0	ug/L	9/20/2023	19:04
Toluene	**67.2**	ug/L	9/20/2023	19:04
trans-1,2-Dichloroethene	< 40.0	ug/L	9/20/2023	19:04

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier:	BreezeTest-01-09132023		
Lab Sample ID:	234271-01	**Date Sampled:** 9/13/2023	16:15
Matrix:	Groundwater	**Date Received** 9/15/2023	

trans-1,3-Dichloropropene	< 40.0	ug/L	9/20/2023	19:04
Trichloroethene	< 40.0	ug/L	9/20/2023	19:04
Trichlorofluoromethane	< 40.0	ug/L	9/20/2023	19:04
Vinyl chloride	< 40.0	ug/L	9/20/2023	19:04

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	**106**	79.7 - 118		9/20/2023	19:04
4-Bromofluorobenzene	**98.9**	80.1 - 112		9/20/2023	19:04
Pentafluorobenzene	**97.0**	88 - 115		9/20/2023	19:04
Toluene-D8	**109**	88.2 - 113		9/20/2023	19:04

Method Reference(s): EPA 8260C
EPA 5030C

Data File: z19680.D

Sample Identifier:	BreezeTest-02-09152023		
Lab Sample ID:	234271-02	**Date Sampled:**	9/15/2023 9:00
Matrix:	Groundwater	**Date Received**	9/15/2023

Ammonia-N

Analyte	Result	Units	Qualifier	Date Analyzed
Ammonia	**1.2**	mg/L		9/19/2023

Method Reference(s): EPA 350.1 Rev 2.0
Subcontractor ELAP ID: 10709

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.0560**	mg/L		9/19/2023

Method Reference(s): EPA 335.4 Rev 1.0
Subcontractor ELAP ID: 10709

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 10.0	ug/L		9/20/2023 17:52
1,2,4,5-Tetrachlorobenzene	< 10.0	ug/L		9/20/2023 17:52
1,2,4-Trichlorobenzene	< 10.0	ug/L		9/20/2023 17:52
1,2-Dichlorobenzene	< 10.0	ug/L		9/20/2023 17:52
1,3-Dichlorobenzene	< 10.0	ug/L		9/20/2023 17:52
1,4-Dichlorobenzene	< 10.0	ug/L		9/20/2023 17:52
2,2-Oxybis (1-chloropropane)	< 10.0	ug/L		9/20/2023 17:52
2,3,4,6-Tetrachlorophenol	< 10.0	ug/L		9/20/2023 17:52
2,4,5-Trichlorophenol	< 10.0	ug/L		9/20/2023 17:52
2,4,6-Trichlorophenol	< 20.0	ug/L		9/20/2023 17:52
2,4-Dichlorophenol	< 10.0	ug/L		9/20/2023 17:52
2,4-Dimethylphenol	< 10.0	ug/L		9/20/2023 17:52
2,4-Dinitrophenol	< 20.0	ug/L		9/20/2023 17:52
2,4-Dinitrotoluene	< 10.0	ug/L		9/20/2023 17:52
2,6-Dinitrotoluene	< 10.0	ug/L		9/20/2023 17:52
2-Chloronaphthalene	< 10.0	ug/L		9/20/2023 17:52
2-Chlorophenol	< 10.0	ug/L		9/20/2023 17:52

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier: BreezeTest-02-09152023
Lab Sample ID: 234271-02 **Date Sampled:** 9/15/2023 9:00
Matrix: Groundwater **Date Received** 9/15/2023

2-Methylnapthalene	< 10.0	ug/L	9/20/2023 17:52
2-Methylphenol	< 10.0	ug/L	9/20/2023 17:52
2-Nitroaniline	< 20.0	ug/L	9/20/2023 17:52
2-Nitrophenol	< 10.0	ug/L	9/20/2023 17:52
3&4-Methylphenol	< 10.0	ug/L	9/20/2023 17:52
3,3'-Dichlorobenzidine	< 10.0	ug/L	9/20/2023 17:52
3-Nitroaniline	< 20.0	ug/L	9/20/2023 17:52
4,6-Dinitro-2-methylphenol	< 20.0	ug/L	9/20/2023 17:52
4-Bromophenyl phenyl ether	< 10.0	ug/L	9/20/2023 17:52
4-Chloro-3-methylphenol	< 10.0	ug/L	9/20/2023 17:52
4-Chloroaniline	< 10.0	ug/L	9/20/2023 17:52
4-Chlorophenyl phenyl ether	< 10.0	ug/L	9/20/2023 17:52
4-Nitroaniline	< 20.0	ug/L	9/20/2023 17:52
4-Nitrophenol	< 20.0	ug/L	9/20/2023 17:52
Acenaphthene	< 10.0	ug/L	9/20/2023 17:52
Acenaphthylene	< 10.0	ug/L	9/20/2023 17:52
Acetophenone	< 10.0	ug/L	9/20/2023 17:52
Anthracene	< 10.0	ug/L	9/20/2023 17:52
Atrazine	< 25.0	ug/L	9/20/2023 17:52
Benzaldehyde	< 10.0	ug/L	9/20/2023 17:52
Benzo (a) anthracene	< 10.0	ug/L	9/20/2023 17:52
Benzo (a) pyrene	< 10.0	ug/L	9/20/2023 17:52
Benzo (b) fluoranthene	< 10.0	ug/L	9/20/2023 17:52
Benzo (g,h,i) perylene	< 10.0	ug/L	9/20/2023 17:52
Benzo (k) fluoranthene	< 10.0	ug/L	9/20/2023 17:52
Bis (2-chloroethoxy) methane	< 10.0	ug/L	9/20/2023 17:52
Bis (2-chloroethyl) ether	< 10.0	ug/L	9/20/2023 17:52
Bis (2-ethylhexyl) phthalate	< 10.0	ug/L	9/20/2023 17:52
Butylbenzylphthalate	< 10.0	ug/L	9/20/2023 17:52
Caprolactam	< 10.0	ug/L	9/20/2023 17:52

Sample Identifier:	BreezeTest-02-09152023		
Lab Sample ID:	234271-02	**Date Sampled:**	9/15/2023 9:00
Matrix:	Groundwater	**Date Received**	9/15/2023

Carbazole	< 10.0	ug/L	9/20/2023 17:52
Chrysene	< 10.0	ug/L	9/20/2023 17:52
Dibenz (a,h) anthracene	< 10.0	ug/L	9/20/2023 17:52
Dibenzofuran	< 10.0	ug/L	9/20/2023 17:52
Diethyl phthalate	< 10.0	ug/L	9/20/2023 17:52
Dimethyl phthalate	< 20.0	ug/L	9/20/2023 17:52
Di-n-butyl phthalate	< 10.0	ug/L	9/20/2023 17:52
Di-n-octylphthalate	< 10.0	ug/L	9/20/2023 17:52
Fluoranthene	< 10.0	ug/L	9/20/2023 17:52
Fluorene	< 10.0	ug/L	9/20/2023 17:52
Hexachlorobenzene	< 10.0	ug/L	9/20/2023 17:52
Hexachlorobutadiene	< 10.0	ug/L	9/20/2023 17:52
Hexachlorocyclopentadiene	< 10.0	ug/L	9/20/2023 17:52
Hexachloroethane	< 10.0	ug/L	9/20/2023 17:52
Indeno (1,2,3-cd) pyrene	< 10.0	ug/L	9/20/2023 17:52
Isophorone	< 10.0	ug/L	9/20/2023 17:52
Naphthalene	< 10.0	ug/L	9/20/2023 17:52
Nitrobenzene	< 10.0	ug/L	9/20/2023 17:52
N-Nitroso-di-n-propylamine	< 10.0	ug/L	9/20/2023 17:52
N-Nitrosodiphenylamine	< 10.0	ug/L	9/20/2023 17:52
Pentachlorophenol	< 20.0	ug/L	9/20/2023 17:52
Phenanthrene	< 10.0	ug/L	9/20/2023 17:52
Phenol	< 10.0	ug/L	9/20/2023 17:52
Pyrene	< 10.0	ug/L	9/20/2023 17:52

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier: BreezeTest-02-09152023
Lab Sample ID: 234271-02 **Date Sampled:** 9/15/2023 9:00
Matrix: Groundwater **Date Received** 9/15/2023

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	**87.8**	49 - 127		9/20/2023 17:52
2-Fluorobiphenyl	**35.3**	10 - 107		9/20/2023 17:52
2-Fluorophenol	**48.5**	10.6 - 109		9/20/2023 17:52
Nitrobenzene-d5	**53.1**	41 - 106		9/20/2023 17:52
Phenol-d5	**39.9**	10 - 109		9/20/2023 17:52
Terphenyl-d14	**72.6**	49.6 - 120		9/20/2023 17:52

Method Reference(s): EPA 8270D
EPA 3510C
Preparation Date: 9/20/2023
Data File: B66928.D

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		9/20/2023 19:24
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		9/20/2023 19:24
1,1,2-Trichloroethane	< 2.00	ug/L		9/20/2023 19:24
1,1-Dichloroethane	< 2.00	ug/L		9/20/2023 19:24
1,1-Dichloroethene	< 2.00	ug/L		9/20/2023 19:24
1,2,3-Trichlorobenzene	< 5.00	ug/L		9/20/2023 19:24
1,2,4-Trichlorobenzene	< 5.00	ug/L		9/20/2023 19:24
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		9/20/2023 19:24
1,2-Dibromoethane	< 2.00	ug/L		9/20/2023 19:24
1,2-Dichlorobenzene	< 2.00	ug/L		9/20/2023 19:24
1,2-Dichloroethane	< 2.00	ug/L		9/20/2023 19:24
1,2-Dichloropropane	< 2.00	ug/L		9/20/2023 19:24
1,3-Dichlorobenzene	< 2.00	ug/L		9/20/2023 19:24
1,4-Dichlorobenzene	< 2.00	ug/L		9/20/2023 19:24
1,4-Dioxane	< 10.0	ug/L		9/20/2023 19:24
2-Butanone	< 10.0	ug/L		9/20/2023 19:24
2-Hexanone	< 5.00	ug/L		9/20/2023 19:24
4-Methyl-2-pentanone	< 5.00	ug/L		9/20/2023 19:24

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier:	BreezeTest-02-09152023		
Lab Sample ID:	234271-02	**Date Sampled:** 9/15/2023	9:00
Matrix:	Groundwater	**Date Received** 9/15/2023	

Acetone	**19.4**	ug/L	9/20/2023	19:24
Benzene	< 1.00	ug/L	9/20/2023	19:24
Bromochloromethane	< 5.00	ug/L	9/20/2023	19:24
Bromodichloromethane	< 2.00	ug/L	9/20/2023	19:24
Bromoform	< 5.00	ug/L	9/20/2023	19:24
Bromomethane	< 2.00	ug/L	9/20/2023	19:24
Carbon disulfide	< 2.00	ug/L	9/20/2023	19:24
Carbon Tetrachloride	< 2.00	ug/L	9/20/2023	19:24
Chlorobenzene	< 2.00	ug/L	9/20/2023	19:24
Chloroethane	< 2.00	ug/L	9/20/2023	19:24
Chloroform	< 2.00	ug/L	9/20/2023	19:24
Chloromethane	< 2.00	ug/L	9/20/2023	19:24
cis-1,2-Dichloroethene	< 2.00	ug/L	9/20/2023	19:24
cis-1,3-Dichloropropene	< 2.00	ug/L	9/20/2023	19:24
Cyclohexane	< 10.0	ug/L	9/20/2023	19:24
Dibromochloromethane	< 2.00	ug/L	9/20/2023	19:24
Dichlorodifluoromethane	< 2.00	ug/L	9/20/2023	19:24
Ethylbenzene	< 2.00	ug/L	9/20/2023	19:24
Freon 113	< 2.00	ug/L	9/20/2023	19:24
Isopropylbenzene	< 2.00	ug/L	9/20/2023	19:24
m,p-Xylene	< 2.00	ug/L	9/20/2023	19:24
Methyl acetate	< 2.00	ug/L	9/20/2023	19:24
Methyl tert-butyl Ether	< 2.00	ug/L	9/20/2023	19:24
Methylcyclohexane	< 2.00	ug/L	9/20/2023	19:24
Methylene chloride	< 5.00	ug/L	9/20/2023	19:24
o-Xylene	< 2.00	ug/L	9/20/2023	19:24
Styrene	< 5.00	ug/L	9/20/2023	19:24
Tetrachloroethene	< 2.00	ug/L	9/20/2023	19:24
Toluene	< 2.00	ug/L	9/20/2023	19:24
trans-1,2-Dichloroethene	< 2.00	ug/L	9/20/2023	19:24

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier: BreezeTest-02-09152023
Lab Sample ID: 234271-02 **Date Sampled:** 9/15/2023 9:00
Matrix: Groundwater **Date Received** 9/15/2023

trans-1,3-Dichloropropene	< 2.00	ug/L			9/20/2023 19:24
Trichloroethene	< 2.00	ug/L			9/20/2023 19:24
Trichlorofluoromethane	< 2.00	ug/L			9/20/2023 19:24
Vinyl chloride	< 2.00	ug/L			9/20/2023 19:24

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**112**	79.7 - 118		9/20/2023 19:24
4-Bromofluorobenzene	**97.4**	80.1 - 112		9/20/2023 19:24
Pentafluorobenzene	**95.1**	88 - 115		9/20/2023 19:24
Toluene-D8	**109**	88.2 - 113		9/20/2023 19:24

Method Reference(s): EPA 8260C
EPA 5030C
Data File: z19681.D

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier:	BreezeTest-03-09152023		
Lab Sample ID:	234271-03	**Date Sampled:** 9/15/2023	9:10
Matrix:	Groundwater	**Date Received** 9/15/2023	

Ammonia-N

Analyte	Result	Units	Qualifier	Date Analyzed
Ammonia	**1.5**	mg/L		9/19/2023

Method Reference(s): EPA 350.1 Rev 2.0
Subcontractor ELAP ID: 10709

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.0930**	mg/L		9/19/2023

Method Reference(s): EPA 335.4 Rev 1.0
Subcontractor ELAP ID: 10709

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 10.0	ug/L		9/20/2023 18:20
1,2,4,5-Tetrachlorobenzene	< 10.0	ug/L		9/20/2023 18:20
1,2,4-Trichlorobenzene	< 10.0	ug/L		9/20/2023 18:20
1,2-Dichlorobenzene	< 10.0	ug/L		9/20/2023 18:20
1,3-Dichlorobenzene	< 10.0	ug/L		9/20/2023 18:20
1,4-Dichlorobenzene	< 10.0	ug/L		9/20/2023 18:20
2,2-Oxybis (1-chloropropane)	< 10.0	ug/L		9/20/2023 18:20
2,3,4,6-Tetrachlorophenol	< 10.0	ug/L		9/20/2023 18:20
2,4,5-Trichlorophenol	< 10.0	ug/L		9/20/2023 18:20
2,4,6-Trichlorophenol	< 20.0	ug/L		9/20/2023 18:20
2,4-Dichlorophenol	< 10.0	ug/L		9/20/2023 18:20
2,4-Dimethylphenol	< 10.0	ug/L		9/20/2023 18:20
2,4-Dinitrophenol	< 20.0	ug/L		9/20/2023 18:20
2,4-Dinitrotoluene	< 10.0	ug/L		9/20/2023 18:20
2,6-Dinitrotoluene	< 10.0	ug/L		9/20/2023 18:20
2-Chloronaphthalene	< 10.0	ug/L		9/20/2023 18:20
2-Chlorophenol	< 10.0	ug/L		9/20/2023 18:20

Sample Identifier:	BreezeTest-03-09152023		
Lab Sample ID:	234271-03	**Date Sampled:** 9/15/2023	9:10
Matrix:	Groundwater	**Date Received** 9/15/2023	

2-Methylnapthalene	< 10.0	ug/L	9/20/2023	18:20
2-Methylphenol	< 10.0	ug/L	9/20/2023	18:20
2-Nitroaniline	< 20.0	ug/L	9/20/2023	18:20
2-Nitrophenol	< 10.0	ug/L	9/20/2023	18:20
3&4-Methylphenol	< 10.0	ug/L	9/20/2023	18:20
3,3'-Dichlorobenzidine	< 10.0	ug/L	9/20/2023	18:20
3-Nitroaniline	< 20.0	ug/L	9/20/2023	18:20
4,6-Dinitro-2-methylphenol	< 20.0	ug/L	9/20/2023	18:20
4-Bromophenyl phenyl ether	< 10.0	ug/L	9/20/2023	18:20
4-Chloro-3-methylphenol	< 10.0	ug/L	9/20/2023	18:20
4-Chloroaniline	< 10.0	ug/L	9/20/2023	18:20
4-Chlorophenyl phenyl ether	< 10.0	ug/L	9/20/2023	18:20
4-Nitroaniline	< 20.0	ug/L	9/20/2023	18:20
4-Nitrophenol	< 20.0	ug/L	9/20/2023	18:20
Acenaphthene	< 10.0	ug/L	9/20/2023	18:20
Acenaphthylene	< 10.0	ug/L	9/20/2023	18:20
Acetophenone	< 10.0	ug/L	9/20/2023	18:20
Anthracene	< 10.0	ug/L	9/20/2023	18:20
Atrazine	< 25.0	ug/L	9/20/2023	18:20
Benzaldehyde	< 10.0	ug/L	9/20/2023	18:20
Benzo (a) anthracene	< 10.0	ug/L	9/20/2023	18:20
Benzo (a) pyrene	< 10.0	ug/L	9/20/2023	18:20
Benzo (b) fluoranthene	< 10.0	ug/L	9/20/2023	18:20
Benzo (g,h,i) perylene	< 10.0	ug/L	9/20/2023	18:20
Benzo (k) fluoranthene	< 10.0	ug/L	9/20/2023	18:20
Bis (2-chloroethoxy) methane	< 10.0	ug/L	9/20/2023	18:20
Bis (2-chloroethyl) ether	< 10.0	ug/L	9/20/2023	18:20
Bis (2-ethylhexyl) phthalate	< 10.0	ug/L	9/20/2023	18:20
Butylbenzylphthalate	< 10.0	ug/L	9/20/2023	18:20
Caprolactam	< 10.0	ug/L	9/20/2023	18:20

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier:	BreezeTest-03-09152023		
Lab Sample ID:	234271-03	**Date Sampled:**	9/15/2023 9:10
Matrix:	Groundwater	**Date Received**	9/15/2023

Carbazole	< 10.0	ug/L	9/20/2023	18:20
Chrysene	< 10.0	ug/L	9/20/2023	18:20
Dibenz (a,h) anthracene	< 10.0	ug/L	9/20/2023	18:20
Dibenzofuran	< 10.0	ug/L	9/20/2023	18:20
Diethyl phthalate	< 10.0	ug/L	9/20/2023	18:20
Dimethyl phthalate	< 20.0	ug/L	9/20/2023	18:20
Di-n-butyl phthalate	< 10.0	ug/L	9/20/2023	18:20
Di-n-octylphthalate	< 10.0	ug/L	9/20/2023	18:20
Fluoranthene	< 10.0	ug/L	9/20/2023	18:20
Fluorene	< 10.0	ug/L	9/20/2023	18:20
Hexachlorobenzene	< 10.0	ug/L	9/20/2023	18:20
Hexachlorobutadiene	< 10.0	ug/L	9/20/2023	18:20
Hexachlorocyclopentadiene	< 10.0	ug/L	9/20/2023	18:20
Hexachloroethane	< 10.0	ug/L	9/20/2023	18:20
Indeno (1,2,3-cd) pyrene	< 10.0	ug/L	9/20/2023	18:20
Isophorone	< 10.0	ug/L	9/20/2023	18:20
Naphthalene	< 10.0	ug/L	9/20/2023	18:20
Nitrobenzene	< 10.0	ug/L	9/20/2023	18:20
N-Nitroso-di-n-propylamine	< 10.0	ug/L	9/20/2023	18:20
N-Nitrosodiphenylamine	< 10.0	ug/L	9/20/2023	18:20
Pentachlorophenol	< 20.0	ug/L	9/20/2023	18:20
Phenanthrene	< 10.0	ug/L	9/20/2023	18:20
Phenol	< 10.0	ug/L	9/20/2023	18:20
Pyrene	< 10.0	ug/L	9/20/2023	18:20

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier: BreezeTest-03-09152023
Lab Sample ID: 234271-03 **Date Sampled:** 9/15/2023 9:10
Matrix: Groundwater **Date Received** 9/15/2023

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	**90.3**	49 - 127		9/20/2023 18:20
2-Fluorobiphenyl	**36.5**	10 - 107		9/20/2023 18:20
2-Fluorophenol	**32.5**	10.6 - 109		9/20/2023 18:20
Nitrobenzene-d5	**52.8**	41 - 106		9/20/2023 18:20
Phenol-d5	**33.4**	10 - 109		9/20/2023 18:20
Terphenyl-d14	**78.3**	49.6 - 120		9/20/2023 18:20

Method Reference(s): EPA 8270D
EPA 3510C
Preparation Date: 9/20/2023
Data File: B66929.D

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		9/20/2023 19:43
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		9/20/2023 19:43
1,1,2-Trichloroethane	< 2.00	ug/L		9/20/2023 19:43
1,1-Dichloroethane	< 2.00	ug/L		9/20/2023 19:43
1,1-Dichloroethene	< 2.00	ug/L		9/20/2023 19:43
1,2,3-Trichlorobenzene	< 5.00	ug/L		9/20/2023 19:43
1,2,4-Trichlorobenzene	< 5.00	ug/L		9/20/2023 19:43
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		9/20/2023 19:43
1,2-Dibromoethane	< 2.00	ug/L		9/20/2023 19:43
1,2-Dichlorobenzene	< 2.00	ug/L		9/20/2023 19:43
1,2-Dichloroethane	< 2.00	ug/L		9/20/2023 19:43
1,2-Dichloropropane	< 2.00	ug/L		9/20/2023 19:43
1,3-Dichlorobenzene	< 2.00	ug/L		9/20/2023 19:43
1,4-Dichlorobenzene	< 2.00	ug/L		9/20/2023 19:43
1,4-Dioxane	< 10.0	ug/L		9/20/2023 19:43
2-Butanone	< 10.0	ug/L		9/20/2023 19:43
2-Hexanone	< 5.00	ug/L		9/20/2023 19:43
4-Methyl-2-pentanone	< 5.00	ug/L		9/20/2023 19:43

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier:	BreezeTest-03-09152023		
Lab Sample ID:	234271-03	**Date Sampled:** 9/15/2023	9:10
Matrix:	Groundwater	**Date Received** 9/15/2023	

Acetone	**17.1**	ug/L	9/20/2023	19:43
Benzene	< 1.00	ug/L	9/20/2023	19:43
Bromochloromethane	< 5.00	ug/L	9/20/2023	19:43
Bromodichloromethane	< 2.00	ug/L	9/20/2023	19:43
Bromoform	< 5.00	ug/L	9/20/2023	19:43
Bromomethane	< 2.00	ug/L	9/20/2023	19:43
Carbon disulfide	< 2.00	ug/L	9/20/2023	19:43
Carbon Tetrachloride	< 2.00	ug/L	9/20/2023	19:43
Chlorobenzene	< 2.00	ug/L	9/20/2023	19:43
Chloroethane	< 2.00	ug/L	9/20/2023	19:43
Chloroform	< 2.00	ug/L	9/20/2023	19:43
Chloromethane	< 2.00	ug/L	9/20/2023	19:43
cis-1,2-Dichloroethene	< 2.00	ug/L	9/20/2023	19:43
cis-1,3-Dichloropropene	< 2.00	ug/L	9/20/2023	19:43
Cyclohexane	< 10.0	ug/L	9/20/2023	19:43
Dibromochloromethane	< 2.00	ug/L	9/20/2023	19:43
Dichlorodifluoromethane	< 2.00	ug/L	9/20/2023	19:43
Ethylbenzene	< 2.00	ug/L	9/20/2023	19:43
Freon 113	< 2.00	ug/L	9/20/2023	19:43
Isopropylbenzene	< 2.00	ug/L	9/20/2023	19:43
m,p-Xylene	< 2.00	ug/L	9/20/2023	19:43
Methyl acetate	< 2.00	ug/L	9/20/2023	19:43
Methyl tert-butyl Ether	< 2.00	ug/L	9/20/2023	19:43
Methylcyclohexane	< 2.00	ug/L	9/20/2023	19:43
Methylene chloride	< 5.00	ug/L	9/20/2023	19:43
o-Xylene	< 2.00	ug/L	9/20/2023	19:43
Styrene	< 5.00	ug/L	9/20/2023	19:43
Tetrachloroethene	< 2.00	ug/L	9/20/2023	19:43
Toluene	< 2.00	ug/L	9/20/2023	19:43
trans-1,2-Dichloroethene	< 2.00	ug/L	9/20/2023	19:43

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier: BreezeTest-03-09152023
Lab Sample ID: 234271-03 **Date Sampled:** 9/15/2023 9:10
Matrix: Groundwater **Date Received** 9/15/2023

trans-1,3-Dichloropropene	< 2.00	ug/L			9/20/2023 19:43
Trichloroethene	< 2.00	ug/L			9/20/2023 19:43
Trichlorofluoromethane	< 2.00	ug/L			9/20/2023 19:43
Vinyl chloride	< 2.00	ug/L			9/20/2023 19:43

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**107**	79.7 - 118		9/20/2023 19:43
4-Bromofluorobenzene	**93.9**	80.1 - 112		9/20/2023 19:43
Pentafluorobenzene	**97.9**	88 - 115		9/20/2023 19:43
Toluene-D8	**110**	88.2 - 113		9/20/2023 19:43

Method Reference(s): EPA 8260C
EPA 5030C
Data File: z19682.D

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier:	BreezeTest-04-09152023		
Lab Sample ID:	234271-04	**Date Sampled:**	9/15/2023 9:20
Matrix:	Groundwater	**Date Received**	9/15/2023

Ammonia-N

Analyte	Result	Units	Qualifier	Date Analyzed
Ammonia	**4.0**	mg/L		9/19/2023

Method Reference(s): EPA 350.1 Rev 2.0
Subcontractor ELAP ID: 10709

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	**0.140**	mg/L		9/19/2023

Method Reference(s): EPA 335.4 Rev 1.0
Subcontractor ELAP ID: 10709

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 10.0	ug/L		9/20/2023 18:49
1,2,4,5-Tetrachlorobenzene	< 10.0	ug/L		9/20/2023 18:49
1,2,4-Trichlorobenzene	< 10.0	ug/L		9/20/2023 18:49
1,2-Dichlorobenzene	< 10.0	ug/L		9/20/2023 18:49
1,3-Dichlorobenzene	< 10.0	ug/L		9/20/2023 18:49
1,4-Dichlorobenzene	< 10.0	ug/L		9/20/2023 18:49
2,2-Oxybis (1-chloropropane)	< 10.0	ug/L		9/20/2023 18:49
2,3,4,6-Tetrachlorophenol	< 10.0	ug/L		9/20/2023 18:49
2,4,5-Trichlorophenol	< 10.0	ug/L		9/20/2023 18:49
2,4,6-Trichlorophenol	< 20.0	ug/L		9/20/2023 18:49
2,4-Dichlorophenol	< 10.0	ug/L		9/20/2023 18:49
2,4-Dimethylphenol	< 10.0	ug/L		9/20/2023 18:49
2,4-Dinitrophenol	< 20.0	ug/L		9/20/2023 18:49
2,4-Dinitrotoluene	< 10.0	ug/L		9/20/2023 18:49
2,6-Dinitrotoluene	< 10.0	ug/L		9/20/2023 18:49
2-Chloronaphthalene	< 10.0	ug/L		9/20/2023 18:49
2-Chlorophenol	< 10.0	ug/L		9/20/2023 18:49

Sample Identifier:	BreezeTest-04-09152023		
Lab Sample ID:	234271-04	**Date Sampled:**	9/15/2023 9:20
Matrix:	Groundwater	**Date Received**	9/15/2023

2-Methylnapthalene	< 10.0	ug/L	9/20/2023 18:49
2-Methylphenol	< 10.0	ug/L	9/20/2023 18:49
2-Nitroaniline	< 20.0	ug/L	9/20/2023 18:49
2-Nitrophenol	< 10.0	ug/L	9/20/2023 18:49
3&4-Methylphenol	< 10.0	ug/L	9/20/2023 18:49
3,3'-Dichlorobenzidine	< 10.0	ug/L	9/20/2023 18:49
3-Nitroaniline	< 20.0	ug/L	9/20/2023 18:49
4,6-Dinitro-2-methylphenol	< 20.0	ug/L	9/20/2023 18:49
4-Bromophenyl phenyl ether	< 10.0	ug/L	9/20/2023 18:49
4-Chloro-3-methylphenol	< 10.0	ug/L	9/20/2023 18:49
4-Chloroaniline	< 10.0	ug/L	9/20/2023 18:49
4-Chlorophenyl phenyl ether	< 10.0	ug/L	9/20/2023 18:49
4-Nitroaniline	< 20.0	ug/L	9/20/2023 18:49
4-Nitrophenol	< 20.0	ug/L	9/20/2023 18:49
Acenaphthene	< 10.0	ug/L	9/20/2023 18:49
Acenaphthylene	< 10.0	ug/L	9/20/2023 18:49
Acetophenone	< 10.0	ug/L	9/20/2023 18:49
Anthracene	< 10.0	ug/L	9/20/2023 18:49
Atrazine	< 25.0	ug/L	9/20/2023 18:49
Benzaldehyde	< 10.0	ug/L	9/20/2023 18:49
Benzo (a) anthracene	< 10.0	ug/L	9/20/2023 18:49
Benzo (a) pyrene	< 10.0	ug/L	9/20/2023 18:49
Benzo (b) fluoranthene	< 10.0	ug/L	9/20/2023 18:49
Benzo (g,h,i) perylene	< 10.0	ug/L	9/20/2023 18:49
Benzo (k) fluoranthene	< 10.0	ug/L	9/20/2023 18:49
Bis (2-chloroethoxy) methane	< 10.0	ug/L	9/20/2023 18:49
Bis (2-chloroethyl) ether	< 10.0	ug/L	9/20/2023 18:49
Bis (2-ethylhexyl) phthalate	< 10.0	ug/L	9/20/2023 18:49
Butylbenzylphthalate	< 10.0	ug/L	9/20/2023 18:49
Caprolactam	< 10.0	ug/L	9/20/2023 18:49

Sample Identifier:	BreezeTest-04-09152023		
Lab Sample ID:	234271-04	**Date Sampled:**	9/15/2023 9:20
Matrix:	Groundwater	**Date Received**	9/15/2023

Carbazole	< 10.0	ug/L	9/20/2023 18:49
Chrysene	< 10.0	ug/L	9/20/2023 18:49
Dibenz (a,h) anthracene	< 10.0	ug/L	9/20/2023 18:49
Dibenzofuran	< 10.0	ug/L	9/20/2023 18:49
Diethyl phthalate	< 10.0	ug/L	9/20/2023 18:49
Dimethyl phthalate	< 20.0	ug/L	9/20/2023 18:49
Di-n-butyl phthalate	< 10.0	ug/L	9/20/2023 18:49
Di-n-octylphthalate	< 10.0	ug/L	9/20/2023 18:49
Fluoranthene	< 10.0	ug/L	9/20/2023 18:49
Fluorene	< 10.0	ug/L	9/20/2023 18:49
Hexachlorobenzene	< 10.0	ug/L	9/20/2023 18:49
Hexachlorobutadiene	< 10.0	ug/L	9/20/2023 18:49
Hexachlorocyclopentadiene	< 10.0	ug/L	9/20/2023 18:49
Hexachloroethane	< 10.0	ug/L	9/20/2023 18:49
Indeno (1,2,3-cd) pyrene	< 10.0	ug/L	9/20/2023 18:49
Isophorone	< 10.0	ug/L	9/20/2023 18:49
Naphthalene	< 10.0	ug/L	9/20/2023 18:49
Nitrobenzene	< 10.0	ug/L	9/20/2023 18:49
N-Nitroso-di-n-propylamine	< 10.0	ug/L	9/20/2023 18:49
N-Nitrosodiphenylamine	< 10.0	ug/L	9/20/2023 18:49
Pentachlorophenol	< 20.0	ug/L	9/20/2023 18:49
Phenanthrene	< 10.0	ug/L	9/20/2023 18:49
Phenol	< 10.0	ug/L	9/20/2023 18:49
Pyrene	< 10.0	ug/L	9/20/2023 18:49

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier: BreezeTest-04-09152023
Lab Sample ID: 234271-04 **Date Sampled:** 9/15/2023 9:20
Matrix: Groundwater **Date Received** 9/15/2023

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	**92.7**	49 - 127		9/20/2023 18:49
2-Fluorobiphenyl	**36.4**	10 - 107		9/20/2023 18:49
2-Fluorophenol	**49.2**	10.6 - 109		9/20/2023 18:49
Nitrobenzene-d5	**54.8**	41 - 106		9/20/2023 18:49
Phenol-d5	**41.3**	10 - 109		9/20/2023 18:49
Terphenyl-d14	**78.6**	49.6 - 120		9/20/2023 18:49

Method Reference(s): EPA 8270D
EPA 3510C
Preparation Date: 9/20/2023
Data File: B66930.D

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		9/20/2023 20:02
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		9/20/2023 20:02
1,1,2-Trichloroethane	< 2.00	ug/L		9/20/2023 20:02
1,1-Dichloroethane	< 2.00	ug/L		9/20/2023 20:02
1,1-Dichloroethene	< 2.00	ug/L		9/20/2023 20:02
1,2,3-Trichlorobenzene	< 5.00	ug/L		9/20/2023 20:02
1,2,4-Trichlorobenzene	< 5.00	ug/L		9/20/2023 20:02
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		9/20/2023 20:02
1,2-Dibromoethane	< 2.00	ug/L		9/20/2023 20:02
1,2-Dichlorobenzene	< 2.00	ug/L		9/20/2023 20:02
1,2-Dichloroethane	< 2.00	ug/L		9/20/2023 20:02
1,2-Dichloropropane	< 2.00	ug/L		9/20/2023 20:02
1,3-Dichlorobenzene	< 2.00	ug/L		9/20/2023 20:02
1,4-Dichlorobenzene	< 2.00	ug/L		9/20/2023 20:02
1,4-Dioxane	< 10.0	ug/L		9/20/2023 20:02
2-Butanone	< 10.0	ug/L		9/20/2023 20:02
2-Hexanone	< 5.00	ug/L		9/20/2023 20:02
4-Methyl-2-pentanone	< 5.00	ug/L		9/20/2023 20:02

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier:	BreezeTest-04-09152023		
Lab Sample ID:	234271-04	**Date Sampled:** 9/15/2023	9:20
Matrix:	Groundwater	**Date Received** 9/15/2023	

Acetone	**24.4**	ug/L	9/20/2023	20:02
Benzene	< 1.00	ug/L	9/20/2023	20:02
Bromochloromethane	< 5.00	ug/L	9/20/2023	20:02
Bromodichloromethane	< 2.00	ug/L	9/20/2023	20:02
Bromoform	< 5.00	ug/L	9/20/2023	20:02
Bromomethane	< 2.00	ug/L	9/20/2023	20:02
Carbon disulfide	< 2.00	ug/L	9/20/2023	20:02
Carbon Tetrachloride	< 2.00	ug/L	9/20/2023	20:02
Chlorobenzene	< 2.00	ug/L	9/20/2023	20:02
Chloroethane	< 2.00	ug/L	9/20/2023	20:02
Chloroform	< 2.00	ug/L	9/20/2023	20:02
Chloromethane	< 2.00	ug/L	9/20/2023	20:02
cis-1,2-Dichloroethene	< 2.00	ug/L	9/20/2023	20:02
cis-1,3-Dichloropropene	< 2.00	ug/L	9/20/2023	20:02
Cyclohexane	< 10.0	ug/L	9/20/2023	20:02
Dibromochloromethane	< 2.00	ug/L	9/20/2023	20:02
Dichlorodifluoromethane	< 2.00	ug/L	9/20/2023	20:02
Ethylbenzene	< 2.00	ug/L	9/20/2023	20:02
Freon 113	< 2.00	ug/L	9/20/2023	20:02
Isopropylbenzene	< 2.00	ug/L	9/20/2023	20:02
m,p-Xylene	< 2.00	ug/L	9/20/2023	20:02
Methyl acetate	< 2.00	ug/L	9/20/2023	20:02
Methyl tert-butyl Ether	< 2.00	ug/L	9/20/2023	20:02
Methylcyclohexane	< 2.00	ug/L	9/20/2023	20:02
Methylene chloride	< 5.00	ug/L	9/20/2023	20:02
o-Xylene	< 2.00	ug/L	9/20/2023	20:02
Styrene	< 5.00	ug/L	9/20/2023	20:02
Tetrachloroethene	< 2.00	ug/L	9/20/2023	20:02
Toluene	< 2.00	ug/L	9/20/2023	20:02
trans-1,2-Dichloroethene	< 2.00	ug/L	9/20/2023	20:02

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier: BreezeTest-04-09152023
Lab Sample ID: 234271-04 **Date Sampled:** 9/15/2023 9:20
Matrix: Groundwater **Date Received** 9/15/2023

trans-1,3-Dichloropropene	< 2.00	ug/L	9/20/2023	20:02
Trichloroethene	< 2.00	ug/L	9/20/2023	20:02
Trichlorofluoromethane	< 2.00	ug/L	9/20/2023	20:02
Vinyl chloride	< 2.00	ug/L	9/20/2023	20:02

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	**110**	79.7 - 118		9/20/2023	20:02
4-Bromofluorobenzene	**95.9**	80.1 - 112		9/20/2023	20:02
Pentafluorobenzene	**96.1**	88 - 115		9/20/2023	20:02
Toluene-D8	**108**	88.2 - 113		9/20/2023	20:02

Method Reference(s): EPA 8260C
EPA 5030C
Data File: z19683.D

Sample Identifier:	BreezeTest-05-09152023		
Lab Sample ID:	234271-05	**Date Sampled:**	9/15/2023 9:25
Matrix:	Groundwater	**Date Received**	9/15/2023

Ammonia-N

Analyte	Result	Units	Qualifier	Date Analyzed
Ammonia	<0.1	mg/L		9/19/2023

Method Reference(s): EPA 350.1 Rev 2.0
Subcontractor ELAP ID: 10709

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	<0.010	mg/L		9/21/2023

Method Reference(s): EPA 335.4 Rev 1.0
Subcontractor ELAP ID: 10709

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 10.0	ug/L		9/20/2023 19:17
1,2,4,5-Tetrachlorobenzene	< 10.0	ug/L		9/20/2023 19:17
1,2,4-Trichlorobenzene	< 10.0	ug/L		9/20/2023 19:17
1,2-Dichlorobenzene	< 10.0	ug/L		9/20/2023 19:17
1,3-Dichlorobenzene	< 10.0	ug/L		9/20/2023 19:17
1,4-Dichlorobenzene	< 10.0	ug/L		9/20/2023 19:17
2,2-Oxybis (1-chloropropane)	< 10.0	ug/L		9/20/2023 19:17
2,3,4,6-Tetrachlorophenol	< 10.0	ug/L		9/20/2023 19:17
2,4,5-Trichlorophenol	< 10.0	ug/L		9/20/2023 19:17
2,4,6-Trichlorophenol	< 20.0	ug/L		9/20/2023 19:17
2,4-Dichlorophenol	< 10.0	ug/L		9/20/2023 19:17
2,4-Dimethylphenol	< 10.0	ug/L		9/20/2023 19:17
2,4-Dinitrophenol	< 20.0	ug/L		9/20/2023 19:17
2,4-Dinitrotoluene	< 10.0	ug/L		9/20/2023 19:17
2,6-Dinitrotoluene	< 10.0	ug/L		9/20/2023 19:17
2-Chloronaphthalene	< 10.0	ug/L		9/20/2023 19:17
2-Chlorophenol	< 10.0	ug/L		9/20/2023 19:17

Sample Identifier:	BreezeTest-05-09152023		
Lab Sample ID:	234271-05	**Date Sampled:**	9/15/2023 9:25
Matrix:	Groundwater	**Date Received**	9/15/2023

2-Methylnapthalene	< 10.0	ug/L	9/20/2023 19:17
2-Methylphenol	< 10.0	ug/L	9/20/2023 19:17
2-Nitroaniline	< 20.0	ug/L	9/20/2023 19:17
2-Nitrophenol	< 10.0	ug/L	9/20/2023 19:17
3&4-Methylphenol	< 10.0	ug/L	9/20/2023 19:17
3,3'-Dichlorobenzidine	< 10.0	ug/L	9/20/2023 19:17
3-Nitroaniline	< 20.0	ug/L	9/20/2023 19:17
4,6-Dinitro-2-methylphenol	< 20.0	ug/L	9/20/2023 19:17
4-Bromophenyl phenyl ether	< 10.0	ug/L	9/20/2023 19:17
4-Chloro-3-methylphenol	< 10.0	ug/L	9/20/2023 19:17
4-Chloroaniline	< 10.0	ug/L	9/20/2023 19:17
4-Chlorophenyl phenyl ether	< 10.0	ug/L	9/20/2023 19:17
4-Nitroaniline	< 20.0	ug/L	9/20/2023 19:17
4-Nitrophenol	< 20.0	ug/L	9/20/2023 19:17
Acenaphthene	< 10.0	ug/L	9/20/2023 19:17
Acenaphthylene	< 10.0	ug/L	9/20/2023 19:17
Acetophenone	< 10.0	ug/L	9/20/2023 19:17
Anthracene	< 10.0	ug/L	9/20/2023 19:17
Atrazine	< 25.0	ug/L	9/20/2023 19:17
Benzaldehyde	< 10.0	ug/L	9/20/2023 19:17
Benzo (a) anthracene	< 10.0	ug/L	9/20/2023 19:17
Benzo (a) pyrene	< 10.0	ug/L	9/20/2023 19:17
Benzo (b) fluoranthene	< 10.0	ug/L	9/20/2023 19:17
Benzo (g,h,i) perylene	< 10.0	ug/L	9/20/2023 19:17
Benzo (k) fluoranthene	< 10.0	ug/L	9/20/2023 19:17
Bis (2-chloroethoxy) methane	< 10.0	ug/L	9/20/2023 19:17
Bis (2-chloroethyl) ether	< 10.0	ug/L	9/20/2023 19:17
Bis (2-ethylhexyl) phthalate	< 10.0	ug/L	9/20/2023 19:17
Butylbenzylphthalate	< 10.0	ug/L	9/20/2023 19:17
Caprolactam	< 10.0	ug/L	9/20/2023 19:17

Sample Identifier:	BreezeTest-05-09152023		
Lab Sample ID:	234271-05	**Date Sampled:**	9/15/2023 9:25
Matrix:	Groundwater	**Date Received**	9/15/2023

Carbazole	< 10.0	ug/L	9/20/2023 19:17
Chrysene	< 10.0	ug/L	9/20/2023 19:17
Dibenz (a,h) anthracene	< 10.0	ug/L	9/20/2023 19:17
Dibenzofuran	< 10.0	ug/L	9/20/2023 19:17
Diethyl phthalate	< 10.0	ug/L	9/20/2023 19:17
Dimethyl phthalate	< 20.0	ug/L	9/20/2023 19:17
Di-n-butyl phthalate	< 10.0	ug/L	9/20/2023 19:17
Di-n-octylphthalate	< 10.0	ug/L	9/20/2023 19:17
Fluoranthene	< 10.0	ug/L	9/20/2023 19:17
Fluorene	< 10.0	ug/L	9/20/2023 19:17
Hexachlorobenzene	< 10.0	ug/L	9/20/2023 19:17
Hexachlorobutadiene	< 10.0	ug/L	9/20/2023 19:17
Hexachlorocyclopentadiene	< 10.0	ug/L	9/20/2023 19:17
Hexachloroethane	< 10.0	ug/L	9/20/2023 19:17
Indeno (1,2,3-cd) pyrene	< 10.0	ug/L	9/20/2023 19:17
Isophorone	< 10.0	ug/L	9/20/2023 19:17
Naphthalene	< 10.0	ug/L	9/20/2023 19:17
Nitrobenzene	< 10.0	ug/L	9/20/2023 19:17
N-Nitroso-di-n-propylamine	< 10.0	ug/L	9/20/2023 19:17
N-Nitrosodiphenylamine	< 10.0	ug/L	9/20/2023 19:17
Pentachlorophenol	< 20.0	ug/L	9/20/2023 19:17
Phenanthrene	**17.5**	ug/L	9/20/2023 19:17
Phenol	< 10.0	ug/L	9/20/2023 19:17
Pyrene	< 10.0	ug/L	9/20/2023 19:17

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier: BreezeTest-05-09152023
Lab Sample ID: 234271-05 **Date Sampled:** 9/15/2023 9:25
Matrix: Groundwater **Date Received** 9/15/2023

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	**92.9**	49 - 127		9/20/2023 19:17
2-Fluorobiphenyl	**39.2**	10 - 107		9/20/2023 19:17
2-Fluorophenol	**34.6**	10.6 - 109		9/20/2023 19:17
Nitrobenzene-d5	**58.2**	41 - 106		9/20/2023 19:17
Phenol-d5	**24.1**	10 - 109		9/20/2023 19:17
Terphenyl-d14	**77.2**	49.6 - 120		9/20/2023 19:17

Method Reference(s): EPA 8270D
EPA 3510C
Preparation Date: 9/20/2023
Data File: B66931.D

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 2.00	ug/L		9/20/2023 20:21
1,1,2,2-Tetrachloroethane	< 2.00	ug/L		9/20/2023 20:21
1,1,2-Trichloroethane	< 2.00	ug/L		9/20/2023 20:21
1,1-Dichloroethane	< 2.00	ug/L		9/20/2023 20:21
1,1-Dichloroethene	< 2.00	ug/L		9/20/2023 20:21
1,2,3-Trichlorobenzene	< 5.00	ug/L		9/20/2023 20:21
1,2,4-Trichlorobenzene	< 5.00	ug/L		9/20/2023 20:21
1,2-Dibromo-3-Chloropropane	< 10.0	ug/L		9/20/2023 20:21
1,2-Dibromoethane	< 2.00	ug/L		9/20/2023 20:21
1,2-Dichlorobenzene	< 2.00	ug/L		9/20/2023 20:21
1,2-Dichloroethane	< 2.00	ug/L		9/20/2023 20:21
1,2-Dichloropropane	< 2.00	ug/L		9/20/2023 20:21
1,3-Dichlorobenzene	< 2.00	ug/L		9/20/2023 20:21
1,4-Dichlorobenzene	< 2.00	ug/L		9/20/2023 20:21
1,4-Dioxane	< 10.0	ug/L		9/20/2023 20:21
2-Butanone	< 10.0	ug/L		9/20/2023 20:21
2-Hexanone	< 5.00	ug/L		9/20/2023 20:21
4-Methyl-2-pentanone	< 5.00	ug/L		9/20/2023 20:21

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier:	BreezeTest-05-09152023		
Lab Sample ID:	234271-05	**Date Sampled:**	9/15/2023 9:25
Matrix:	Groundwater	**Date Received**	9/15/2023

Acetone	**14.1**	ug/L	9/20/2023 20:21
Benzene	< 1.00	ug/L	9/20/2023 20:21
Bromochloromethane	< 5.00	ug/L	9/20/2023 20:21
Bromodichloromethane	< 2.00	ug/L	9/20/2023 20:21
Bromoform	< 5.00	ug/L	9/20/2023 20:21
Bromomethane	< 2.00	ug/L	9/20/2023 20:21
Carbon disulfide	< 2.00	ug/L	9/20/2023 20:21
Carbon Tetrachloride	< 2.00	ug/L	9/20/2023 20:21
Chlorobenzene	< 2.00	ug/L	9/20/2023 20:21
Chloroethane	< 2.00	ug/L	9/20/2023 20:21
Chloroform	< 2.00	ug/L	9/20/2023 20:21
Chloromethane	< 2.00	ug/L	9/20/2023 20:21
cis-1,2-Dichloroethene	< 2.00	ug/L	9/20/2023 20:21
cis-1,3-Dichloropropene	< 2.00	ug/L	9/20/2023 20:21
Cyclohexane	< 10.0	ug/L	9/20/2023 20:21
Dibromochloromethane	< 2.00	ug/L	9/20/2023 20:21
Dichlorodifluoromethane	< 2.00	ug/L	9/20/2023 20:21
Ethylbenzene	< 2.00	ug/L	9/20/2023 20:21
Freon 113	< 2.00	ug/L	9/20/2023 20:21
Isopropylbenzene	< 2.00	ug/L	9/20/2023 20:21
m,p-Xylene	< 2.00	ug/L	9/20/2023 20:21
Methyl acetate	< 2.00	ug/L	9/20/2023 20:21
Methyl tert-butyl Ether	< 2.00	ug/L	9/20/2023 20:21
Methylcyclohexane	< 2.00	ug/L	9/20/2023 20:21
Methylene chloride	< 5.00	ug/L	9/20/2023 20:21
o-Xylene	< 2.00	ug/L	9/20/2023 20:21
Styrene	< 5.00	ug/L	9/20/2023 20:21
Tetrachloroethene	< 2.00	ug/L	9/20/2023 20:21
Toluene	< 2.00	ug/L	9/20/2023 20:21
trans-1,2-Dichloroethene	< 2.00	ug/L	9/20/2023 20:21

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier: BreezeTest-05-09152023
Lab Sample ID: 234271-05 **Date Sampled:** 9/15/2023 9:25
Matrix: Groundwater **Date Received** 9/15/2023

trans-1,3-Dichloropropene	< 2.00	ug/L		9/20/2023 20:21
Trichloroethene	< 2.00	ug/L		9/20/2023 20:21
Trichlorofluoromethane	< 2.00	ug/L		9/20/2023 20:21
Vinyl chloride	< 2.00	ug/L		9/20/2023 20:21

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**109**	79.7 - 118		9/20/2023 20:21
4-Bromofluorobenzene	**95.5**	80.1 - 112		9/20/2023 20:21
Pentafluorobenzene	**98.2**	88 - 115		9/20/2023 20:21
Toluene-D8	**109**	88.2 - 113		9/20/2023 20:21

Method Reference(s): EPA 8260C
EPA 5030C
Data File: z19684.D

Sample Identifier:	BreezeTest-06-09152023		
Lab Sample ID:	234271-06	**Date Sampled:**	9/15/2023 9:30
Matrix:	Solid	**Date Received**	9/15/2023

Ammonia-N

Analyte	Result	Units	Qualifier	Date Analyzed
Ammonia	<10.0	mg/Kg		9/19/2023

Method Reference(s): SM 4500 NH3 G - 2011
Subcontractor ELAP ID: 10709

Total Cyanide

Analyte	Result	Units	Qualifier	Date Analyzed
Cyanide, Total	<0.50	mg/Kg		9/19/2023

Method Reference(s): EPA 9012B
Subcontractor ELAP ID: 10709

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed
1,1-Biphenyl	< 272	ug/Kg		9/20/2023 21:10
1,2,4,5-Tetrachlorobenzene	< 272	ug/Kg		9/20/2023 21:10
1,2,4-Trichlorobenzene	< 272	ug/Kg		9/20/2023 21:10
1,2-Dichlorobenzene	< 272	ug/Kg		9/20/2023 21:10
1,3-Dichlorobenzene	< 272	ug/Kg		9/20/2023 21:10
1,4-Dichlorobenzene	< 272	ug/Kg		9/20/2023 21:10
2,2-Oxybis (1-chloropropane)	< 272	ug/Kg		9/20/2023 21:10
2,3,4,6-Tetrachlorophenol	< 272	ug/Kg		9/20/2023 21:10
2,4,5-Trichlorophenol	< 272	ug/Kg		9/20/2023 21:10
2,4,6-Trichlorophenol	< 272	ug/Kg		9/20/2023 21:10
2,4-Dichlorophenol	< 272	ug/Kg		9/20/2023 21:10
2,4-Dimethylphenol	< 272	ug/Kg		9/20/2023 21:10
2,4-Dinitrophenol	< 1090	ug/Kg		9/20/2023 21:10
2,4-Dinitrotoluene	< 272	ug/Kg		9/20/2023 21:10
2,6-Dinitrotoluene	< 272	ug/Kg		9/20/2023 21:10
2-Chloronaphthalene	< 272	ug/Kg		9/20/2023 21:10
2-Chlorophenol	< 272	ug/Kg		9/20/2023 21:10

Sample Identifier:	BreezeTest-06-09152023		
Lab Sample ID:	234271-06	**Date Sampled:**	9/15/2023 9:30
Matrix:	Solid	**Date Received**	9/15/2023

2-Methylnapthalene	**765**	ug/Kg	9/20/2023 21:10
2-Methylphenol	< 272	ug/Kg	9/20/2023 21:10
2-Nitroaniline	< 272	ug/Kg	9/20/2023 21:10
2-Nitrophenol	< 272	ug/Kg	9/20/2023 21:10
3&4-Methylphenol	< 272	ug/Kg	9/20/2023 21:10
3,3'-Dichlorobenzidine	< 272	ug/Kg	9/20/2023 21:10
3-Nitroaniline	< 272	ug/Kg	9/20/2023 21:10
4,6-Dinitro-2-methylphenol	< 364	ug/Kg	9/20/2023 21:10
4-Bromophenyl phenyl ether	< 272	ug/Kg	9/20/2023 21:10
4-Chloro-3-methylphenol	< 272	ug/Kg	9/20/2023 21:10
4-Chloroaniline	< 272	ug/Kg	9/20/2023 21:10
4-Chlorophenyl phenyl ether	< 272	ug/Kg	9/20/2023 21:10
4-Nitroaniline	< 272	ug/Kg	9/20/2023 21:10
4-Nitrophenol	< 272	ug/Kg	9/20/2023 21:10
Acenaphthene	**1130**	ug/Kg	9/20/2023 21:10
Acenaphthylene	< 272	ug/Kg	9/20/2023 21:10
Acetophenone	< 272	ug/Kg	9/20/2023 21:10
Anthracene	**985**	ug/Kg	9/20/2023 21:10
Atrazine	< 272	ug/Kg	9/20/2023 21:10
Benzaldehyde	< 272	ug/Kg	9/20/2023 21:10
Benzo (a) anthracene	**3430**	ug/Kg	9/20/2023 21:10
Benzo (a) pyrene	**6430**	ug/Kg	9/20/2023 21:10
Benzo (b) fluoranthene	**6320**	ug/Kg	9/20/2023 21:10
Benzo (g,h,i) perylene	**5010**	ug/Kg	9/20/2023 21:10
Benzo (k) fluoranthene	**3050**	ug/Kg	9/20/2023 21:10
Bis (2-chloroethoxy) methane	< 272	ug/Kg	9/20/2023 21:10
Bis (2-chloroethyl) ether	< 272	ug/Kg	9/20/2023 21:10
Bis (2-ethylhexyl) phthalate	< 272	ug/Kg	9/20/2023 21:10
Butylbenzylphthalate	< 272	ug/Kg	9/20/2023 21:10
Caprolactam	< 272	ug/Kg	9/20/2023 21:10

Sample Identifier:	BreezeTest-06-09152023		
Lab Sample ID:	234271-06	**Date Sampled:**	9/15/2023 9:30
Matrix:	Solid	**Date Received**	9/15/2023

Carbazole	**320**	ug/Kg	9/20/2023	21:10
Chrysene	**4210**	ug/Kg	9/20/2023	21:10
Dibenz (a,h) anthracene	**1500**	ug/Kg	9/20/2023	21:10
Dibenzofuran	**326**	ug/Kg	9/20/2023	21:10
Diethyl phthalate	< 272	ug/Kg	9/20/2023	21:10
Dimethyl phthalate	< 272	ug/Kg	9/20/2023	21:10
Di-n-butyl phthalate	< 272	ug/Kg	9/20/2023	21:10
Di-n-octylphthalate	< 272	ug/Kg	9/20/2023	21:10
Fluoranthene	< 272	ug/Kg	9/20/2023	21:10
Fluorene	< 272	ug/Kg	9/20/2023	21:10
Hexachlorobenzene	< 272	ug/Kg	9/20/2023	21:10
Hexachlorobutadiene	< 272	ug/Kg	9/20/2023	21:10
Hexachlorocyclopentadiene	< 1090	ug/Kg	9/20/2023	21:10
Hexachloroethane	< 272	ug/Kg	9/20/2023	21:10
Indeno (1,2,3-cd) pyrene	**3780**	ug/Kg	9/20/2023	21:10
Isophorone	< 272	ug/Kg	9/20/2023	21:10
Naphthalene	**1190**	ug/Kg	9/20/2023	21:10
Nitrobenzene	< 272	ug/Kg	9/20/2023	21:10
N-Nitroso-di-n-propylamine	< 272	ug/Kg	9/20/2023	21:10
N-Nitrosodiphenylamine	< 272	ug/Kg	9/20/2023	21:10
Pentachlorophenol	< 543	ug/Kg	9/20/2023	21:10
Phenanthrene	**2800**	ug/Kg	9/20/2023	21:10
Phenol	< 272	ug/Kg	9/20/2023	21:10
Pyrene	**4520**	ug/Kg	9/20/2023	21:10

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier: BreezeTest-06-09152023
Lab Sample ID: 234271-06 **Date Sampled:** 9/15/2023 9:30
Matrix: Solid **Date Received** 9/15/2023

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
2,4,6-Tribromophenol	**28.8**	35.1 - 95.9	*	9/20/2023 21:10
2-Fluorobiphenyl	**31.0**	10 - 156		9/20/2023 21:10
2-Fluorophenol	**31.2**	36 - 81.3	*	9/20/2023 21:10
Nitrobenzene-d5	**27.6**	31.5 - 83.8	*	9/20/2023 21:10
Phenol-d5	**28.2**	37.7 - 84	*	9/20/2023 21:10
Terphenyl-d14	**29.3**	40.5 - 99.5	*	9/20/2023 21:10

Method Reference(s): EPA 8270D
EPA 3546
Preparation Date: 9/20/2023
Data File: B66935.D

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed
1,1,1-Trichloroethane	< 8.00	ug/Kg		9/21/2023 14:17
1,1,2,2-Tetrachloroethane	< 8.00	ug/Kg		9/21/2023 14:17
1,1,2-Trichloroethane	< 8.00	ug/Kg		9/21/2023 14:17
1,1-Dichloroethane	< 8.00	ug/Kg		9/21/2023 14:17
1,1-Dichloroethene	< 8.00	ug/Kg		9/21/2023 14:17
1,2,3-Trichlorobenzene	< 20.0	ug/Kg		9/21/2023 14:17
1,2,4-Trichlorobenzene	< 20.0	ug/Kg		9/21/2023 14:17
1,2-Dibromo-3-Chloropropane	< 40.0	ug/Kg		9/21/2023 14:17
1,2-Dibromoethane	< 8.00	ug/Kg		9/21/2023 14:17
1,2-Dichlorobenzene	< 8.00	ug/Kg		9/21/2023 14:17
1,2-Dichloroethane	< 8.00	ug/Kg		9/21/2023 14:17
1,2-Dichloropropane	< 8.00	ug/Kg		9/21/2023 14:17
1,3-Dichlorobenzene	< 8.00	ug/Kg		9/21/2023 14:17
1,4-Dichlorobenzene	< 8.00	ug/Kg		9/21/2023 14:17
1,4-Dioxane	< 40.0	ug/Kg		9/21/2023 14:17
2-Butanone	< 40.0	ug/Kg		9/21/2023 14:17
2-Hexanone	< 20.0	ug/Kg		9/21/2023 14:17
4-Methyl-2-pentanone	< 20.0	ug/Kg		9/21/2023 14:17

Sample Identifier: BreezeTest-06-09152023
Lab Sample ID: 234271-06 **Date Sampled:** 9/15/2023 9:30
Matrix: Solid **Date Received** 9/15/2023

Acetone	< 40.0	ug/Kg	9/21/2023 14:17
Benzene	< 8.00	ug/Kg	9/21/2023 14:17
Bromochloromethane	< 20.0	ug/Kg	9/21/2023 14:17
Bromodichloromethane	< 8.00	ug/Kg	9/21/2023 14:17
Bromoform	< 20.0	ug/Kg	9/21/2023 14:17
Bromomethane	< 8.00	ug/Kg	9/21/2023 14:17
Carbon disulfide	< 8.00	ug/Kg	9/21/2023 14:17
Carbon Tetrachloride	< 8.00	ug/Kg	9/21/2023 14:17
Chlorobenzene	< 8.00	ug/Kg	9/21/2023 14:17
Chloroethane	< 8.00	ug/Kg	9/21/2023 14:17
Chloroform	< 8.00	ug/Kg	9/21/2023 14:17
Chloromethane	< 8.00	ug/Kg	9/21/2023 14:17
cis-1,2-Dichloroethene	< 8.00	ug/Kg	9/21/2023 14:17
cis-1,3-Dichloropropene	< 8.00	ug/Kg	9/21/2023 14:17
Cyclohexane	< 40.0	ug/Kg	9/21/2023 14:17
Dibromochloromethane	< 8.00	ug/Kg	9/21/2023 14:17
Dichlorodifluoromethane	< 8.00	ug/Kg	9/21/2023 14:17
Ethylbenzene	< 8.00	ug/Kg	9/21/2023 14:17
Freon 113	< 8.00	ug/Kg	9/21/2023 14:17
Isopropylbenzene	< 8.00	ug/Kg	9/21/2023 14:17
m,p-Xylene	< 8.00	ug/Kg	9/21/2023 14:17
Methyl acetate	< 8.00	ug/Kg	9/21/2023 14:17
Methyl tert-butyl Ether	< 8.00	ug/Kg	9/21/2023 14:17
Methylcyclohexane	< 8.00	ug/Kg	9/21/2023 14:17
Methylene chloride	< 20.0	ug/Kg	9/21/2023 14:17
o-Xylene	< 8.00	ug/Kg	9/21/2023 14:17
Styrene	< 20.0	ug/Kg	9/21/2023 14:17
Tetrachloroethene	< 8.00	ug/Kg	9/21/2023 14:17
Toluene	< 8.00	ug/Kg	9/21/2023 14:17
trans-1,2-Dichloroethene	< 8.00	ug/Kg	9/21/2023 14:17

PARADIGM ENVIRONMENTAL SERVICES, INC.

Lab Project ID: 234271

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Sample Identifier:	BreezeTest-06-09152023		
Lab Sample ID:	234271-06	**Date Sampled:** 9/15/2023	9:30
Matrix:	Solid	**Date Received** 9/15/2023	

trans-1,3-Dichloropropene	< 8.00	ug/Kg		9/21/2023	14:17
Trichloroethene	< 8.00	ug/Kg		9/21/2023	14:17
Trichlorofluoromethane	< 8.00	ug/Kg		9/21/2023	14:17
Vinyl chloride	< 8.00	ug/Kg		9/21/2023	14:17

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
1,2-Dichloroethane-d4	**101**	72.3 - 128		9/21/2023	14:17
4-Bromofluorobenzene	**71.9**	70 - 123		9/21/2023	14:17
Pentafluorobenzene	**97.5**	80.7 - 124		9/21/2023	14:17
Toluene-D8	**102**	82.1 - 121		9/21/2023	14:17

Internal standard outliers indicate probable matrix interference

Method Reference(s): EPA 8260C
EPA 5035A - L

Data File: z19701.D

PARADIGM ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Solid

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed	
1,1-Biphenyl	<262	ug/Kg		9/20/2023	19:45
1,2,4,5-Tetrachlorobenzene	<262	ug/Kg		9/20/2023	19:45
1,2,4-Trichlorobenzene	<262	ug/Kg		9/20/2023	19:45
1,2-Dichlorobenzene	<262	ug/Kg		9/20/2023	19:45
1,3-Dichlorobenzene	<262	ug/Kg		9/20/2023	19:45
1,4-Dichlorobenzene	<262	ug/Kg		9/20/2023	19:45
2,2-Oxybis (1-chloropropane)	<262	ug/Kg		9/20/2023	19:45
2,3,4,6-Tetrachlorophenol	<262	ug/Kg		9/20/2023	19:45
2,4,5-Trichlorophenol	<262	ug/Kg		9/20/2023	19:45
2,4,6-Trichlorophenol	<262	ug/Kg		9/20/2023	19:45
2,4-Dichlorophenol	<262	ug/Kg		9/20/2023	19:45
2,4-Dimethylphenol	<262	ug/Kg		9/20/2023	19:45
2,4-Dinitrophenol	<1050	ug/Kg		9/20/2023	19:45
2,4-Dinitrotoluene	<262	ug/Kg		9/20/2023	19:45
2,6-Dinitrotoluene	<262	ug/Kg		9/20/2023	19:45
2-Chloronaphthalene	<262	ug/Kg		9/20/2023	19:45
2-Chlorophenol	<262	ug/Kg		9/20/2023	19:45
2-Methylnapthalene	<262	ug/Kg		9/20/2023	19:45
2-Methylphenol	<262	ug/Kg		9/20/2023	19:45
2-Nitroaniline	<262	ug/Kg		9/20/2023	19:45
2-Nitrophenol	<262	ug/Kg		9/20/2023	19:45
3&4-Methylphenol	<262	ug/Kg		9/20/2023	19:45
3,3'-Dichlorobenzidine	<262	ug/Kg		9/20/2023	19:45
3-Nitroaniline	<262	ug/Kg		9/20/2023	19:45
4,6-Dinitro-2-methylphenol	<524	ug/Kg		9/20/2023	19:45
4-Bromophenyl phenyl ether	<262	ug/Kg		9/20/2023	19:45
4-Chloro-3-methylphenol	<262	ug/Kg		9/20/2023	19:45

PARADIGM ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Solid

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed	
4-Chloroaniline	<262	ug/Kg		9/20/2023	19:45
4-Chlorophenyl phenyl ether	<262	ug/Kg		9/20/2023	19:45
4-Nitroaniline	<262	ug/Kg		9/20/2023	19:45
4-Nitrophenol	<262	ug/Kg		9/20/2023	19:45
Acenaphthene	<262	ug/Kg		9/20/2023	19:45
Acenaphthylene	<262	ug/Kg		9/20/2023	19:45
Acetophenone	<262	ug/Kg		9/20/2023	19:45
Anthracene	<262	ug/Kg		9/20/2023	19:45
Atrazine	<262	ug/Kg		9/20/2023	19:45
Benzaldehyde	<262	ug/Kg		9/20/2023	19:45
Benzo (a) anthracene	<262	ug/Kg		9/20/2023	19:45
Benzo (a) pyrene	<262	ug/Kg		9/20/2023	19:45
Benzo (b) fluoranthene	<262	ug/Kg		9/20/2023	19:45
Benzo (g,h,i) perylene	<262	ug/Kg		9/20/2023	19:45
Benzo (k) fluoranthene	<262	ug/Kg		9/20/2023	19:45
Bis (2-chloroethoxy) methane	<262	ug/Kg		9/20/2023	19:45
Bis (2-chloroethyl) ether	<262	ug/Kg		9/20/2023	19:45
Bis (2-ethylhexyl) phthalate	<262	ug/Kg		9/20/2023	19:45
Butylbenzylphthalate	<262	ug/Kg		9/20/2023	19:45
Caprolactam	<262	ug/Kg		9/20/2023	19:45
Carbazole	<262	ug/Kg		9/20/2023	19:45
Chrysene	<262	ug/Kg		9/20/2023	19:45
Dibenz (a,h) anthracene	<262	ug/Kg		9/20/2023	19:45
Dibenzofuran	<262	ug/Kg		9/20/2023	19:45
Diethyl phthalate	<262	ug/Kg		9/20/2023	19:45
Dimethyl phthalate	<262	ug/Kg		9/20/2023	19:45
Di-n-butyl phthalate	<262	ug/Kg		9/20/2023	19:45
Di-n-octylphthalate	<262	ug/Kg		9/20/2023	19:45

PARADIGM ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Solid

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed	
Fluoranthene	<262	ug/Kg		9/20/2023	19:45
Fluorene	<262	ug/Kg		9/20/2023	19:45
Hexachlorobenzene	<262	ug/Kg		9/20/2023	19:45
Hexachlorobutadiene	<262	ug/Kg		9/20/2023	19:45
Hexachlorocyclopentadiene	<1050	ug/Kg		9/20/2023	19:45
Hexachloroethane	<262	ug/Kg		9/20/2023	19:45
Indeno (1,2,3-cd) pyrene	<262	ug/Kg		9/20/2023	19:45
Isophorone	<262	ug/Kg		9/20/2023	19:45
Naphthalene	<262	ug/Kg		9/20/2023	19:45
Nitrobenzene	<262	ug/Kg		9/20/2023	19:45
N-Nitroso-di-n-propylamine	<262	ug/Kg		9/20/2023	19:45
N-Nitrosodiphenylamine	<262	ug/Kg		9/20/2023	19:45
Pentachlorophenol	<524	ug/Kg		9/20/2023	19:45
Phenanthrene	<262	ug/Kg		9/20/2023	19:45
Phenol	<262	ug/Kg		9/20/2023	19:45
Pyrene	<262	ug/Kg		9/20/2023	19:45

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
2,4,6-Tribromophenol	**69.6**	35.1 - 95.9		9/20/2023	19:45
2-Fluorobiphenyl	**58.1**	10 - 156		9/20/2023	19:45
2-Fluorophenol	**54.4**	36 - 81.3		9/20/2023	19:45
Nitrobenzene-d5	**50.3**	31.5 - 83.8		9/20/2023	19:45
Phenol-d5	**54.5**	37.7 - 84		9/20/2023	19:45
Terphenyl-d14	**68.0**	40.5 - 99.5		9/20/2023	19:45

Method Reference(s): EPA 8270D
EPA 3546
Preparation Date: 9/20/2023
Data File: B66932.D
QC Batch ID: QC2309020ABNS
QC Number: Blk 1

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**
Project Reference: Breeze Water Testing
Lab Project ID: 234271
Matrix: Solid

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
1,2,4-Trichlorobenzene	2530	ug/Kg	1640	64.8	41.2 - 84.4		9/20/2023
1,4-Dichlorobenzene	2530	ug/Kg	1540	60.9	39.2 - 74.5		9/20/2023
2,3,4,6-Tetrachlorophenol	3790	ug/Kg	2700	71.4	46.8 - 91.6		9/20/2023
2,4,6-Trichlorophenol	3790	ug/Kg	2800	73.8	49.4 - 96.7		9/20/2023
2,4-Dichlorophenol	3790	ug/Kg	2650	70.0	49.9 - 90		9/20/2023
2,4-Dimethylphenol	3790	ug/Kg	2480	65.5	40.5 - 92.9		9/20/2023
2,4-Dinitrophenol	3790	ug/Kg	2020	53.5	10 - 76.8		9/20/2023
2,4-Dinitrotoluene	2530	ug/Kg	1850	73.4	37.8 - 99.2		9/20/2023
2-Chlorophenol	3790	ug/Kg	2510	66.2	48.2 - 82.9		9/20/2023
2-Nitrophenol	3790	ug/Kg	2440	64.5	45.2 - 85.7		9/20/2023
4,6-Dinitro-2-methylphenol	3790	ug/Kg	2740	72.3	22.6 - 92.8		9/20/2023
4-Chloro-3-methylphenol	3790	ug/Kg	2710	71.6	48.3 - 93.6		9/20/2023
4-Nitrophenol	3790	ug/Kg	2430	64.2	19.3 - 106		9/20/2023
Acenaphthene	2530	ug/Kg	1760	69.5	44.2 - 90.1		9/20/2023
N-Nitroso-di-n-propylamine	2530	ug/Kg	1560	61.7	36.5 - 87.1		9/20/2023
Pentachlorophenol	3790	ug/Kg	2970	78.3	33 - 110		9/20/2023

PARADIGM ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Solid

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
Phenol	3790	ug/Kg	2490	65.6	45.5 - 83.9		9/20/2023
Pyrene	2530	ug/Kg	1960	77.7	47.9 - 101		9/20/2023

Method Reference(s): EPA 8270D
EPA 3546
Preparation Date: 9/20/2023
Data File: B66933.D
QC Number: LCS 1
QC Batch ID: QC2309020ABNS

PARADIGM ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Groundwater

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed	
1,1-Biphenyl	<10.0	ug/L		9/20/2023	16:55
1,2,4,5-Tetrachlorobenzene	<10.0	ug/L		9/20/2023	16:55
1,2,4-Trichlorobenzene	<10.0	ug/L		9/20/2023	16:55
1,2-Dichlorobenzene	<10.0	ug/L		9/20/2023	16:55
1,3-Dichlorobenzene	<10.0	ug/L		9/20/2023	16:55
1,4-Dichlorobenzene	<10.0	ug/L		9/20/2023	16:55
2,2-Oxybis (1-chloropropane)	<10.0	ug/L		9/20/2023	16:55
2,3,4,6-Tetrachlorophenol	<10.0	ug/L		9/20/2023	16:55
2,4,5-Trichlorophenol	<10.0	ug/L		9/20/2023	16:55
2,4,6-Trichlorophenol	<20.0	ug/L		9/20/2023	16:55
2,4-Dichlorophenol	<10.0	ug/L		9/20/2023	16:55
2,4-Dimethylphenol	<10.0	ug/L		9/20/2023	16:55
2,4-Dinitrophenol	<20.0	ug/L		9/20/2023	16:55
2,4-Dinitrotoluene	<10.0	ug/L		9/20/2023	16:55
2,6-Dinitrotoluene	<10.0	ug/L		9/20/2023	16:55
2-Chloronaphthalene	<10.0	ug/L		9/20/2023	16:55
2-Chlorophenol	<10.0	ug/L		9/20/2023	16:55
2-Methylnapthalene	<10.0	ug/L		9/20/2023	16:55
2-Methylphenol	<10.0	ug/L		9/20/2023	16:55
2-Nitroaniline	<20.0	ug/L		9/20/2023	16:55
2-Nitrophenol	<10.0	ug/L		9/20/2023	16:55
3&4-Methylphenol	<10.0	ug/L		9/20/2023	16:55
3,3'-Dichlorobenzidine	<10.0	ug/L		9/20/2023	16:55
3-Nitroaniline	<20.0	ug/L		9/20/2023	16:55
4,6-Dinitro-2-methylphenol	<20.0	ug/L		9/20/2023	16:55
4-Bromophenyl phenyl ether	<10.0	ug/L		9/20/2023	16:55
4-Chloro-3-methylphenol	<10.0	ug/L		9/20/2023	16:55

PARADIGM ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Groundwater

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed	
4-Chloroaniline	<10.0	ug/L		9/20/2023	16:55
4-Chlorophenyl phenyl ether	<10.0	ug/L		9/20/2023	16:55
4-Nitroaniline	<20.0	ug/L		9/20/2023	16:55
4-Nitrophenol	<20.0	ug/L		9/20/2023	16:55
Acenaphthene	<10.0	ug/L		9/20/2023	16:55
Acenaphthylene	<10.0	ug/L		9/20/2023	16:55
Acetophenone	<10.0	ug/L		9/20/2023	16:55
Anthracene	<10.0	ug/L		9/20/2023	16:55
Atrazine	<25.0	ug/L		9/20/2023	16:55
Benzaldehyde	<10.0	ug/L		9/20/2023	16:55
Benzo (a) anthracene	<10.0	ug/L		9/20/2023	16:55
Benzo (a) pyrene	<10.0	ug/L		9/20/2023	16:55
Benzo (b) fluoranthene	<10.0	ug/L		9/20/2023	16:55
Benzo (g,h,i) perylene	<10.0	ug/L		9/20/2023	16:55
Benzo (k) fluoranthene	<10.0	ug/L		9/20/2023	16:55
Bis (2-chloroethoxy) methane	<10.0	ug/L		9/20/2023	16:55
Bis (2-chloroethyl) ether	<10.0	ug/L		9/20/2023	16:55
Bis (2-ethylhexyl) phthalate	<10.0	ug/L		9/20/2023	16:55
Butylbenzylphthalate	<10.0	ug/L		9/20/2023	16:55
Caprolactam	<10.0	ug/L		9/20/2023	16:55
Carbazole	<10.0	ug/L		9/20/2023	16:55
Chrysene	<10.0	ug/L		9/20/2023	16:55
Dibenz (a,h) anthracene	<10.0	ug/L		9/20/2023	16:55
Dibenzofuran	<10.0	ug/L		9/20/2023	16:55
Diethyl phthalate	<10.0	ug/L		9/20/2023	16:55
Dimethyl phthalate	<20.0	ug/L		9/20/2023	16:55
Di-n-butyl phthalate	<10.0	ug/L		9/20/2023	16:55
Di-n-octylphthalate	<10.0	ug/L		9/20/2023	16:55

PARADIGM ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Groundwater

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Result	Units	Qualifier	Date Analyzed	
Fluoranthene	<10.0	ug/L		9/20/2023	16:55
Fluorene	<10.0	ug/L		9/20/2023	16:55
Hexachlorobenzene	<10.0	ug/L		9/20/2023	16:55
Hexachlorobutadiene	<10.0	ug/L		9/20/2023	16:55
Hexachlorocyclopentadiene	<10.0	ug/L		9/20/2023	16:55
Hexachloroethane	<10.0	ug/L		9/20/2023	16:55
Indeno (1,2,3-cd) pyrene	<10.0	ug/L		9/20/2023	16:55
Isophorone	<10.0	ug/L		9/20/2023	16:55
Naphthalene	<10.0	ug/L		9/20/2023	16:55
Nitrobenzene	<10.0	ug/L		9/20/2023	16:55
N-Nitroso-di-n-propylamine	<10.0	ug/L		9/20/2023	16:55
N-Nitrosodiphenylamine	<10.0	ug/L		9/20/2023	16:55
Pentachlorophenol	<20.0	ug/L		9/20/2023	16:55
Phenanthrene	<10.0	ug/L		9/20/2023	16:55
Phenol	<10.0	ug/L		9/20/2023	16:55
Pyrene	<10.0	ug/L		9/20/2023	16:55

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed	
2,4,6-Tribromophenol	**93.1**	49 - 127		9/20/2023	16:55
2-Fluorobiphenyl	**36.8**	10 - 107		9/20/2023	16:55
2-Fluorophenol	**34.6**	10.6 - 109		9/20/2023	16:55
Nitrobenzene-d5	**58.7**	41 - 106		9/20/2023	16:55
Phenol-d5	**24.5**	10 - 109		9/20/2023	16:55
Terphenyl-d14	**85.8**	49.6 - 120		9/20/2023	16:55

Method Reference(s): EPA 8270D
EPA 3510C
Preparation Date: 9/20/2023
Data File: B66926.D
QC Batch ID: QC2309020ABNW
QC Number: Blk 1

PARADIGM ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Groundwater

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
1,2,4-Trichlorobenzene	50.0	ug/L	31.9	63.8	16.6 - 116		9/21/2023
1,4-Dichlorobenzene	50.0	ug/L	29.8	59.5	10 - 107		9/21/2023
2,3,4,6-Tetrachlorophenol	75.0	ug/L	63.0	84.0	44.4 - 130		9/21/2023
2,4,6-Trichlorophenol	75.0	ug/L	64.8	86.3	49.3 - 129		9/21/2023
2,4-Dichlorophenol	75.0	ug/L	61.7	82.3	57.3 - 116		9/21/2023
2,4-Dimethylphenol	75.0	ug/L	59.6	79.4	42.4 - 123		9/21/2023
2,4-Dinitrophenol	75.0	ug/L	60.3	80.4	14.4 - 130		9/21/2023
2,4-Dinitrotoluene	50.0	ug/L	40.9	81.7	50.8 - 124		9/21/2023
2-Chlorophenol	75.0	ug/L	56.9	75.8	48.8 - 110		9/21/2023
2-Nitrophenol	75.0	ug/L	62.8	83.7	54.2 - 117		9/21/2023
4,6-Dinitro-2-methylphenol	75.0	ug/L	68.3	91.0	16.7 - 137		9/21/2023
4-Chloro-3-methylphenol	75.0	ug/L	61.7	82.3	59.1 - 117		9/21/2023
4-Nitrophenol	75.0	ug/L	26.8	35.8	10 - 124		9/21/2023
Acenaphthene	50.0	ug/L	38.8	77.6	43.3 - 115		9/21/2023
N-Nitroso-di-n-propylamine	50.0	ug/L	38.2	76.5	46.1 - 118		9/21/2023
Pentachlorophenol	75.0	ug/L	72.7	97.0	36.1 - 158		9/21/2023

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Groundwater

Semi-Volatile Organics (Acid/Base Neutrals)

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
Phenol	75.0	ug/L	25.1	33.5	10 - 116		9/21/2023
Pyrene	50.0	ug/L	41.9	83.9	55.4 - 122		9/21/2023

Method Reference(s): EPA 8270D
EPA 3510C
Preparation Date: 9/20/2023
Data File: B66976.D
QC Number: LCS 1
QC Batch ID: QC2309020ABNW

PARADIGM ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Solid

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed	
1,1,1-Trichloroethane	<2.00	ug/Kg		9/21/2023	13:39
1,1,2,2-Tetrachloroethane	<2.00	ug/Kg		9/21/2023	13:39
1,1,2-Trichloroethane	<2.00	ug/Kg		9/21/2023	13:39
1,1-Dichloroethane	<2.00	ug/Kg		9/21/2023	13:39
1,1-Dichloroethene	<2.00	ug/Kg		9/21/2023	13:39
1,2,3-Trichlorobenzene	<5.00	ug/Kg		9/21/2023	13:39
1,2,4-Trichlorobenzene	<5.00	ug/Kg		9/21/2023	13:39
1,2-Dibromo-3-Chloropropane	<10.0	ug/Kg		9/21/2023	13:39
1,2-Dibromoethane	<2.00	ug/Kg		9/21/2023	13:39
1,2-Dichlorobenzene	<2.00	ug/Kg		9/21/2023	13:39
1,2-Dichloroethane	<2.00	ug/Kg		9/21/2023	13:39
1,2-Dichloropropane	<2.00	ug/Kg		9/21/2023	13:39
1,3-Dichlorobenzene	<2.00	ug/Kg		9/21/2023	13:39
1,4-Dichlorobenzene	<2.00	ug/Kg		9/21/2023	13:39
1,4-Dioxane	<10.0	ug/Kg		9/21/2023	13:39
2-Butanone	<10.0	ug/Kg		9/21/2023	13:39
2-Hexanone	<5.00	ug/Kg		9/21/2023	13:39
4-Methyl-2-pentanone	<5.00	ug/Kg		9/21/2023	13:39
Acetone	<10.0	ug/Kg		9/21/2023	13:39
Benzene	<2.00	ug/Kg		9/21/2023	13:39
Bromochloromethane	<5.00	ug/Kg		9/21/2023	13:39
Bromodichloromethane	<2.00	ug/Kg		9/21/2023	13:39
Bromoform	<5.00	ug/Kg		9/21/2023	13:39
Bromomethane	<2.00	ug/Kg		9/21/2023	13:39
Carbon disulfide	<2.00	ug/Kg		9/21/2023	13:39
Carbon Tetrachloride	<2.00	ug/Kg		9/21/2023	13:39
Chlorobenzene	<2.00	ug/Kg		9/21/2023	13:39

PARADIGM ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Solid

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed	
Chloroethane	<2.00	ug/Kg		9/21/2023	13:39
Chloroform	<2.00	ug/Kg		9/21/2023	13:39
Chloromethane	<2.00	ug/Kg		9/21/2023	13:39
cis-1,2-Dichloroethene	<2.00	ug/Kg		9/21/2023	13:39
cis-1,3-Dichloropropene	<2.00	ug/Kg		9/21/2023	13:39
Cyclohexane	<10.0	ug/Kg		9/21/2023	13:39
Dibromochloromethane	<2.00	ug/Kg		9/21/2023	13:39
Dichlorodifluoromethane	<2.00	ug/Kg		9/21/2023	13:39
Ethylbenzene	<2.00	ug/Kg		9/21/2023	13:39
Freon 113	<2.00	ug/Kg		9/21/2023	13:39
Isopropylbenzene	<2.00	ug/Kg		9/21/2023	13:39
m,p-Xylene	<2.00	ug/Kg		9/21/2023	13:39
Methyl acetate	<2.00	ug/Kg		9/21/2023	13:39
Methyl tert-butyl Ether	<2.00	ug/Kg		9/21/2023	13:39
Methylcyclohexane	<2.00	ug/Kg		9/21/2023	13:39
Methylene chloride	<5.00	ug/Kg		9/21/2023	13:39
o-Xylene	<2.00	ug/Kg		9/21/2023	13:39
Styrene	<5.00	ug/Kg		9/21/2023	13:39
Tetrachloroethene	<2.00	ug/Kg		9/21/2023	13:39
Toluene	<2.00	ug/Kg		9/21/2023	13:39
trans-1,2-Dichloroethene	<2.00	ug/Kg		9/21/2023	13:39
trans-1,3-Dichloropropene	<2.00	ug/Kg		9/21/2023	13:39
Trichloroethene	<2.00	ug/Kg		9/21/2023	13:39
Trichlorofluoromethane	<2.00	ug/Kg		9/21/2023	13:39
Vinyl chloride	<2.00	ug/Kg		9/21/2023	13:39

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Solid

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**106**	72.3 - 128		9/21/2023 13:39
4-Bromofluorobenzene	**95.8**	70 - 123		9/21/2023 13:39
Pentafluorobenzene	**98.2**	80.7 - 124		9/21/2023 13:39
Toluene-D8	**110**	82.1 - 121		9/21/2023 13:39

Method Reference(s): EPA 8260C
EPA 5035A - L

Data File: z19699.D

QC Batch ID: voas230921

QC Number: Blk 1

PARADIGM ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Solid

Volatile Organics

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
1,1,1-Trichloroethane	20.0	ug/Kg	20.0	99.9	69.1 - 120		9/21/2023
1,1,2,2-Tetrachloroethane	20.0	ug/Kg	19.7	98.7	21 - 179		9/21/2023
1,1,2-Trichloroethane	20.0	ug/Kg	20.5	102	64.1 - 126		9/21/2023
1,1-Dichloroethane	20.0	ug/Kg	19.9	99.5	75.4 - 113		9/21/2023
1,1-Dichloroethene	20.0	ug/Kg	19.2	95.8	71.2 - 116		9/21/2023
1,2-Dichlorobenzene	20.0	ug/Kg	18.8	94.1	76.4 - 116		9/21/2023
1,2-Dichloroethane	20.0	ug/Kg	20.4	102	69.4 - 121		9/21/2023
1,2-Dichloropropane	20.0	ug/Kg	19.9	99.5	74.7 - 115		9/21/2023
1,3-Dichlorobenzene	20.0	ug/Kg	18.6	93.1	77.3 - 114		9/21/2023
1,4-Dichlorobenzene	20.0	ug/Kg	18.3	91.6	77.5 - 112		9/21/2023
Benzene	20.0	ug/Kg	20.4	102	78.4 - 116		9/21/2023
Bromodichloromethane	20.0	ug/Kg	20.1	101	71.2 - 117		9/21/2023
Bromoform	20.0	ug/Kg	19.0	95.0	63.5 - 121		9/21/2023
Bromomethane	20.0	ug/Kg	21.1	106	61.6 - 128		9/21/2023
Carbon Tetrachloride	20.0	ug/Kg	19.6	98.2	67.2 - 121		9/21/2023
Chlorobenzene	20.0	ug/Kg	19.3	96.4	81.1 - 119		9/21/2023

PARADIGM ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Solid

Volatile Organics

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
Chloroethane	20.0	ug/Kg	18.8	93.9	70.2 - 123		9/21/2023
Chloroform	20.0	ug/Kg	18.9	94.5	76.5 - 113		9/21/2023
Chloromethane	20.0	ug/Kg	15.4	77.1	53.8 - 125		9/21/2023
cis-1,3-Dichloropropene	20.0	ug/Kg	20.5	103	69.7 - 115		9/21/2023
Dibromochloromethane	20.0	ug/Kg	20.4	102	61.4 - 125		9/21/2023
Ethylbenzene	20.0	ug/Kg	19.1	95.3	75.5 - 117		9/21/2023
Methylene chloride	20.0	ug/Kg	22.4	112	65.8 - 125		9/21/2023
Tetrachloroethene	20.0	ug/Kg	18.7	93.7	61.1 - 125		9/21/2023
Toluene	20.0	ug/Kg	20.3	102	77.1 - 116		9/21/2023
trans-1,2-Dichloroethene	20.0	ug/Kg	19.5	97.6	75.4 - 116		9/21/2023
trans-1,3-Dichloropropene	20.0	ug/Kg	20.7	104	65.9 - 116		9/21/2023
Trichloroethene	20.0	ug/Kg	20.9	104	75.8 - 120		9/21/2023
Trichlorofluoromethane	20.0	ug/Kg	19.7	98.5	69 - 123		9/21/2023
Vinyl chloride	20.0	ug/Kg	19.1	95.4	64 - 127		9/21/2023

Report Prepared Monday, September 25, 2023

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Solid

Volatile Organics

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed

Method Reference(s): EPA 8260C
EPA 5035A - L

Data File: z19698.D

QC Number: LCS 1

QC Batch ID: voas230921

Report Prepared Monday, September 25, 2023

PARADIGM ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Groundwater

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed	
1,1,1-Trichloroethane	<2.00	ug/L		9/20/2023	13:17
1,1,2,2-Tetrachloroethane	<2.00	ug/L		9/20/2023	13:17
1,1,2-Trichloroethane	<2.00	ug/L		9/20/2023	13:17
1,1-Dichloroethane	<2.00	ug/L		9/20/2023	13:17
1,1-Dichloroethene	<2.00	ug/L		9/20/2023	13:17
1,2,3-Trichlorobenzene	<5.00	ug/L		9/20/2023	13:17
1,2,4-Trichlorobenzene	<5.00	ug/L		9/20/2023	13:17
1,2-Dibromo-3-Chloropropane	<10.0	ug/L		9/20/2023	13:17
1,2-Dibromoethane	<2.00	ug/L		9/20/2023	13:17
1,2-Dichlorobenzene	<2.00	ug/L		9/20/2023	13:17
1,2-Dichloroethane	<2.00	ug/L		9/20/2023	13:17
1,2-Dichloropropane	<2.00	ug/L		9/20/2023	13:17
1,3-Dichlorobenzene	<2.00	ug/L		9/20/2023	13:17
1,4-Dichlorobenzene	<2.00	ug/L		9/20/2023	13:17
1,4-Dioxane	<10.0	ug/L		9/20/2023	13:17
2-Butanone	<10.0	ug/L		9/20/2023	13:17
2-Hexanone	<5.00	ug/L		9/20/2023	13:17
4-Methyl-2-pentanone	<5.00	ug/L		9/20/2023	13:17
Acetone	<10.0	ug/L		9/20/2023	13:17
Benzene	<1.00	ug/L		9/20/2023	13:17
Bromochloromethane	<5.00	ug/L		9/20/2023	13:17
Bromodichloromethane	<2.00	ug/L		9/20/2023	13:17
Bromoform	<5.00	ug/L		9/20/2023	13:17
Bromomethane	<2.00	ug/L		9/20/2023	13:17
Carbon disulfide	<2.00	ug/L		9/20/2023	13:17
Carbon Tetrachloride	<2.00	ug/L		9/20/2023	13:17
Chlorobenzene	<2.00	ug/L		9/20/2023	13:17

PARADIGM ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Groundwater

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed	
Chloroethane	<2.00	ug/L		9/20/2023	13:17
Chloroform	<2.00	ug/L		9/20/2023	13:17
Chloromethane	<2.00	ug/L		9/20/2023	13:17
cis-1,2-Dichloroethene	<2.00	ug/L		9/20/2023	13:17
cis-1,3-Dichloropropene	<2.00	ug/L		9/20/2023	13:17
Cyclohexane	<10.0	ug/L		9/20/2023	13:17
Dibromochloromethane	<2.00	ug/L		9/20/2023	13:17
Dichlorodifluoromethane	<2.00	ug/L		9/20/2023	13:17
Ethylbenzene	<2.00	ug/L		9/20/2023	13:17
Freon 113	<2.00	ug/L		9/20/2023	13:17
Isopropylbenzene	<2.00	ug/L		9/20/2023	13:17
m,p-Xylene	<2.00	ug/L		9/20/2023	13:17
Methyl acetate	<2.00	ug/L		9/20/2023	13:17
Methyl tert-butyl Ether	<2.00	ug/L		9/20/2023	13:17
Methylcyclohexane	<2.00	ug/L		9/20/2023	13:17
Methylene chloride	<5.00	ug/L		9/20/2023	13:17
o-Xylene	<2.00	ug/L		9/20/2023	13:17
Styrene	<5.00	ug/L		9/20/2023	13:17
Tetrachloroethene	<2.00	ug/L		9/20/2023	13:17
Toluene	<2.00	ug/L		9/20/2023	13:17
trans-1,2-Dichloroethene	<2.00	ug/L		9/20/2023	13:17
trans-1,3-Dichloropropene	<2.00	ug/L		9/20/2023	13:17
Trichloroethene	<2.00	ug/L		9/20/2023	13:17
Trichlorofluoromethane	<2.00	ug/L		9/20/2023	13:17
Vinyl chloride	<2.00	ug/L		9/20/2023	13:17

PARADIGM
ENVIRONMENTAL SERVICES, INC.

Method Blank Report

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Groundwater

Volatile Organics

Analyte	Result	Units	Qualifier	Date Analyzed

Surrogate	Percent Recovery	Limits	Outliers	Date Analyzed
1,2-Dichloroethane-d4	**113**	79.7 - 118		9/20/2023 13:17
4-Bromofluorobenzene	**98.0**	80.1 - 112		9/20/2023 13:17
Pentafluorobenzene	**94.4**	88 - 115		9/20/2023 13:17
Toluene-D8	**109**	88.2 - 113		9/20/2023 13:17

Method Reference(s): EPA 8260C
EPA 5030C

Data File: z19662.D

QC Batch ID: voaw230920

QC Number: Blk 1

PARADIGM ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Groundwater

Volatile Organics

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
1,1,1-Trichloroethane	20.0	ug/L	19.3	96.3	72.2 - 115		9/20/2023
1,1,2,2-Tetrachloroethane	20.0	ug/L	19.0	95.0	79.1 - 121		9/20/2023
1,1,2-Trichloroethane	20.0	ug/L	20.2	101	80.9 - 111		9/20/2023
1,1-Dichloroethane	20.0	ug/L	18.9	94.4	74.9 - 111		9/20/2023
1,1-Dichloroethene	20.0	ug/L	18.4	91.8	70.1 - 114		9/20/2023
1,2-Dichlorobenzene	20.0	ug/L	18.4	92.2	83.9 - 108		9/20/2023
1,2-Dichloroethane	20.0	ug/L	19.8	99.0	76.2 - 113		9/20/2023
1,2-Dichloropropane	20.0	ug/L	19.3	96.3	82 - 107		9/20/2023
1,3-Dichlorobenzene	20.0	ug/L	18.2	91.2	84.7 - 106		9/20/2023
1,4-Dichlorobenzene	20.0	ug/L	17.8	89.2	84.8 - 105		9/20/2023
Benzene	20.0	ug/L	19.5	97.4	82.6 - 111		9/20/2023
Bromodichloromethane	20.0	ug/L	19.2	95.9	79.8 - 106		9/20/2023
Bromoform	20.0	ug/L	18.0	90.2	76.1 - 112		9/20/2023
Bromomethane	20.0	ug/L	20.2	101	64.7 - 125		9/20/2023
Carbon Tetrachloride	20.0	ug/L	18.7	93.5	69.7 - 115		9/20/2023
Chlorobenzene	20.0	ug/L	18.7	93.5	88.3 - 111		9/20/2023

PARADIGM ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Groundwater

Volatile Organics

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed
Chloroethane	20.0	ug/L	18.6	93.0	70.6 - 119		9/20/2023
Chloroform	20.0	ug/L	18.7	93.3	77.1 - 112		9/20/2023
Chloromethane	20.0	ug/L	15.2	76.2	57.6 - 111		9/20/2023
cis-1,3-Dichloropropene	20.0	ug/L	19.9	99.7	79.2 - 106		9/20/2023
Dibromochloromethane	20.0	ug/L	19.6	98.1	75.6 - 111		9/20/2023
Ethylbenzene	20.0	ug/L	18.9	94.5	82.7 - 108		9/20/2023
Methylene chloride	20.0	ug/L	19.4	96.9	64.4 - 128		9/20/2023
Tetrachloroethene	20.0	ug/L	18.4	92.2	74.7 - 113		9/20/2023
Toluene	20.0	ug/L	19.9	99.5	81.3 - 111		9/20/2023
trans-1,2-Dichloroethene	20.0	ug/L	18.9	94.7	75.9 - 112		9/20/2023
trans-1,3-Dichloropropene	20.0	ug/L	19.5	97.3	75.7 - 108		9/20/2023
Trichloroethene	20.0	ug/L	19.9	99.6	82.4 - 113		9/20/2023
Trichlorofluoromethane	20.0	ug/L	18.8	93.8	69.8 - 118		9/20/2023
Vinyl chloride	20.0	ug/L	17.8	89.0	63 - 120		9/20/2023

Report Prepared Monday, September 25, 2023

PARADIGM
ENVIRONMENTAL SERVICES, INC.

QC Report for Laboratory Control Sample

Client: **Inventum Engineering, P.C.**

Project Reference: Breeze Water Testing

Lab Project ID: 234271

Matrix: Groundwater

Volatile Organics

Analyte	Spike Added	Spike Units	LCS Result	LCS % Recovery	% Rec Limits	LCS Outliers	Date Analyzed

Method Reference(s): EPA 8260C
EPA 5030C

Data File: z19661.D

QC Number: LCS 1

QC Batch ID: voaw230920

Report Prepared Monday, September 25, 2023

Analytical Report Appendix

The reported results relate only to the samples as they have been received by the laboratory.

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All soil/sludge samples have been reported on a dry weight basis, unless qualified "reported as received". Other solids are reported as received.

Low level Volatiles blank reports for soil/solid matrix are based on a nominal 5 gram weight. Sample results and reporting limits are based on actual weight, which may be more or less than 5 grams.

The Chain of Custody provides additional information, including compliance with sample condition requirements upon receipt. Sample condition requirements are defined under the 2003 NELAC Standard, sections 5.5.8.3.1 and 5.5.8.3.2.

NYSDOH ELAP does not certify for all parameters. Paradigm Environmental Services or the indicated subcontracted laboratory does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Aliquots separated for certain tests, such as TCLP, are indicated on the Chain of Custody and final reports with an "A" suffix.

Data qualifiers are used, when necessary, to provide additional information about the data. This information may be communicated as a flag or as text at the bottom of the report. Please refer to the following list of analyte-specific, frequently used data flags and their meaning:

"<" = Analyzed for but not detected at or above the quantitation limit.
"E" = Result has been estimated, calibration limit exceeded.
"H" = Denotes a parameter analyzed outside of holding time.
"Z" = See case narrative.
"D" = Sample, Laboratory Control Sample, or Matrix Spike Duplicate results above Relative Percent Difference limit.
"M" = Matrix spike recoveries outside QC limits. Matrix bias indicated.
"B" = Method blank contained trace levels of analyte. Refer to included method blank report.
"J" = Result estimated between the quantitation limit and half the quantitation limit.
"L" = Laboratory Control Sample recovery outside accepted QC limits.
"P" = Concentration differs by more than 40% between the primary and secondary analytical columns.
"NC" = Not calculable. Applicable to RPD if sample or duplicate result is non-detect or estimated (see primary report for data flags). Applicable to MS if sample is greater or equal to ten times the spike added. Applicable to sample surrogates or MS if sample dilution is 10x or higher.
"" = Indicates any recoveries outside associated acceptance windows. Surrogate outliers in samples are presumed matrix effects. LCS demonstrates method compliance unless otherwise noted.*
"(1)" = Indicates data from primary column used for QC calculation.
"A" = denotes a parameter for which ELAP does not offer approval as part of their laboratory certification program.
"F" = denotes a parameter for which Paradigm does not carry certification, the results for which should therefore only be used where ELAP certification is not required, such as personal exposure assessment.

GENERAL TERMS AND CONDITIONS
LABORATORY SERVICES

These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory (LAB) and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to the LAB. The invalidity or unenforceability in whole or in part of any provision, term or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term, or condition hereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term, or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state which services are procured.

Warranty. Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

Scope and Compensation. LAB agrees to perform the services described in the chain of custody to which these terms and conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described. LAB wi use LAB default method for all tests unless specified otherwise on the Work Order.
Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1-1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sale, use or other taxes. Such taxes will be added to invoice prices when required.

Prices. Compensation for services performed will be based on the current Lab Analytical Fee Schedule or on quotations agreed to in writing by the parties. Turnaround time based charges are determined from the time of resolution of all work order questions. Testimony, court appearances or data compilation for legal action will be charged separately. Evaluation and reporting of initial screening runs may incur additional fees.

Limitations of Liability. In the event of any error, omission, or other professional negligence, the sole and exclusive responsibility of LAB shall be to re-perform the deficient work at its own expense and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.
LAB shall have no liability, obligation, or responsibility of any kind for losses, costs, expenses, or other damages (including but not limited to any special, direct, incidental or consequential damages) with respect to LAB's services or results.
All results provided by LAB are strictly for the use of its clients and LAB is in no way responsible for the use of such results by clients or third parties. All reports should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of these reports. Client may not assign the lab report without the written consent of the LAB.
Client covenants and agrees, at its/his/her sole expense, to indemnify, protect, defend, and save harmless the LAB from and against any and all damages, losses, liabilities, obligations, penalties, claims, litigation, demands, defenses, judgments, suits, actions, proceedings, costs, disbursements and/or expenses (including, without limitation attorneys' and experts' fees and disbursements) of any kind whatsoever which may at any time be imposed upon, incurred by or asserted or awarded against client relating to, resulting from or arising out of (a) the breach of this agreement by this client, (b) the negligence of the client in handling, delivering or disclosing any hazardous substance, (c) the violation of the Client of any applicable law, (d) non-compliance by the Client with any environmental permit or (e) a material misrepresentation in disclosing the materials to be tested.

Hazard Disclosure. Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance that is to be delivered to LAB will be packaged, labeled, transported, and delivered properly and in accordance with applicable laws.

Sample Handling. Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss or of damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility for the action or inaction of any carrier shipping or delivering any sample to or from LAB premises.
Client authorizes LAB to proceed with the analysis of samples as received by the laboratory, recognizing that any samples not in compliance with all current DOH-ELAP-NELAP requirements for containers, preservation or holding time will be noted as such on th final report.
Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis unless modified by applicable state or federal laws. Client will be required to give the LAB written instructions concerning disposal of these samples.
LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept, or revoke acceptance of any sample, which, in the sole judgment of LAB (a) is of unsuitable volume, (b) may be or become unsuitable for or may pose a risk in handling, transport, or processing for any health, safety, environmental or other reason whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client or (c) if the condition or sample date make the sample unsuitable for analysis.

Legal Responsibility. LAB is solely responsible for performance of this contract, and no affiliated company, director, officer, employee, or agent shall have any legal responsibility hereunder, whether in contract or tort including negligence.

Assignment. LAB may assign its performance obligations under this contract to other parties, as it deems necessary. LAB shall disclose to Client any assignee (subcontractor) by ELAP ID # on the submitted final report.

Force Majeure. LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB, which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not limited to, acts of God, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

Law. This contract shall be continued under the laws of the State of New York without regard to its conflicts of laws provision.

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

CHAIN OF CUSTODY

PARADIGM
ENVIRONMENTAL SERVICES

REPORT TO:	INVOICE TO:	
COMPANY: INVENTUM ENGINEERING	COMPANY: SAME	LAB PROJECT ID: 234271
address: 441 CARLISLE DR	ADDRESS:	
CITY: HERNDON STATE: VA ZIP: 20170	CITY: STATE: ZIP:	Quotation #:
PHONE: 585-734-5255 FAX:	PHONE: FAX:	Email: john.black@inventumeng.com roxanne.birx @ " "
ATTN: ROXANNE BIRX	ATTN: JOHN BLACK	

PROJECT REFERENCE: BREEZE WATER TESTING

Matrix Codes:
AQ - Aqueous Liquid; NQ - Non-Aqueous Liquid; WA - Water; WG - Groundwater; DW - Drinking Water; WW - Wastewater; SO - Soil; SL - Sludge; SD - Solid; PT - Paint; WP - Wipe; CK - Caulk; OL - Oil; AR - Air

REQUESTED ANALYSIS

DATE COLLECTED	TIME COLLECTED	COMPOSITE	GRAB	SAMPLE IDENTIFIER	MATRIX CODES	NUMBER OF CONTAINERS	TCL VOCs 8260	TCL SVOCs 8270	AMMONIA	CYANIDE	REMARKS	PARADIGM LAB SAMPLE NUMBER
9/13/23	1615		X	BREEZETEST-01-09132023	WAG	4	X	X	X	X	NO FILTRATION	-01
9/15/23	900		X	BREEZETEST-02-09152023	WAG	4					LAB FILTRATION	-02
9/15/23	910		X	BREEZETEST-03-09152023	WAG	4					LAB FILTRATION	-03
9/15/23	920		X	BREEZETEST-04-09152023	WAG	4					LAB FILTRATION	-04
9/15/23	925		X	BREEZETEST-05-09152023	WAG	4					LAB FILTRATION	-05
9/15/23	930		X	BREEZETEST-06-09152023	SD	3					COKE BREEZE	-06

WAG = GROUNDWATER per SD EM 9/19/23

Turnaround Time		Report Supplements			
Availability contingent upon lab approval; additional fees may apply.					
Standard 5 day	X	None Required		None Required	
10 day		Batch QC	X	Basic EDD	
Rush 3 day		Category A		NYSDEC EDD	X
Rush 2 day		Category B			
Rush 1 day					
Other		Other		Other EDD	
please indicate date needed:		please indicate package needed:		please indicate EDD needed :	

ROXANNE BIRX — Sampled By — 9/15/23 — Date/Time

Relinquished By — Date/Time

Received By — 9/15/23 11:10 — Date/Time

Received @ Lab By — @ 1600 9/15/23 — Date/Time

Total Cost:

P.I.F.

By signing this form, client agrees to Paradigm Terms and Conditions (reverse).

10°C iced @ 1553 9/15/23

See additional page for sample conditions.

PARADIGM

Chain of Custody Supplement

Client: Inventum

Completed by: ZF

Lab Project ID: 234271

Date: 9/18/23

Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

Condition	NELAC compliance with the sample condition requirements upon receipt: Yes	No	N/A
Container Type	X		
Comments			
Transferred to method-compliant container	X		X -01 -06
Headspace (<1 mL)	X VOA		X
Comments	pressure filtered all containers through a 0.7um acid washed glass fiber filter (-02, -03, -04, -05)		
Preservation	X -01 VOA TCN NH3 -02, -03, -04, -05	X VOA Ammonia TCN	X SVOCs
Comments	transfered VOAs to a preserved vial after filtration		
Chlorine Absent (<0.10 ppm per test strip)			X
Comments			
Holding Time	X		
Comments			
Temperature		X	
Comments	10°C		
Compliant Sample Quantity/Type	X		
Comments			

2309180~~8~~ 24 CF 9/18

179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

PARADIGM ENVIRONMENTAL SERVICES, INC.

CHAIN OF CUSTODY

ELAP ID: 1

REPORT TO:		INVOICE TO:	
COMPANY:	Paradigm Environmental	COMPANY:	Same
ADDRESS:		ADDRESS:	
CITY: STATE: ZIP:		CITY: STATE: ZIP:	
PHONE: FAX:		PHONE: FAX:	
ATTN:	Reporting	ATTN:	Accounts Payable
COMMENTS:	Please email results to reporting@paradigmenv.com		

PROJECT NAME/SITE NAME:

LAB PROJECT #:

CLIENT PROJECT

TURNAROUND TIME: (WORKING DAYS) ☐ 1 ☐ 2 ☐ 3 ☐ 5 STD

Date Due: 9/25/2

REQUESTED ANALYSIS

	DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	NUMBER OF CONTAINERS	Ammonia	Cyanide	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	9/13/23	1615		X	BreezeTest-01-09132023	WG	4	X	X	234271.01	
2	9/15/23	0900		X	BreezeTest-02-09152023	↓	2	X	X	.02	
3	↓	0910		X	BreezeTest-03-09152023	↓	2	X	X	.03	
4	↓	0920		X	BreezeTest-04-09152023	↓	2	X	X	.04	
5	↓	0925		X	BreezeTest-05-09152023	↓	2	X	X	.05	
6	↓	0930		X	BreezeTest-06-09152023	SD	1	X	X	.06	
7											
8											
9											
10											

LAB USE ONLY BELOW THIS LINE

Sample Condition: Per NELAC/ELAP 210/241/242/243/244

Receipt Parameter	NELAC Compliance	
Container Type:	Y ☐	N ☐
Comments:		
Preservation:	Y ☐	N ☐
Comments:		
Holding Time:	Y ☐	N ☐
Comments:		
Temperature:	Y ☐	N ☐
Comments:		

Client

	Signature	Date/Time
Sampled By	[signature]	@ 0830 9/18/23
Relinquished By	[signature]	9/18/23 1200
Received By	[signature]	9/18/23 15:36
Received @ Lab By		

Total Cost:

P.I.F.

Demo

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