PHASE SEPARATION SCIENCE

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Baltimore, MD 21228
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800-932-9047
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Certificate of Analysis

Project Name: Quantum Frederick
PSS Project No.: 23060726

June 8, 2023

Kevin Plocek
GTA - Baltimore
1414 Key Highway, Ste. 201P
Baltimore, MD 21230

Reference: PSS Project No: **23060726**
Project Name: Quantum Frederick
Project Location: Frederick
Project ID.: 31222314

Dear Kevin Plocek:

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Project number(s) **23060726**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on July 12, 2023, with the exception of air canisters which are cleaned immediately following analysis. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or info@phaseonline.com.

Sincerely,

Dan Prucnal
Laboratory Manager

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Explanation of Qualifiers

Project Name: Quantum Frederick

PSS Project No.: 23060726

Project ID: 31222314

The following samples were received under chain of custody by Phase Separation Science (PSS) on 06/07/2023 at 03:00 pm

PSS Sample ID	Sample ID	Matrix	Date/Time Collected
23060726-001	GTA-TC-11	SURFACE WATER	06/07/23 10:00
23060726-002	GTA-TC-11	SOIL	06/07/23 10:00
23060726-003	GTA-TC-10	SURFACE WATER	06/07/23 10:40
23060726-004	GTA-TC-10	SOIL	06/07/23 10:40
23060726-005	DUP	SURFACE WATER	06/07/23 11:00
23060726-006	DUP	SOIL	06/07/23 11:00
23060726-007	GTA-TC-9	SURFACE WATER	06/07/23 11:30
23060726-008	GTA-TC-9	SOIL	06/07/23 11:30
23060726-009	GTA-TC-8	SURFACE WATER	06/07/23 12:00
23060726-010	GTA-TC-8	SOIL	06/07/23 12:00
23060726-011	GTA-TC-7	SURFACE WATER	06/07/23 12:40
23060726-012	GTA-TC-7	SOIL	06/07/23 12:40
23060726-013	GTA-TC-1	SURFACE WATER	06/07/23 13:15
23060726-014	GTA-TC-1	SOIL	06/07/23 13:15

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. Unless otherwise noted in the case narrative, results are reported on a dry weight basis with the exception of pH, flashpoint, moisture, and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminates, and part 141.3, for the secondary drinking water contaminates.
5. Sample prepared under EPA 3550C with concentrations greater than 20 mg/Kg should employ the microtip extraction procedure if required to meet data quality objectives.
6. The analysis of acrolein by EPA 624 must be analyzed within three days of sampling unless pH is adjusted to 4-5 units [40 CFR part 136.3(e)].
7. Method 180.1, The Determination of Turbidity by Nephelometry, recommends samples over 40 NTU be diluted until the turbidity falls below 40 units. Routine samples over 40 NTU may not be diluted as long as the data quality objectives are not affected.
8. Alkalinity results analyzed by EPA 310.2 that are reported by dilution are estimated and are not in compliance with method requirements.

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Explanation of Qualifiers

Project Name: Quantum Frederick

PSS Project No.: 23060726

Standard Flags/Abbreviations:

B	A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
C	Results Pending Final Confirmation.
E	The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
Fail	The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
J	The target analyte was positively identified below the reporting limit but greater than the MDL.
MDL	This is the Laboratory Method Detection Limit which is equivalent to the Limit of Detection (LOD). The LOD is the minimum result, which can be reliably discriminated from a blank with a predetermined confidence level. This value will remain constant across multiple similar instrumentation and among different analysts. An LOD is analyte and matrix specific. instrumentation and among different analysts. An LOD is analyte and matrix specific.
ND	Not Detected at or above the reporting limit.
RL	PSS Reporting Limit.
U	Not detected.

Certifications:

NELAP Certifications: PA 68-03330, VA 460156
State Certifications: MD 179, WV 303
Regulated Soil Permit: P330-12-00268
NSWC USCG Accepted Laboratory
LDBE MWAA LD1997-0041-2015

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Certificate of Analysis

Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-11 **Date/Time Sampled: 06/07/2023 10:00** **PSS Sample ID: 23060726-001**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

Priority Pollutant Metals — Analytical Method: EPA 200.8 — Preparation Method: E200.8

Qualifier(s): See Batch 204169 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Antimony	ND	ug/L	5.0		1	06/07/23	06/08/23 12:10	1064
Arsenic	ND	ug/L	1.0		1	06/07/23	06/08/23 12:10	1064
Beryllium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:10	1064
Cadmium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:10	1064
Chromium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:10	1064
Copper	**1.3**	ug/L	1.0		1	06/07/23	06/08/23 12:10	1064
Lead	ND	ug/L	1.0		1	06/07/23	06/08/23 12:10	1064
Mercury	ND	ug/L	0.20		1	06/07/23	06/08/23 12:10	1064
Nickel	ND	ug/L	1.0		1	06/07/23	06/08/23 12:10	1064
Selenium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:10	1064
Silver	ND	ug/L	1.0		1	06/07/23	06/08/23 12:10	1064
Thallium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:10	1064
Zinc	ND	ug/L	20		1	06/07/23	06/08/23 12:10	1064

Dissolved Priority Pollutant Metals — Analytical Method: EPA 200.8 Dissolved — Preparation Method: E200.8

Qualifier(s): See Sample Receipt section on Case Narrative. See Batch 204145 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Antimony	ND	ug/L	5.0		1	06/07/23	06/07/23 22:53	1064
Arsenic	ND	ug/L	1.0		1	06/07/23	06/07/23 22:53	1064
Beryllium	ND	ug/L	1.0		1	06/07/23	06/07/23 22:53	1064
Cadmium	ND	ug/L	1.0		1	06/07/23	06/07/23 22:53	1064
Chromium	ND	ug/L	1.0		1	06/07/23	06/07/23 22:53	1064
Copper	ND	ug/L	1.0		1	06/07/23	06/07/23 22:53	1064
Lead	ND	ug/L	1.0		1	06/07/23	06/07/23 22:53	1064
Mercury	**0.24**	ug/L	0.20		1	06/07/23	06/07/23 22:53	1064
Nickel	ND	ug/L	1.0		1	06/07/23	06/07/23 22:53	1064
Selenium	ND	ug/L	1.0		1	06/07/23	06/07/23 22:53	1064
Silver	ND	ug/L	1.0		1	06/07/23	06/07/23 22:53	1064
Thallium	ND	ug/L	1.0		1	06/07/23	06/07/23 22:53	1064
Zinc	ND	ug/L	20		1	06/07/23	06/07/23 22:53	1064

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-11 **Date/Time Sampled: 06/07/2023 10:00** **PSS Sample ID: 23060726-001**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

Inorganic Anions — Analytical Method: EPA 300.0 — Preparation Method: E300.0P

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Fluoride	ND	mg/kg	0.25		1	06/07/23	06/07/23 18:00	1053

Total Residual Chlorine — Analytical Method: SM 4500-CL G -2011

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Total Chlorine	ND	mg/L	0.20		1	06/08/23	06/08/23 16:08	1073

Total Cyanide — Analytical Method: SM 4500-CN C,E -2016 — Preparation Method: SM4500CN-C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Cyanide, Total	ND	mg/L	0.010		1	06/08/23	06/08/23 13:47	1053

MDE TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 D — Preparation Method: SW5030B
Qualifier(s): See Batch 204166 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/L	5.0		1	06/08/23	06/08/23 11:50	1011
Benzene	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
Bromochloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
Bromodichloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
Bromoform	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
Bromomethane	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
2-Butanone (MEK)	ND	ug/L	5.0		1	06/08/23	06/08/23 11:50	1011
Carbon Disulfide	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
Carbon tetrachloride	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-11 **Date/Time Sampled: 06/07/2023 10:00** **PSS Sample ID: 23060726-001**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

MDE TCL Volatile Organic Compounds Analytical Method: SW-846 8260 D Preparation Method: SW5030B

Qualifier(s): See Batch 204166 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Chlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
Chloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
Chloroform	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
Chloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
Cyclohexane	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
Dibromochloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
Ethylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
2-Hexanone (MBK)	ND	ug/L	5.0		1	06/08/23	06/08/23 11:50	1011
Isopropylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
Methyl Acetate	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
Methylcyclohexane	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
Methylene chloride	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	06/08/23	06/08/23 11:50	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
Naphthalene	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
Styrene	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
Tetrachloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
Toluene	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011

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Certificate of Analysis

Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-11 **Date/Time Sampled: 06/07/2023 10:00** **PSS Sample ID: 23060726-001**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

MDE TCL Volatile Organic Compounds Analytical Method: SW-846 8260 D Preparation Method: SW5030B

Qualifier(s): See Batch 204166 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
1,1,1-Trichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
Trichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
Trichlorofluoromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
1,2,4-Trimethylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
1,3,5-Trimethylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
Vinyl chloride	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011
m&p-Xylene	ND	ug/L	2.0		1	06/08/23	06/08/23 11:50	1011
o-Xylene	ND	ug/L	1.0		1	06/08/23	06/08/23 11:50	1011

Surrogate(s)	*Recovery*		*Limits*				
4-Bromofluorobenzene	*110*	*%*	*88-120*		*1*	*06/08/23*	*06/08/23 11:50*	*1011*
Dibromofluoromethane	*98*	*%*	*92-107*		*1*	*06/08/23*	*06/08/23 11:50*	*1011*
Toluene-D8	*99*	*%*	*95-106*		*1*	*06/08/23*	*06/08/23 11:50*	*1011*

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Certificate of Analysis

Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-11 **Date/Time Sampled: 06/07/2023 10:00** **PSS Sample ID: 23060726-002**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 77.5**

Inorganic Anions — Analytical Method: EPA 300.0 — Preparation Method: E300.0P

Qualifier(s): See Batch 204156 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Fluoride	ND	mg/kg	3.1		1	06/07/23	06/08/23 00:30	1053

MDE PP Metals — Analytical Method: SW-846 6020 B — Preparation Method: SW3050B

Qualifier(s): See Batch 204171 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Antimony	ND	mg/kg	2.3		1	06/07/23	06/08/23 14:01	1064
Arsenic	**2.9**	mg/kg	0.46		1	06/07/23	06/08/23 14:01	1064
Beryllium	**0.47**	mg/kg	0.46		1	06/07/23	06/08/23 14:01	1064
Cadmium	ND	mg/kg	0.46		1	06/07/23	06/08/23 14:01	1064
Chromium	**14**	mg/kg	0.46		1	06/07/23	06/08/23 14:01	1064
Copper	**3.3**	mg/kg	0.46		1	06/07/23	06/08/23 14:01	1064
Lead	**170**	mg/kg	0.46		1	06/07/23	06/08/23 14:01	1064
Mercury	ND	mg/kg	0.093		1	06/07/23	06/08/23 14:01	1064
Nickel	**9.2**	mg/kg	0.46		1	06/07/23	06/08/23 14:01	1064
Selenium	ND	mg/kg	0.46		1	06/07/23	06/08/23 14:01	1064
Silver	ND	mg/kg	0.46		1	06/07/23	06/08/23 14:01	1064
Thallium	ND	mg/kg	0.46		1	06/07/23	06/08/23 14:01	1064
Zinc	**24**	mg/kg	9.3		1	06/07/23	06/08/23 14:01	1064

Polychlorinated Biphenyls — Analytical Method: SW-846 8082 A — Preparation Method: SW3550C
Clean up Method: SW846 3665A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
PCB-1016	ND	mg/kg	0.063		1	06/07/23	06/08/23 08:20	1029
PCB-1221	ND	mg/kg	0.063		1	06/07/23	06/08/23 08:20	1029
PCB-1232	ND	mg/kg	0.063		1	06/07/23	06/08/23 08:20	1029
PCB-1242	ND	mg/kg	0.063		1	06/07/23	06/08/23 08:20	1029
PCB-1248	ND	mg/kg	0.063		1	06/07/23	06/08/23 08:20	1029
PCB-1254	ND	mg/kg	0.063		1	06/07/23	06/08/23 08:20	1029
PCB-1260	ND	mg/kg	0.063		1	06/07/23	06/08/23 08:20	1029

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Certificate of Analysis

Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-11 **Date/Time Sampled: 06/07/2023 10:00** **PSS Sample ID: 23060726-002**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 77.5**

Polychlorinated Biphenyls — Analytical Method: SW-846 8082 A — Preparation Method: SW3550C
Clean up Method: SW846 3665A

Surrogate(s)	*Recovery*		*Limits*				
Tetrachloro-m-xylene	*79*	*%*	*43-117*	*1*	*06/07/23*	*06/08/23 08:20*	*1029*
Decachlorobiphenyl	*111*	*%*	*48-145*	*1*	*06/07/23*	*06/08/23 08:20*	*1029*

MDE TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 D — Preparation Method: SW5030
Qualifier(s): See Batch 204112 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	mg/kg	0.026		1	06/07/23	06/07/23 16:32	1045
Benzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Bromochloromethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Bromodichloromethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Bromoform	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Bromomethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
2-Butanone (MEK)	ND	mg/kg	0.0065		1	06/07/23	06/07/23 16:32	1045
Carbon Disulfide	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Carbon tetrachloride	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Chlorobenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Chloroethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Chloroform	ND	mg/kg	0.0065		1	06/07/23	06/07/23 16:32	1045
Chloromethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Cyclohexane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Dibromochloromethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
1,2-Dibromoethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
1,2-Dichlorobenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
1,3-Dichlorobenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
1,4-Dichlorobenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Dichlorodifluoromethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
1,1-Dichloroethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
1,2-Dichloroethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
1,1-Dichloroethene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
cis-1,2-Dichloroethene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
1,2-Dichloropropane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
cis-1,3-Dichloropropene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-11 **Date/Time Sampled: 06/07/2023 10:00** **PSS Sample ID: 23060726-002**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 77.5**

MDE TCL Volatile Organic Compounds Analytical Method: SW-846 8260 D Preparation Method: SW5030

Qualifier(s): See Batch 204112 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,2-Dichloroethene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
trans-1,3-Dichloropropene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Ethylbenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
2-Hexanone (MBK)	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Isopropylbenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Methyl Acetate	ND	mg/kg	0.033		1	06/07/23	06/07/23 16:32	1045
Methylcyclohexane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Methylene chloride	ND	mg/kg	0.0065		1	06/07/23	06/07/23 16:32	1045
4-Methyl-2-Pentanone (MIBK)	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Methyl-t-Butyl Ether	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Naphthalene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Styrene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Tetrachloroethene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Toluene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
1,2,3-Trichlorobenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
1,2,4-Trichlorobenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
1,1,1-Trichloroethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
1,1,2-Trichloroethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Trichloroethene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Trichlorofluoromethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
1,1,2-Trichlorotrifluoroethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
1,2,4-Trimethylbenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
1,3,5-Trimethylbenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045
Vinyl chloride	ND	mg/kg	0.0065		1	06/07/23	06/07/23 16:32	1045
m&p-Xylene	ND	mg/kg	0.0026		1	06/07/23	06/07/23 16:32	1045
o-Xylene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:32	1045

Surrogate(s)	*Recovery*		*Limits*				
4-Bromofluorobenzene	*110*	*%*	*89-111*		*1*	*06/07/23*	*06/07/23 16:32*	*1045*
Dibromofluoromethane	*96*	*%*	*91-108*		*1*	*06/07/23*	*06/07/23 16:32*	*1045*
Toluene-D8	*100*	*%*	*93-104*		*1*	*06/07/23*	*06/07/23 16:32*	*1045*

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-11 **Date/Time Sampled: 06/07/2023 10:00** **PSS Sample ID: 23060726-002**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 77.5**

Cyanide — Analytical Method: SW-846 9014 — Preparation Method: SW9010C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Cyanide, Total	**0.091**	mg/kg	0.075		1	06/08/23	06/08/23 14:23	1053

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-10 **Date/Time Sampled: 06/07/2023 10:40** **PSS Sample ID: 23060726-003**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

Priority Pollutant Metals — Analytical Method: EPA 200.8 — Preparation Method: E200.8

Qualifier(s): See Batch 204169 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Antimony	ND	ug/L	5.0		1	06/07/23	06/08/23 12:24	1064
Arsenic	ND	ug/L	1.0		1	06/07/23	06/08/23 12:24	1064
Beryllium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:24	1064
Cadmium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:24	1064
Chromium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:24	1064
Copper	ND	ug/L	1.0		1	06/07/23	06/08/23 12:24	1064
Lead	ND	ug/L	1.0		1	06/07/23	06/08/23 12:24	1064
Mercury	ND	ug/L	0.20		1	06/07/23	06/08/23 12:24	1064
Nickel	ND	ug/L	1.0		1	06/07/23	06/08/23 12:24	1064
Selenium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:24	1064
Silver	ND	ug/L	1.0		1	06/07/23	06/08/23 12:24	1064
Thallium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:24	1064
Zinc	ND	ug/L	20		1	06/07/23	06/08/23 12:24	1064

Dissolved Priority Pollutant Metals — Analytical Method: EPA 200.8 Dissolved — Preparation Method: E200.8

Qualifier(s): See Sample Receipt section on Case Narrative. See Batch 204145 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Antimony	ND	ug/L	5.0		1	06/07/23	06/07/23 22:58	1064
Arsenic	ND	ug/L	1.0		1	06/07/23	06/07/23 22:58	1064
Beryllium	ND	ug/L	1.0		1	06/07/23	06/07/23 22:58	1064
Cadmium	ND	ug/L	1.0		1	06/07/23	06/07/23 22:58	1064
Chromium	ND	ug/L	1.0		1	06/07/23	06/07/23 22:58	1064
Copper	ND	ug/L	1.0		1	06/07/23	06/07/23 22:58	1064
Lead	ND	ug/L	1.0		1	06/07/23	06/07/23 22:58	1064
Mercury	ND	ug/L	0.20		1	06/07/23	06/07/23 22:58	1064
Nickel	ND	ug/L	1.0		1	06/07/23	06/07/23 22:58	1064
Selenium	ND	ug/L	1.0		1	06/07/23	06/07/23 22:58	1064
Silver	ND	ug/L	1.0		1	06/07/23	06/07/23 22:58	1064
Thallium	ND	ug/L	1.0		1	06/07/23	06/07/23 22:58	1064
Zinc	ND	ug/L	20		1	06/07/23	06/07/23 22:58	1064

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-10 **Date/Time Sampled: 06/07/2023 10:40** **PSS Sample ID: 23060726-003**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

Inorganic Anions — Analytical Method: EPA 300.0 — Preparation Method: E300.0P

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Fluoride	**0.32**	mg/kg	0.25		1	06/07/23	06/07/23 18:23	1053

Total Residual Chlorine — Analytical Method: SM 4500-CL G -2011

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Total Chlorine	ND	mg/L	0.20		1	06/08/23	06/08/23 16:08	1073

Total Cyanide — Analytical Method: SM 4500-CN C,E -2016 — Preparation Method: SM4500CN-C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Cyanide, Total	ND	mg/L	0.010		1	06/08/23	06/08/23 13:53	1053

MDE TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 D — Preparation Method: SW5030B
Qualifier(s): See Batch 204166 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/L	5.0		1	06/08/23	06/08/23 12:12	1011
Benzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
Bromochloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
Bromodichloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
Bromoform	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
Bromomethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
2-Butanone (MEK)	ND	ug/L	5.0		1	06/08/23	06/08/23 12:12	1011
Carbon Disulfide	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
Carbon tetrachloride	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-10 **Date/Time Sampled: 06/07/2023 10:40** **PSS Sample ID: 23060726-003**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

MDE TCL Volatile Organic Compounds Analytical Method: SW-846 8260 D Preparation Method: SW5030B

Qualifier(s): See Batch 204166 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Chlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
Chloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
Chloroform	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
Chloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
Cyclohexane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
Dibromochloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
Ethylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
2-Hexanone (MBK)	ND	ug/L	5.0		1	06/08/23	06/08/23 12:12	1011
Isopropylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
Methyl Acetate	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
Methylcyclohexane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
Methylene chloride	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	06/08/23	06/08/23 12:12	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
Naphthalene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
Styrene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
Tetrachloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
Toluene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-10 **Date/Time Sampled: 06/07/2023 10:40** **PSS Sample ID: 23060726-003**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

MDE TCL Volatile Organic Compounds Analytical Method: SW-846 8260 D Preparation Method: SW5030B

Qualifier(s): See Batch 204166 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
1,1,1-Trichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
Trichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
Trichlorofluoromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
1,2,4-Trimethylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
1,3,5-Trimethylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
Vinyl chloride	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011
m&p-Xylene	ND	ug/L	2.0		1	06/08/23	06/08/23 12:12	1011
o-Xylene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:12	1011

Surrogate(s)	*Recovery*		*Limits*				
4-Bromofluorobenzene	*108*	*%*	*88-120*		*1*	*06/08/23*	*06/08/23 12:12*	*1011*
Dibromofluoromethane	*98*	*%*	*92-107*		*1*	*06/08/23*	*06/08/23 12:12*	*1011*
Toluene-D8	*98*	*%*	*95-106*		*1*	*06/08/23*	*06/08/23 12:12*	*1011*

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-10 **Date/Time Sampled: 06/07/2023 10:40** **PSS Sample ID: 23060726-004**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 75.1**

Inorganic Anions — Analytical Method: EPA 300.0 — Preparation Method: E300.0P

Qualifier(s): See Batch 204156 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Fluoride	ND	mg/kg	3.3		1	06/07/23	06/08/23 01:39	1053

MDE PP Metals — Analytical Method: SW-846 6020 B — Preparation Method: SW3050B

Qualifier(s): See Batch 204171 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Antimony	ND	mg/kg	2.2		1	06/07/23	06/08/23 14:23	1064
Arsenic	**3.1**	mg/kg	0.45		1	06/07/23	06/08/23 14:23	1064
Beryllium	**0.82**	mg/kg	0.45		1	06/07/23	06/08/23 14:23	1064
Cadmium	ND	mg/kg	0.45		1	06/07/23	06/08/23 14:23	1064
Chromium	**23**	mg/kg	0.45		1	06/07/23	06/08/23 14:23	1064
Copper	**7.2**	mg/kg	0.45		1	06/07/23	06/08/23 14:23	1064
Lead	**14**	mg/kg	0.45		1	06/07/23	06/08/23 14:23	1064
Mercury	ND	mg/kg	0.089		1	06/07/23	06/08/23 14:23	1064
Nickel	**16**	mg/kg	0.45		1	06/07/23	06/08/23 14:23	1064
Selenium	ND	mg/kg	0.45		1	06/07/23	06/08/23 14:23	1064
Silver	ND	mg/kg	0.45		1	06/07/23	06/08/23 14:23	1064
Thallium	ND	mg/kg	0.45		1	06/07/23	06/08/23 14:23	1064
Zinc	**42**	mg/kg	8.9		1	06/07/23	06/08/23 14:23	1064

Polychlorinated Biphenyls — Analytical Method: SW-846 8082 A — Preparation Method: SW3550C
Clean up Method: SW846 3665A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
PCB-1016	ND	mg/kg	0.065		1	06/07/23	06/08/23 08:49	1029
PCB-1221	ND	mg/kg	0.065		1	06/07/23	06/08/23 08:49	1029
PCB-1232	ND	mg/kg	0.065		1	06/07/23	06/08/23 08:49	1029
PCB-1242	ND	mg/kg	0.065		1	06/07/23	06/08/23 08:49	1029
PCB-1248	ND	mg/kg	0.065		1	06/07/23	06/08/23 08:49	1029
PCB-1254	ND	mg/kg	0.065		1	06/07/23	06/08/23 08:49	1029
PCB-1260	ND	mg/kg	0.065		1	06/07/23	06/08/23 08:49	1029

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Certificate of Analysis

Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-10 **Date/Time Sampled: 06/07/2023 10:40** **PSS Sample ID: 23060726-004**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 75.1**

Polychlorinated Biphenyls — Analytical Method: SW-846 8082 A — Preparation Method: SW3550C
Clean up Method: SW846 3665A

Surrogate(s)	*Recovery*		*Limits*				
Tetrachloro-m-xylene	*82*	*%*	*43-117*	*1*	*06/07/23*	*06/08/23 08:49*	*1029*
Decachlorobiphenyl	*114*	*%*	*48-145*	*1*	*06/07/23*	*06/08/23 08:49*	*1029*

MDE TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 D — Preparation Method: SW5030
Qualifier(s): See Batch 204112 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	mg/kg	0.027		1	06/07/23	06/07/23 16:54	1045
Benzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Bromochloromethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Bromodichloromethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Bromoform	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Bromomethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
2-Butanone (MEK)	ND	mg/kg	0.0066		1	06/07/23	06/07/23 16:54	1045
Carbon Disulfide	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Carbon tetrachloride	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Chlorobenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Chloroethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Chloroform	ND	mg/kg	0.0066		1	06/07/23	06/07/23 16:54	1045
Chloromethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Cyclohexane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Dibromochloromethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
1,2-Dibromoethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
1,2-Dichlorobenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
1,3-Dichlorobenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
1,4-Dichlorobenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Dichlorodifluoromethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
1,1-Dichloroethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
1,2-Dichloroethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
1,1-Dichloroethene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
1,2-Dichloropropane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
cis-1,2-Dichloroethene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
cis-1,3-Dichloropropene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045

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Certificate of Analysis

Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-10 **Date/Time Sampled: 06/07/2023 10:40** **PSS Sample ID: 23060726-004**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 75.1**

MDE TCL Volatile Organic Compounds Analytical Method: SW-846 8260 D Preparation Method: SW5030

Qualifier(s): See Batch 204112 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,2-Dichloroethene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
trans-1,3-Dichloropropene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Ethylbenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
2-Hexanone (MBK)	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Isopropylbenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Methyl Acetate	ND	mg/kg	0.033		1	06/07/23	06/07/23 16:54	1045
Methylcyclohexane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Methylene chloride	ND	mg/kg	0.0066		1	06/07/23	06/07/23 16:54	1045
4-Methyl-2-Pentanone (MIBK)	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Methyl-t-Butyl Ether	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Naphthalene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Styrene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Tetrachloroethene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Toluene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
1,2,3-Trichlorobenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
1,2,4-Trichlorobenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
1,1,1-Trichloroethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
1,1,2-Trichloroethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Trichloroethene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Trichlorofluoromethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
1,1,2-Trichlorotrifluoroethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
1,2,4-Trimethylbenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
1,3,5-Trimethylbenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045
Vinyl chloride	ND	mg/kg	0.0066		1	06/07/23	06/07/23 16:54	1045
m&p-Xylene	ND	mg/kg	0.0027		1	06/07/23	06/07/23 16:54	1045
o-Xylene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 16:54	1045

Surrogate(s)	*Recovery*		*Limits*					
4-Bromofluorobenzene	*113*	*%*	*89-111*	*	*1*	*06/07/23*	*06/07/23 16:54*	*1045*
Dibromofluoromethane	*95*	*%*	*91-108*		*1*	*06/07/23*	*06/07/23 16:54*	*1045*
Toluene-D8	*99*	*%*	*93-104*		*1*	*06/07/23*	*06/07/23 16:54*	*1045*

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-10 **Date/Time Sampled: 06/07/2023 10:40** **PSS Sample ID: 23060726-004**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 75.1**

Cyanide — Analytical Method: SW-846 9014 — Preparation Method: SW9010C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Cyanide, Total	**0.10**	mg/kg	0.088		1	06/08/23	06/08/23 14:29	1053

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Certificate of Analysis

Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: DUP **Date/Time Sampled: 06/07/2023 11:00** **PSS Sample ID: 23060726-005**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

Priority Pollutant Metals — Analytical Method: EPA 200.8 — Preparation Method: E200.8

Qualifier(s): See Batch 204169 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Antimony	ND	ug/L	5.0		1	06/07/23	06/08/23 12:28	1064
Arsenic	ND	ug/L	1.0		1	06/07/23	06/08/23 12:28	1064
Beryllium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:28	1064
Cadmium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:28	1064
Chromium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:28	1064
Copper	ND	ug/L	1.0		1	06/07/23	06/08/23 12:28	1064
Lead	ND	ug/L	1.0		1	06/07/23	06/08/23 12:28	1064
Mercury	ND	ug/L	0.20		1	06/07/23	06/08/23 12:28	1064
Nickel	**1.2**	ug/L	1.0		1	06/07/23	06/08/23 12:28	1064
Selenium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:28	1064
Silver	ND	ug/L	1.0		1	06/07/23	06/08/23 12:28	1064
Thallium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:28	1064
Zinc	ND	ug/L	20		1	06/07/23	06/08/23 12:28	1064

Dissolved Priority Pollutant Metals — Analytical Method: EPA 200.8 Dissolved — Preparation Method: E200.8

Qualifier(s): See Sample Receipt section on Case Narrative. See Batch 204145 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Antimony	ND	ug/L	5.0		1	06/07/23	06/07/23 23:03	1064
Arsenic	ND	ug/L	1.0		1	06/07/23	06/07/23 23:03	1064
Beryllium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:03	1064
Cadmium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:03	1064
Chromium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:03	1064
Copper	ND	ug/L	1.0		1	06/07/23	06/07/23 23:03	1064
Lead	ND	ug/L	1.0		1	06/07/23	06/07/23 23:03	1064
Mercury	ND	ug/L	0.20		1	06/07/23	06/07/23 23:03	1064
Nickel	ND	ug/L	1.0		1	06/07/23	06/07/23 23:03	1064
Selenium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:03	1064
Silver	ND	ug/L	1.0		1	06/07/23	06/07/23 23:03	1064
Thallium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:03	1064
Zinc	ND	ug/L	20		1	06/07/23	06/07/23 23:03	1064

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: DUP **Date/Time Sampled: 06/07/2023 11:00** **PSS Sample ID: 23060726-005**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

Inorganic Anions — Analytical Method: EPA 300.0 — Preparation Method: E300.0P

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Fluoride	**0.32**	mg/kg	0.25		1	06/07/23	06/07/23 18:46	1053

Total Residual Chlorine — Analytical Method: SM 4500-CL G -2011

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Total Chlorine	ND	mg/L	0.20		1	06/08/23	06/08/23 16:08	1073

Total Cyanide — Analytical Method: SM 4500-CN C,E -2016 — Preparation Method: SM4500CN-C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Cyanide, Total	ND	mg/L	0.010		1	06/08/23	06/08/23 13:55	1053

MDE TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 D — Preparation Method: SW5030B
Qualifier(s): See Batch 204166 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/L	5.0		1	06/08/23	06/08/23 12:35	1011
Benzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
Bromochloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
Bromodichloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
Bromoform	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
Bromomethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
2-Butanone (MEK)	ND	ug/L	5.0		1	06/08/23	06/08/23 12:35	1011
Carbon Disulfide	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
Carbon tetrachloride	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: DUP **Date/Time Sampled: 06/07/2023 11:00** **PSS Sample ID: 23060726-005**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

MDE TCL Volatile Organic Compounds Analytical Method: SW-846 8260 D Preparation Method: SW5030B

Qualifier(s): See Batch 204166 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Chlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
Chloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
Chloroform	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
Chloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
Cyclohexane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
Dibromochloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
Ethylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
2-Hexanone (MBK)	ND	ug/L	5.0		1	06/08/23	06/08/23 12:35	1011
Isopropylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
Methyl Acetate	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
Methylcyclohexane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
Methylene chloride	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	06/08/23	06/08/23 12:35	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
Naphthalene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
Styrene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
Tetrachloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
Toluene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: DUP **Date/Time Sampled: 06/07/2023 11:00** **PSS Sample ID: 23060726-005**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

MDE TCL Volatile Organic Compounds Analytical Method: SW-846 8260 D Preparation Method: SW5030B

Qualifier(s): See Batch 204166 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
1,1,1-Trichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
Trichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
Trichlorofluoromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
1,2,4-Trimethylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
1,3,5-Trimethylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
Vinyl chloride	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011
m&p-Xylene	ND	ug/L	2.0		1	06/08/23	06/08/23 12:35	1011
o-Xylene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:35	1011

Surrogate(s)	*Recovery*		*Limits*				
4-Bromofluorobenzene	*108*	*%*	*88-120*		*1*	*06/08/23*	*06/08/23 12:35*	*1011*
Dibromofluoromethane	*97*	*%*	*92-107*		*1*	*06/08/23*	*06/08/23 12:35*	*1011*
Toluene-D8	*99*	*%*	*95-106*		*1*	*06/08/23*	*06/08/23 12:35*	*1011*

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: DUP **Date/Time Sampled: 06/07/2023 11:00** **PSS Sample ID: 23060726-006**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 80.2**

Inorganic Anions — Analytical Method: EPA 300.0 — Preparation Method: E300.0P

Qualifier(s): See Batch 204156 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Fluoride	ND	mg/kg	3.3		1	06/07/23	06/08/23 02:02	1053

MDE PP Metals — Analytical Method: SW-846 6020 B — Preparation Method: SW3050B

Qualifier(s): See Batch 204171 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Antimony	ND	mg/kg	2.1		1	06/07/23	06/08/23 14:27	1064
Arsenic	**3.8**	mg/kg	0.41		1	06/07/23	06/08/23 14:27	1064
Beryllium	**1.2**	mg/kg	0.41		1	06/07/23	06/08/23 14:27	1064
Cadmium	ND	mg/kg	0.41		1	06/07/23	06/08/23 14:27	1064
Chromium	**23**	mg/kg	0.41		1	06/07/23	06/08/23 14:27	1064
Copper	**6.0**	mg/kg	0.41		1	06/07/23	06/08/23 14:27	1064
Lead	**15**	mg/kg	0.41		1	06/07/23	06/08/23 14:27	1064
Mercury	ND	mg/kg	0.083		1	06/07/23	06/08/23 14:27	1064
Nickel	**15**	mg/kg	0.41		1	06/07/23	06/08/23 14:27	1064
Selenium	ND	mg/kg	0.41		1	06/07/23	06/08/23 14:27	1064
Silver	ND	mg/kg	0.41		1	06/07/23	06/08/23 14:27	1064
Thallium	ND	mg/kg	0.41		1	06/07/23	06/08/23 14:27	1064
Zinc	**41**	mg/kg	8.3		1	06/07/23	06/08/23 14:27	1064

Polychlorinated Biphenyls — Analytical Method: SW-846 8082 A — Preparation Method: SW3550C
Clean up Method: SW846 3665A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
PCB-1016	ND	mg/kg	0.063		1	06/07/23	06/08/23 09:17	1029
PCB-1221	ND	mg/kg	0.063		1	06/07/23	06/08/23 09:17	1029
PCB-1232	ND	mg/kg	0.063		1	06/07/23	06/08/23 09:17	1029
PCB-1242	ND	mg/kg	0.063		1	06/07/23	06/08/23 09:17	1029
PCB-1248	ND	mg/kg	0.063		1	06/07/23	06/08/23 09:17	1029
PCB-1254	ND	mg/kg	0.063		1	06/07/23	06/08/23 09:17	1029
PCB-1260	ND	mg/kg	0.063		1	06/07/23	06/08/23 09:17	1029

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: DUP **Date/Time Sampled: 06/07/2023 11:00** **PSS Sample ID: 23060726-006**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 80.2**

Polychlorinated Biphenyls — Analytical Method: SW-846 8082 A — Preparation Method: SW3550C
Clean up Method: SW846 3665A

Surrogate(s)	*Recovery*		*Limits*				
Decachlorobiphenyl	*110*	*%*	*48-145*	*1*	*06/07/23*	*06/08/23 09:17*	*1029*
Tetrachloro-m-xylene	*83*	*%*	*43-117*	*1*	*06/07/23*	*06/08/23 09:17*	*1029*

MDE TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 D — Preparation Method: SW5030
Qualifier(s): See Batch 204112 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	mg/kg	0.024		1	06/07/23	06/07/23 17:17	1045
Benzene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Bromochloromethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Bromodichloromethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Bromoform	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Bromomethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
2-Butanone (MEK)	ND	mg/kg	0.0060		1	06/07/23	06/07/23 17:17	1045
Carbon Disulfide	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Carbon tetrachloride	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Chlorobenzene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Chloroethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Chloroform	ND	mg/kg	0.0060		1	06/07/23	06/07/23 17:17	1045
Chloromethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Cyclohexane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Dibromochloromethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
1,2-Dibromoethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
1,2-Dichlorobenzene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
1,3-Dichlorobenzene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
1,4-Dichlorobenzene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Dichlorodifluoromethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
1,1-Dichloroethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
1,2-Dichloroethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
1,1-Dichloroethene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
cis-1,2-Dichloroethene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
1,2-Dichloropropane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
cis-1,3-Dichloropropene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: DUP **Date/Time Sampled: 06/07/2023 11:00** **PSS Sample ID: 23060726-006**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 80.2**

MDE TCL Volatile Organic Compounds Analytical Method: SW-846 8260 D Preparation Method: SW5030

Qualifier(s): See Batch 204112 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,2-Dichloroethene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
trans-1,3-Dichloropropene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Ethylbenzene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
2-Hexanone (MBK)	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Isopropylbenzene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Methyl Acetate	ND	mg/kg	0.030		1	06/07/23	06/07/23 17:17	1045
Methylcyclohexane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Methylene chloride	ND	mg/kg	0.0060		1	06/07/23	06/07/23 17:17	1045
4-Methyl-2-Pentanone (MIBK)	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Methyl-t-Butyl Ether	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Naphthalene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Styrene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Tetrachloroethene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Toluene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
1,2,3-Trichlorobenzene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
1,2,4-Trichlorobenzene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
1,1,1-Trichloroethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
1,1,2-Trichloroethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Trichloroethene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Trichlorofluoromethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
1,1,2-Trichlorotrifluoroethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
1,2,4-Trimethylbenzene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
1,3,5-Trimethylbenzene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045
Vinyl chloride	ND	mg/kg	0.0060		1	06/07/23	06/07/23 17:17	1045
m&p-Xylene	ND	mg/kg	0.0024		1	06/07/23	06/07/23 17:17	1045
o-Xylene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 17:17	1045

Surrogate(s)	*Recovery*		*Limits*				
4-Bromofluorobenzene	*107*	*%*	*89-111*		*1*	*06/07/23*	*06/07/23 17:17*	*1045*
Dibromofluoromethane	*96*	*%*	*91-108*		*1*	*06/07/23*	*06/07/23 17:17*	*1045*
Toluene-D8	*97*	*%*	*93-104*		*1*	*06/07/23*	*06/07/23 17:17*	*1045*

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: DUP **Date/Time Sampled: 06/07/2023 11:00** **PSS Sample ID: 23060726-006**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 80.2**

Cyanide — Analytical Method: SW-846 9014 — Preparation Method: SW9010C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Cyanide, Total	**0.55**	mg/kg	0.073		1	06/08/23	06/08/23 14:31	1053

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Certificate of Analysis

Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-9 **Date/Time Sampled: 06/07/2023 11:30** **PSS Sample ID: 23060726-007**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

Priority Pollutant Metals — Analytical Method: EPA 200.8 — Preparation Method: E200.8

Qualifier(s): See Batch 204169 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Antimony	ND	ug/L	5.0		1	06/07/23	06/08/23 12:32	1064
Arsenic	ND	ug/L	1.0		1	06/07/23	06/08/23 12:32	1064
Beryllium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:32	1064
Cadmium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:32	1064
Chromium	**1.4**	ug/L	1.0		1	06/07/23	06/08/23 12:32	1064
Copper	ND	ug/L	1.0		1	06/07/23	06/08/23 12:32	1064
Lead	ND	ug/L	1.0		1	06/07/23	06/08/23 12:32	1064
Mercury	ND	ug/L	0.20		1	06/07/23	06/08/23 12:32	1064
Nickel	**3.4**	ug/L	1.0		1	06/07/23	06/08/23 12:32	1064
Selenium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:32	1064
Silver	ND	ug/L	1.0		1	06/07/23	06/08/23 12:32	1064
Thallium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:32	1064
Zinc	ND	ug/L	20		1	06/07/23	06/08/23 12:32	1064

Dissolved Priority Pollutant Metals — Analytical Method: EPA 200.8 Dissolved — Preparation Method: E200.8

Qualifier(s): See Sample Receipt section on Case Narrative. See Batch 204145 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Antimony	ND	ug/L	5.0		1	06/07/23	06/07/23 23:08	1064
Arsenic	ND	ug/L	1.0		1	06/07/23	06/07/23 23:08	1064
Beryllium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:08	1064
Cadmium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:08	1064
Chromium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:08	1064
Copper	ND	ug/L	1.0		1	06/07/23	06/07/23 23:08	1064
Lead	ND	ug/L	1.0		1	06/07/23	06/07/23 23:08	1064
Mercury	ND	ug/L	0.20		1	06/07/23	06/07/23 23:08	1064
Nickel	ND	ug/L	1.0		1	06/07/23	06/07/23 23:08	1064
Selenium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:08	1064
Silver	ND	ug/L	1.0		1	06/07/23	06/07/23 23:08	1064
Thallium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:08	1064
Zinc	ND	ug/L	20		1	06/07/23	06/07/23 23:08	1064

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-9 **Date/Time Sampled: 06/07/2023 11:30** **PSS Sample ID: 23060726-007**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

Inorganic Anions — Analytical Method: EPA 300.0 — Preparation Method: E300.0P

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Fluoride	**0.54**	mg/kg	0.25		1	06/07/23	06/07/23 19:09	1053

Total Residual Chlorine — Analytical Method: SM 4500-CL G -2011

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Total Chlorine	ND	mg/L	0.20		1	06/08/23	06/08/23 16:08	1073

Total Cyanide — Analytical Method: SM 4500-CN C,E -2016 — Preparation Method: SM4500CN-C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Cyanide, Total	ND	mg/L	0.010		1	06/08/23	06/08/23 13:57	1053

MDE TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 D — Preparation Method: SW5030B
Qualifier(s): See Batch 204166 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/L	5.0		1	06/08/23	06/08/23 12:58	1011
Benzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
Bromochloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
Bromodichloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
Bromoform	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
Bromomethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
2-Butanone (MEK)	ND	ug/L	5.0		1	06/08/23	06/08/23 12:58	1011
Carbon Disulfide	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
Carbon tetrachloride	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-9 **Date/Time Sampled: 06/07/2023 11:30** **PSS Sample ID: 23060726-007**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

MDE TCL Volatile Organic Compounds Analytical Method: SW-846 8260 D Preparation Method: SW5030B

Qualifier(s): See Batch 204166 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Chlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
Chloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
Chloroform	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
Chloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
Cyclohexane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
Dibromochloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
Ethylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
2-Hexanone (MBK)	ND	ug/L	5.0		1	06/08/23	06/08/23 12:58	1011
Isopropylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
Methyl Acetate	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
Methylcyclohexane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
Methylene chloride	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	06/08/23	06/08/23 12:58	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
Naphthalene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
Styrene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
Tetrachloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
Toluene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011

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Certificate of Analysis

Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-9 **Date/Time Sampled: 06/07/2023 11:30** **PSS Sample ID: 23060726-007**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

MDE TCL Volatile Organic Compounds Analytical Method: SW-846 8260 D Preparation Method: SW5030B

Qualifier(s): See Batch 204166 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
1,1,1-Trichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
Trichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
Trichlorofluoromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
1,2,4-Trimethylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
1,3,5-Trimethylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
Vinyl chloride	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011
m&p-Xylene	ND	ug/L	2.0		1	06/08/23	06/08/23 12:58	1011
o-Xylene	ND	ug/L	1.0		1	06/08/23	06/08/23 12:58	1011

Surrogate(s)	*Recovery*		*Limits*				
4-Bromofluorobenzene	*110*	*%*	*88-120*		*1*	*06/08/23*	*06/08/23 12:58*	*1011*
Dibromofluoromethane	*97*	*%*	*92-107*		*1*	*06/08/23*	*06/08/23 12:58*	*1011*
Toluene-D8	*99*	*%*	*95-106*		*1*	*06/08/23*	*06/08/23 12:58*	*1011*

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Certificate of Analysis

Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-9 **Date/Time Sampled: 06/07/2023 11:30** **PSS Sample ID: 23060726-008**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 82.3**

Inorganic Anions — Analytical Method: EPA 300.0 — Preparation Method: E300.0P

Qualifier(s): See Batch 204156 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Fluoride	ND	mg/kg	3.0		1	06/07/23	06/08/23 02:25	1053

MDE PP Metals — Analytical Method: SW-846 6020 B — Preparation Method: SW3050B

Qualifier(s): See Batch 204171 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Antimony	ND	mg/kg	2.0		1	06/07/23	06/08/23 14:44	1064
Arsenic	**1.0**	mg/kg	0.41		1	06/07/23	06/08/23 14:44	1064
Beryllium	ND	mg/kg	0.41		1	06/07/23	06/08/23 14:44	1064
Cadmium	ND	mg/kg	0.41		1	06/07/23	06/08/23 14:44	1064
Chromium	**9.9**	mg/kg	0.41		1	06/07/23	06/08/23 14:44	1064
Copper	**3.0**	mg/kg	0.41		1	06/07/23	06/08/23 14:44	1064
Lead	**4.6**	mg/kg	0.41		1	06/07/23	06/08/23 14:44	1064
Mercury	ND	mg/kg	0.082		1	06/07/23	06/08/23 14:44	1064
Nickel	**5.3**	mg/kg	0.41		1	06/07/23	06/08/23 14:44	1064
Selenium	ND	mg/kg	0.41		1	06/07/23	06/08/23 14:44	1064
Silver	ND	mg/kg	0.41		1	06/07/23	06/08/23 14:44	1064
Thallium	ND	mg/kg	0.41		1	06/07/23	06/08/23 14:44	1064
Zinc	**16**	mg/kg	8.2		1	06/07/23	06/08/23 14:44	1064

Polychlorinated Biphenyls — Analytical Method: SW-846 8082 A — Preparation Method: SW3550C — Clean up Method: SW846 3665A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
PCB-1016	ND	mg/kg	0.062		1	06/07/23	06/08/23 09:45	1029
PCB-1221	ND	mg/kg	0.062		1	06/07/23	06/08/23 09:45	1029
PCB-1232	ND	mg/kg	0.062		1	06/07/23	06/08/23 09:45	1029
PCB-1242	ND	mg/kg	0.062		1	06/07/23	06/08/23 09:45	1029
PCB-1248	ND	mg/kg	0.062		1	06/07/23	06/08/23 09:45	1029
PCB-1254	ND	mg/kg	0.062		1	06/07/23	06/08/23 09:45	1029
PCB-1260	ND	mg/kg	0.062		1	06/07/23	06/08/23 09:45	1029

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-9 **Date/Time Sampled: 06/07/2023 11:30** **PSS Sample ID: 23060726-008**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 82.3**

Polychlorinated Biphenyls — Analytical Method: SW-846 8082 A — Preparation Method: SW3550C
Clean up Method: SW846 3665A

Surrogate(s)	*Recovery*		*Limits*				
Decachlorobiphenyl	*116*	*%*	*48-145*	*1*	*06/07/23*	*06/08/23 09:45*	*1029*
Tetrachloro-m-xylene	*84*	*%*	*43-117*	*1*	*06/07/23*	*06/08/23 09:45*	*1029*

MDE TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 D — Preparation Method: SW5030
Qualifier(s): See Batch 204112 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	mg/kg	0.025		1	06/07/23	06/07/23 17:39	1045
Benzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Bromochloromethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Bromodichloromethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Bromoform	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Bromomethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
2-Butanone (MEK)	ND	mg/kg	0.0063		1	06/07/23	06/07/23 17:39	1045
Carbon Disulfide	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Carbon tetrachloride	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Chlorobenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Chloroethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Chloroform	ND	mg/kg	0.0063		1	06/07/23	06/07/23 17:39	1045
Chloromethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Cyclohexane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Dibromochloromethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
1,2-Dibromoethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
1,2-Dichlorobenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
1,3-Dichlorobenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
1,4-Dichlorobenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Dichlorodifluoromethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
1,1-Dichloroethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
1,2-Dichloroethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
1,1-Dichloroethene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
cis-1,2-Dichloroethene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
1,2-Dichloropropane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
cis-1,3-Dichloropropene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-9 **Date/Time Sampled: 06/07/2023 11:30** **PSS Sample ID: 23060726-008**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 82.3**

MDE TCL Volatile Organic Compounds Analytical Method: SW-846 8260 D Preparation Method: SW5030

Qualifier(s): See Batch 204112 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,2-Dichloroethene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
trans-1,3-Dichloropropene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Ethylbenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
2-Hexanone (MBK)	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Isopropylbenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Methyl Acetate	ND	mg/kg	0.031		1	06/07/23	06/07/23 17:39	1045
Methylcyclohexane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Methylene chloride	ND	mg/kg	0.0063		1	06/07/23	06/07/23 17:39	1045
4-Methyl-2-Pentanone (MIBK)	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Methyl-t-Butyl Ether	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Naphthalene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Styrene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Tetrachloroethene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Toluene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
1,2,3-Trichlorobenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
1,2,4-Trichlorobenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
1,1,1-Trichloroethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
1,1,2-Trichloroethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Trichloroethene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Trichlorofluoromethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
1,1,2-Trichlorotrifluoroethane	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
1,2,4-Trimethylbenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
1,3,5-Trimethylbenzene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045
Vinyl chloride	ND	mg/kg	0.0063		1	06/07/23	06/07/23 17:39	1045
m&p-Xylene	ND	mg/kg	0.0025		1	06/07/23	06/07/23 17:39	1045
o-Xylene	ND	mg/kg	0.0013		1	06/07/23	06/07/23 17:39	1045

Surrogate(s)	*Recovery*		*Limits*				
4-Bromofluorobenzene	*111*	*%*	*89-111*		*1*	*06/07/23*	*06/07/23 17:39*	*1045*
Dibromofluoromethane	*94*	*%*	*91-108*		*1*	*06/07/23*	*06/07/23 17:39*	*1045*
Toluene-D8	*96*	*%*	*93-104*		*1*	*06/07/23*	*06/07/23 17:39*	*1045*

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-9 **Date/Time Sampled: 06/07/2023 11:30** **PSS Sample ID: 23060726-008**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 82.3**

Cyanide — Analytical Method: SW-846 9014 — Preparation Method: SW9010C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Cyanide, Total	**0.076**	mg/kg	0.076		1	06/08/23	06/08/23 14:33	1053

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Certificate of Analysis

Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-8 **Date/Time Sampled: 06/07/2023 12:00** **PSS Sample ID: 23060726-009**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

Priority Pollutant Metals — Analytical Method: EPA 200.8 — Preparation Method: E200.8

Qualifier(s): See Batch 204169 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Antimony	ND	ug/L	5.0		1	06/07/23	06/08/23 12:37	1064
Arsenic	ND	ug/L	1.0		1	06/07/23	06/08/23 12:37	1064
Beryllium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:37	1064
Cadmium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:37	1064
Chromium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:37	1064
Copper	ND	ug/L	1.0		1	06/07/23	06/08/23 12:37	1064
Lead	ND	ug/L	1.0		1	06/07/23	06/08/23 12:37	1064
Mercury	ND	ug/L	0.20		1	06/07/23	06/08/23 12:37	1064
Nickel	**1.1**	ug/L	1.0		1	06/07/23	06/08/23 12:37	1064
Selenium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:37	1064
Silver	ND	ug/L	1.0		1	06/07/23	06/08/23 12:37	1064
Thallium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:37	1064
Zinc	ND	ug/L	20		1	06/07/23	06/08/23 12:37	1064

Dissolved Priority Pollutant Metals — Analytical Method: EPA 200.8 Dissolved — Preparation Method: E200.8

Qualifier(s): See Sample Receipt section on Case Narrative. See Batch 204145 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Antimony	ND	ug/L	5.0		1	06/07/23	06/07/23 23:28	1064
Arsenic	ND	ug/L	1.0		1	06/07/23	06/07/23 23:28	1064
Beryllium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:28	1064
Cadmium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:28	1064
Chromium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:28	1064
Copper	ND	ug/L	1.0		1	06/07/23	06/07/23 23:28	1064
Lead	ND	ug/L	1.0		1	06/07/23	06/07/23 23:28	1064
Mercury	ND	ug/L	0.20		1	06/07/23	06/07/23 23:28	1064
Nickel	ND	ug/L	1.0		1	06/07/23	06/07/23 23:28	1064
Selenium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:28	1064
Silver	ND	ug/L	1.0		1	06/07/23	06/07/23 23:28	1064
Thallium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:28	1064
Zinc	ND	ug/L	20		1	06/07/23	06/07/23 23:28	1064

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-8 **Date/Time Sampled: 06/07/2023 12:00** **PSS Sample ID: 23060726-009**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

Inorganic Anions — Analytical Method: EPA 300.0 — Preparation Method: E300.0P

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Fluoride	**0.56**	mg/kg	0.25		1	06/07/23	06/07/23 19:32	1053

Total Residual Chlorine — Analytical Method: SM 4500-CL G -2011

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Total Chlorine	ND	mg/L	0.20		1	06/08/23	06/08/23 16:08	1073

Total Cyanide — Analytical Method: SM 4500-CN C,E -2016 — Preparation Method: SM4500CN-C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Cyanide, Total	ND	mg/L	0.010		1	06/08/23	06/08/23 14:03	1053

MDE TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 D — Preparation Method: SW5030B

Qualifier(s): See Batch 204166 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/L	5.0		1	06/08/23	06/08/23 13:20	1011
Benzene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
Bromochloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
Bromodichloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
Bromoform	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
Bromomethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
2-Butanone (MEK)	ND	ug/L	5.0		1	06/08/23	06/08/23 13:20	1011
Carbon Disulfide	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
Carbon tetrachloride	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-8 **Date/Time Sampled: 06/07/2023 12:00** **PSS Sample ID: 23060726-009**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

MDE TCL Volatile Organic Compounds Analytical Method: SW-846 8260 D Preparation Method: SW5030B

Qualifier(s): See Batch 204166 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Chlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
Chloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
Chloroform	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
Chloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
Cyclohexane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
Dibromochloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
Ethylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
2-Hexanone (MBK)	ND	ug/L	5.0		1	06/08/23	06/08/23 13:20	1011
Isopropylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
Methyl Acetate	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
Methylcyclohexane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
Methylene chloride	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	06/08/23	06/08/23 13:20	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
Naphthalene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
Styrene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
Tetrachloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
Toluene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011

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Certificate of Analysis

Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-8 **Date/Time Sampled: 06/07/2023 12:00** **PSS Sample ID: 23060726-009**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

MDE TCL Volatile Organic Compounds Analytical Method: SW-846 8260 D Preparation Method: SW5030B

Qualifier(s): See Batch 204166 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
1,1,1-Trichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
Trichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
Trichlorofluoromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
1,2,4-Trimethylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
1,3,5-Trimethylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
Vinyl chloride	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011
m&p-Xylene	ND	ug/L	2.0		1	06/08/23	06/08/23 13:20	1011
o-Xylene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:20	1011

Surrogate(s)	*Recovery*		*Limits*				
4-Bromofluorobenzene	*109*	*%*	*88-120*		*1*	*06/08/23*	*06/08/23 13:20*	*1011*
Dibromofluoromethane	*98*	*%*	*92-107*		*1*	*06/08/23*	*06/08/23 13:20*	*1011*
Toluene-D8	*99*	*%*	*95-106*		*1*	*06/08/23*	*06/08/23 13:20*	*1011*

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-8 **Date/Time Sampled: 06/07/2023 12:00** **PSS Sample ID: 23060726-010**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 82.0**

Inorganic Anions — Analytical Method: EPA 300.0 — Preparation Method: E300.0P

Qualifier(s): See Batch 204156 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Fluoride	ND	mg/kg	2.9		1	06/07/23	06/08/23 02:48	1053

MDE PP Metals — Analytical Method: SW-846 6020 B — Preparation Method: SW3050B

Qualifier(s): See Batch 204171 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Antimony	ND	mg/kg	2.2		1	06/07/23	06/08/23 14:49	1064
Arsenic	**1.2**	mg/kg	0.43		1	06/07/23	06/08/23 14:49	1064
Beryllium	ND	mg/kg	0.43		1	06/07/23	06/08/23 14:49	1064
Cadmium	ND	mg/kg	0.43		1	06/07/23	06/08/23 14:49	1064
Chromium	**13**	mg/kg	0.43		1	06/07/23	06/08/23 14:49	1064
Copper	**3.0**	mg/kg	0.43		1	06/07/23	06/08/23 14:49	1064
Lead	**6.6**	mg/kg	0.43		1	06/07/23	06/08/23 14:49	1064
Mercury	ND	mg/kg	0.086		1	06/07/23	06/08/23 14:49	1064
Nickel	**8.0**	mg/kg	0.43		1	06/07/23	06/08/23 14:49	1064
Selenium	ND	mg/kg	0.43		1	06/07/23	06/08/23 14:49	1064
Silver	ND	mg/kg	0.43		1	06/07/23	06/08/23 14:49	1064
Thallium	ND	mg/kg	0.43		1	06/07/23	06/08/23 14:49	1064
Zinc	**21**	mg/kg	8.6		1	06/07/23	06/08/23 14:49	1064

Polychlorinated Biphenyls — Analytical Method: SW-846 8082 A — Preparation Method: SW3550C
Clean up Method: SW846 3665A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
PCB-1016	ND	mg/kg	0.064		1	06/07/23	06/08/23 10:13	1029
PCB-1221	ND	mg/kg	0.064		1	06/07/23	06/08/23 10:13	1029
PCB-1232	ND	mg/kg	0.064		1	06/07/23	06/08/23 10:13	1029
PCB-1242	ND	mg/kg	0.064		1	06/07/23	06/08/23 10:13	1029
PCB-1248	ND	mg/kg	0.064		1	06/07/23	06/08/23 10:13	1029
PCB-1254	ND	mg/kg	0.064		1	06/07/23	06/08/23 10:13	1029
PCB-1260	ND	mg/kg	0.064		1	06/07/23	06/08/23 10:13	1029

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-8 **Date/Time Sampled: 06/07/2023 12:00** **PSS Sample ID: 23060726-010**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 82.0**

Polychlorinated Biphenyls — Analytical Method: SW-846 8082 A — Preparation Method: SW3550C
Clean up Method: SW846 3665A

Surrogate(s)	*Recovery*		*Limits*				
Decachlorobiphenyl	*112*	*%*	*48-145*	*1*	*06/07/23*	*06/08/23 10:13*	*1029*
Tetrachloro-m-xylene	*84*	*%*	*43-117*	*1*	*06/07/23*	*06/08/23 10:13*	*1029*

MDE TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 D — Preparation Method: SW5030
Qualifier(s): See Batch 204112 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	mg/kg	0.025		1	06/07/23	06/07/23 18:01	1045
Benzene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Bromochloromethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Bromodichloromethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Bromoform	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Bromomethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
2-Butanone (MEK)	ND	mg/kg	0.0062		1	06/07/23	06/07/23 18:01	1045
Carbon Disulfide	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Carbon tetrachloride	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Chlorobenzene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Chloroethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Chloroform	ND	mg/kg	0.0062		1	06/07/23	06/07/23 18:01	1045
Chloromethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Cyclohexane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Dibromochloromethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
1,2-Dibromoethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
1,2-Dichlorobenzene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
1,3-Dichlorobenzene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
1,4-Dichlorobenzene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Dichlorodifluoromethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
1,1-Dichloroethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
1,2-Dichloroethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
1,1-Dichloroethene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
1,2-Dichloropropane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
cis-1,2-Dichloroethene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
cis-1,3-Dichloropropene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-8 **Date/Time Sampled: 06/07/2023 12:00** **PSS Sample ID: 23060726-010**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 82.0**

MDE TCL Volatile Organic Compounds Analytical Method: SW-846 8260 D Preparation Method: SW5030

Qualifier(s): See Batch 204112 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,2-Dichloroethene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
trans-1,3-Dichloropropene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Ethylbenzene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
2-Hexanone (MBK)	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Isopropylbenzene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Methyl Acetate	ND	mg/kg	0.031		1	06/07/23	06/07/23 18:01	1045
Methylcyclohexane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Methylene chloride	ND	mg/kg	0.0062		1	06/07/23	06/07/23 18:01	1045
4-Methyl-2-Pentanone (MIBK)	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Methyl-t-Butyl Ether	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Naphthalene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Styrene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Tetrachloroethene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Toluene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
1,2,3-Trichlorobenzene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
1,2,4-Trichlorobenzene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
1,1,1-Trichloroethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
1,1,2-Trichloroethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Trichloroethene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Trichlorofluoromethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
1,1,2-Trichlorotrifluoroethane	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
1,2,4-Trimethylbenzene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
1,3,5-Trimethylbenzene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045
Vinyl chloride	ND	mg/kg	0.0062		1	06/07/23	06/07/23 18:01	1045
m&p-Xylene	ND	mg/kg	0.0025		1	06/07/23	06/07/23 18:01	1045
o-Xylene	ND	mg/kg	0.0012		1	06/07/23	06/07/23 18:01	1045

Surrogate(s)	*Recovery*		*Limits*				
4-Bromofluorobenzene	*107*	*%*	*89-111*		*1*	*06/07/23*	*06/07/23 18:01*	*1045*
Dibromofluoromethane	*99*	*%*	*91-108*		*1*	*06/07/23*	*06/07/23 18:01*	*1045*
Toluene-D8	*98*	*%*	*93-104*		*1*	*06/07/23*	*06/07/23 18:01*	*1045*

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-8 **Date/Time Sampled: 06/07/2023 12:00** **PSS Sample ID: 23060726-010**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 82.0**

Cyanide — Analytical Method: SW-846 9014 — Preparation Method: SW9010C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Cyanide, Total	ND	mg/kg	0.070		1	06/08/23	06/08/23 14:34	1053

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-7 **Date/Time Sampled: 06/07/2023 12:40** **PSS Sample ID: 23060726-011**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

Priority Pollutant Metals — Analytical Method: EPA 200.8 — Preparation Method: E200.8

Qualifier(s): See Batch 204169 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Antimony	ND	ug/L	5.0		1	06/07/23	06/08/23 12:54	1064
Arsenic	ND	ug/L	1.0		1	06/07/23	06/08/23 12:54	1064
Beryllium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:54	1064
Cadmium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:54	1064
Chromium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:54	1064
Copper	ND	ug/L	1.0		1	06/07/23	06/08/23 12:54	1064
Lead	ND	ug/L	1.0		1	06/07/23	06/08/23 12:54	1064
Mercury	ND	ug/L	0.20		1	06/07/23	06/08/23 12:54	1064
Nickel	ND	ug/L	1.0		1	06/07/23	06/08/23 12:54	1064
Selenium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:54	1064
Silver	ND	ug/L	1.0		1	06/07/23	06/08/23 12:54	1064
Thallium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:54	1064
Zinc	ND	ug/L	20		1	06/07/23	06/08/23 12:54	1064

Dissolved Priority Pollutant Metals — Analytical Method: EPA 200.8 Dissolved — Preparation Method: E200.8

Qualifier(s): See Sample Receipt section on Case Narrative. See Batch 204145 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Antimony	ND	ug/L	5.0		1	06/07/23	06/07/23 23:33	1064
Arsenic	ND	ug/L	1.0		1	06/07/23	06/07/23 23:33	1064
Beryllium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:33	1064
Cadmium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:33	1064
Chromium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:33	1064
Copper	ND	ug/L	1.0		1	06/07/23	06/07/23 23:33	1064
Lead	ND	ug/L	1.0		1	06/07/23	06/07/23 23:33	1064
Mercury	ND	ug/L	0.20		1	06/07/23	06/07/23 23:33	1064
Nickel	ND	ug/L	1.0		1	06/07/23	06/07/23 23:33	1064
Selenium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:33	1064
Silver	ND	ug/L	1.0		1	06/07/23	06/07/23 23:33	1064
Thallium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:33	1064
Zinc	ND	ug/L	20		1	06/07/23	06/07/23 23:33	1064

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-7 **Date/Time Sampled: 06/07/2023 12:40** **PSS Sample ID: 23060726-011**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

Inorganic Anions — Analytical Method: EPA 300.0 — Preparation Method: E300.0P

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Fluoride	**0.68**	mg/kg	0.25		1	06/07/23	06/07/23 19:55	1053

Total Residual Chlorine — Analytical Method: SM 4500-CL G -2011

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Total Chlorine	ND	mg/L	0.20		1	06/08/23	06/08/23 16:08	1073

Total Cyanide — Analytical Method: SM 4500-CN C,E -2016 — Preparation Method: SM4500CN-C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Cyanide, Total	ND	mg/L	0.010		1	06/08/23	06/08/23 14:05	1053

MDE TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 D — Preparation Method: SW5030B

Qualifier(s): See Batch 204166 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/L	5.0		1	06/08/23	06/08/23 13:43	1011
Benzene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
Bromochloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
Bromodichloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
Bromoform	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
Bromomethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
2-Butanone (MEK)	ND	ug/L	5.0		1	06/08/23	06/08/23 13:43	1011
Carbon Disulfide	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
Carbon tetrachloride	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-7 **Date/Time Sampled: 06/07/2023 12:40** **PSS Sample ID: 23060726-011**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

MDE TCL Volatile Organic Compounds Analytical Method: SW-846 8260 D Preparation Method: SW5030B

Qualifier(s): See Batch 204166 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Chlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
Chloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
Chloroform	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
Chloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
Cyclohexane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
Dibromochloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
Ethylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
2-Hexanone (MBK)	ND	ug/L	5.0		1	06/08/23	06/08/23 13:43	1011
Isopropylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
Methyl Acetate	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
Methylcyclohexane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
Methylene chloride	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	06/08/23	06/08/23 13:43	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
Naphthalene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
Styrene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
Tetrachloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
Toluene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-7 **Date/Time Sampled: 06/07/2023 12:40** **PSS Sample ID: 23060726-011**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

MDE TCL Volatile Organic Compounds Analytical Method: SW-846 8260 D Preparation Method: SW5030B

Qualifier(s): See Batch 204166 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
1,1,1-Trichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
Trichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
Trichlorofluoromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
1,2,4-Trimethylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
1,3,5-Trimethylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
Vinyl chloride	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011
m&p-Xylene	ND	ug/L	2.0		1	06/08/23	06/08/23 13:43	1011
o-Xylene	ND	ug/L	1.0		1	06/08/23	06/08/23 13:43	1011

Surrogate(s)	*Recovery*		*Limits*				
4-Bromofluorobenzene	*109*	*%*	*88-120*		*1*	*06/08/23*	*06/08/23 13:43*	*1011*
Dibromofluoromethane	*97*	*%*	*92-107*		*1*	*06/08/23*	*06/08/23 13:43*	*1011*
Toluene-D8	*99*	*%*	*95-106*		*1*	*06/08/23*	*06/08/23 13:43*	*1011*

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Certificate of Analysis

Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-7 **Date/Time Sampled: 06/07/2023 12:40** **PSS Sample ID: 23060726-012**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 70.8**

Inorganic Anions — Analytical Method: EPA 300.0 — Preparation Method: E300.0P

Qualifier(s): See Batch 204156 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Fluoride	ND	mg/kg	3.6		1	06/07/23	06/08/23 03:11	1053

MDE PP Metals — Analytical Method: SW-846 6020 B — Preparation Method: SW3050B

Qualifier(s): See Batch 204171 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Antimony	ND	mg/kg	2.7		1	06/07/23	06/08/23 14:53	1064
Arsenic	**3.2**	mg/kg	0.54		1	06/07/23	06/08/23 14:53	1064
Beryllium	**0.65**	mg/kg	0.54		1	06/07/23	06/08/23 14:53	1064
Cadmium	ND	mg/kg	0.54		1	06/07/23	06/08/23 14:53	1064
Chromium	**23**	mg/kg	0.54		1	06/07/23	06/08/23 14:53	1064
Copper	**7.3**	mg/kg	0.54		1	06/07/23	06/08/23 14:53	1064
Lead	**16**	mg/kg	0.54		1	06/07/23	06/08/23 14:53	1064
Mercury	ND	mg/kg	0.11		1	06/07/23	06/08/23 14:53	1064
Nickel	**15**	mg/kg	0.54		1	06/07/23	06/08/23 14:53	1064
Selenium	ND	mg/kg	0.54		1	06/07/23	06/08/23 14:53	1064
Silver	ND	mg/kg	0.54		1	06/07/23	06/08/23 14:53	1064
Thallium	ND	mg/kg	0.54		1	06/07/23	06/08/23 14:53	1064
Zinc	**42**	mg/kg	11		1	06/07/23	06/08/23 14:53	1064

Polychlorinated Biphenyls — Analytical Method: SW-846 8082 A — Preparation Method: SW3550C
Clean up Method: SW846 3665A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
PCB-1016	ND	mg/kg	0.070		1	06/07/23	06/08/23 10:41	1029
PCB-1221	ND	mg/kg	0.070		1	06/07/23	06/08/23 10:41	1029
PCB-1232	ND	mg/kg	0.070		1	06/07/23	06/08/23 10:41	1029
PCB-1242	ND	mg/kg	0.070		1	06/07/23	06/08/23 10:41	1029
PCB-1248	ND	mg/kg	0.070		1	06/07/23	06/08/23 10:41	1029
PCB-1254	ND	mg/kg	0.070		1	06/07/23	06/08/23 10:41	1029
PCB-1260	ND	mg/kg	0.070		1	06/07/23	06/08/23 10:41	1029

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-7 **Date/Time Sampled: 06/07/2023 12:40** **PSS Sample ID: 23060726-012**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 70.8**

Polychlorinated Biphenyls — Analytical Method: SW-846 8082 A — Preparation Method: SW3550C
Clean up Method: SW846 3665A

Surrogate(s)	*Recovery*		*Limits*				
Decachlorobiphenyl	*115*	*%*	*48-145*	*1*	*06/07/23*	*06/08/23 10:41*	*1029*
Tetrachloro-m-xylene	*82*	*%*	*43-117*	*1*	*06/07/23*	*06/08/23 10:41*	*1029*

MDE TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 D — Preparation Method: SW5030
Qualifier(s): See Batch 204112 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	mg/kg	0.027		1	06/07/23	06/07/23 18:23	1045
Benzene	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Bromochloromethane	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Bromodichloromethane	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Bromoform	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Bromomethane	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
2-Butanone (MEK)	ND	mg/kg	0.0069		1	06/07/23	06/07/23 18:23	1045
Carbon Disulfide	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Carbon tetrachloride	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Chlorobenzene	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Chloroethane	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Chloroform	ND	mg/kg	0.0069		1	06/07/23	06/07/23 18:23	1045
Chloromethane	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Cyclohexane	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Dibromochloromethane	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
1,2-Dibromoethane	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
1,2-Dichlorobenzene	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
1,3-Dichlorobenzene	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
1,4-Dichlorobenzene	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Dichlorodifluoromethane	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
1,1-Dichloroethane	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
1,2-Dichloroethane	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
1,1-Dichloroethene	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
1,2-Dichloropropane	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
cis-1,2-Dichloroethene	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
cis-1,3-Dichloropropene	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-7 **Date/Time Sampled: 06/07/2023 12:40** **PSS Sample ID: 23060726-012**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 70.8**

MDE TCL Volatile Organic Compounds Analytical Method: SW-846 8260 D Preparation Method: SW5030

Qualifier(s): See Batch 204112 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,2-Dichloroethene	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
trans-1,3-Dichloropropene	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Ethylbenzene	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
2-Hexanone (MBK)	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Isopropylbenzene	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Methyl Acetate	ND	mg/kg	0.034		1	06/07/23	06/07/23 18:23	1045
Methylcyclohexane	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Methylene chloride	ND	mg/kg	0.0069		1	06/07/23	06/07/23 18:23	1045
4-Methyl-2-Pentanone (MIBK)	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Methyl-t-Butyl Ether	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Naphthalene	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Styrene	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Tetrachloroethene	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Toluene	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
1,2,3-Trichlorobenzene	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
1,2,4-Trichlorobenzene	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
1,1,1-Trichloroethane	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
1,1,2-Trichloroethane	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Trichloroethene	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Trichlorofluoromethane	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
1,1,2-Trichlorotrifluoroethane	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
1,2,4-Trimethylbenzene	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
1,3,5-Trimethylbenzene	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045
Vinyl chloride	ND	mg/kg	0.0069		1	06/07/23	06/07/23 18:23	1045
m&p-Xylene	ND	mg/kg	0.0027		1	06/07/23	06/07/23 18:23	1045
o-Xylene	ND	mg/kg	0.0014		1	06/07/23	06/07/23 18:23	1045

Surrogate(s)	*Recovery*		*Limits*					
4-Bromofluorobenzene	*112*	*%*	*89-111*	*	*1*	*06/07/23*	*06/07/23 18:23*	*1045*
Dibromofluoromethane	*94*	*%*	*91-108*		*1*	*06/07/23*	*06/07/23 18:23*	*1045*
Toluene-D8	*93*	*%*	*93-104*		*1*	*06/07/23*	*06/07/23 18:23*	*1045*

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-7 **Date/Time Sampled: 06/07/2023 12:40** **PSS Sample ID: 23060726-012**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 70.8**

Cyanide — Analytical Method: SW-846 9014 — Preparation Method: SW9010C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Cyanide, Total	**0.16**	mg/kg	0.081		1	06/08/23	06/08/23 14:36	1053

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-1 **Date/Time Sampled: 06/07/2023 13:15** **PSS Sample ID: 23060726-013**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

Priority Pollutant Metals — Analytical Method: EPA 200.8 — Preparation Method: E200.8

Qualifier(s): See Batch 204169 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Antimony	ND	ug/L	5.0		1	06/07/23	06/08/23 12:58	1064
Arsenic	ND	ug/L	1.0		1	06/07/23	06/08/23 12:58	1064
Beryllium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:58	1064
Cadmium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:58	1064
Chromium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:58	1064
Copper	**1.1**	ug/L	1.0		1	06/07/23	06/08/23 12:58	1064
Lead	ND	ug/L	1.0		1	06/07/23	06/08/23 12:58	1064
Mercury	ND	ug/L	0.20		1	06/07/23	06/08/23 12:58	1064
Nickel	ND	ug/L	1.0		1	06/07/23	06/08/23 12:58	1064
Selenium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:58	1064
Silver	ND	ug/L	1.0		1	06/07/23	06/08/23 12:58	1064
Thallium	ND	ug/L	1.0		1	06/07/23	06/08/23 12:58	1064
Zinc	ND	ug/L	20		1	06/07/23	06/08/23 12:58	1064

Dissolved Priority Pollutant Metals — Analytical Method: EPA 200.8 Dissolved — Preparation Method: E200.8

Qualifier(s): See Sample Receipt section on Case Narrative. See Batch 204145 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Antimony	ND	ug/L	5.0		1	06/07/23	06/07/23 23:38	1064
Arsenic	ND	ug/L	1.0		1	06/07/23	06/07/23 23:38	1064
Beryllium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:38	1064
Cadmium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:38	1064
Chromium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:38	1064
Copper	ND	ug/L	1.0		1	06/07/23	06/07/23 23:38	1064
Lead	ND	ug/L	1.0		1	06/07/23	06/07/23 23:38	1064
Mercury	ND	ug/L	0.20		1	06/07/23	06/07/23 23:38	1064
Nickel	ND	ug/L	1.0		1	06/07/23	06/07/23 23:38	1064
Selenium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:38	1064
Silver	ND	ug/L	1.0		1	06/07/23	06/07/23 23:38	1064
Thallium	ND	ug/L	1.0		1	06/07/23	06/07/23 23:38	1064
Zinc	ND	ug/L	20		1	06/07/23	06/07/23 23:38	1064

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Project Name: Quantum Frederick
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Sample ID: GTA-TC-1 **Date/Time Sampled: 06/07/2023 13:15** **PSS Sample ID: 23060726-013**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

Inorganic Anions — Analytical Method: EPA 300.0 — Preparation Method: E300.0P

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Fluoride	ND	mg/kg	0.25		1	06/07/23	06/07/23 20:18	1053

Total Residual Chlorine — Analytical Method: SM 4500-CL G -2011

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Total Chlorine	ND	mg/L	0.20		1	06/08/23	06/08/23 16:08	1073

Total Cyanide — Analytical Method: SM 4500-CN C,E -2016 — Preparation Method: SM4500CN-C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Cyanide, Total	ND	mg/L	0.010		1	06/08/23	06/08/23 14:07	1053

MDE TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 D — Preparation Method: SW5030B
Qualifier(s): See Batch 204166 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/L	5.0		1	06/08/23	06/08/23 14:06	1011
Benzene	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
Bromochloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
Bromodichloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
Bromoform	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
Bromomethane	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
2-Butanone (MEK)	ND	ug/L	5.0		1	06/08/23	06/08/23 14:06	1011
Carbon Disulfide	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
Carbon tetrachloride	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011

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Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-1 **Date/Time Sampled: 06/07/2023 13:15** **PSS Sample ID: 23060726-013**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

MDE TCL Volatile Organic Compounds Analytical Method: SW-846 8260 D Preparation Method: SW5030B

Qualifier(s): See Batch 204166 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Chlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
Chloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
Chloroform	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
Chloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
Cyclohexane	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
Dibromochloromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
Ethylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
2-Hexanone (MBK)	ND	ug/L	5.0		1	06/08/23	06/08/23 14:06	1011
Isopropylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
Methyl Acetate	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
Methylcyclohexane	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
Methylene chloride	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	06/08/23	06/08/23 14:06	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
Naphthalene	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
Styrene	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
Tetrachloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
Toluene	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011

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Certificate of Analysis

Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-1 **Date/Time Sampled: 06/07/2023 13:15** **PSS Sample ID: 23060726-013**
Matrix: SURFACE WATER **Date/Time Received: 06/07/2023 15:00**

MDE TCL Volatile Organic Compounds Analytical Method: SW-846 8260 D Preparation Method: SW5030B

Qualifier(s): See Batch 204166 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
1,1,1-Trichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
Trichloroethene	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
Trichlorofluoromethane	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
1,2,4-Trimethylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
1,3,5-Trimethylbenzene	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
Vinyl chloride	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011
m&p-Xylene	ND	ug/L	2.0		1	06/08/23	06/08/23 14:06	1011
o-Xylene	ND	ug/L	1.0		1	06/08/23	06/08/23 14:06	1011

Surrogate(s)	*Recovery*		*Limits*				
4-Bromofluorobenzene	*110*	*%*	*88-120*		*1*	*06/08/23*	*06/08/23 14:06*	*1011*
Dibromofluoromethane	*98*	*%*	*92-107*		*1*	*06/08/23*	*06/08/23 14:06*	*1011*
Toluene-D8	*98*	*%*	*95-106*		*1*	*06/08/23*	*06/08/23 14:06*	*1011*

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Certificate of Analysis

Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-1 **Date/Time Sampled: 06/07/2023 13:15** **PSS Sample ID: 23060726-014**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 65.6**

Inorganic Anions — Analytical Method: EPA 300.0 — Preparation Method: E300.0P

Qualifier(s): See Batch 204156 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Fluoride	ND	mg/kg	3.9		1	06/07/23	06/08/23 03:34	1053

MDE PP Metals — Analytical Method: SW-846 6020 B — Preparation Method: SW3050B

Qualifier(s): See Batch 204171 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Antimony	ND	mg/kg	2.7		1	06/07/23	06/08/23 14:57	1064
Arsenic	**2.2**	mg/kg	0.53		1	06/07/23	06/08/23 14:57	1064
Beryllium	**0.57**	mg/kg	0.53		1	06/07/23	06/08/23 14:57	1064
Cadmium	ND	mg/kg	0.53		1	06/07/23	06/08/23 14:57	1064
Chromium	**23**	mg/kg	0.53		1	06/07/23	06/08/23 14:57	1064
Copper	**11**	mg/kg	0.53		1	06/07/23	06/08/23 14:57	1064
Lead	**13**	mg/kg	0.53		1	06/07/23	06/08/23 14:57	1064
Mercury	ND	mg/kg	0.11		1	06/07/23	06/08/23 14:57	1064
Nickel	**15**	mg/kg	0.53		1	06/07/23	06/08/23 14:57	1064
Selenium	ND	mg/kg	0.53		1	06/07/23	06/08/23 14:57	1064
Silver	ND	mg/kg	0.53		1	06/07/23	06/08/23 14:57	1064
Thallium	ND	mg/kg	0.53		1	06/07/23	06/08/23 14:57	1064
Zinc	**48**	mg/kg	11		1	06/07/23	06/08/23 14:57	1064

Polychlorinated Biphenyls — Analytical Method: SW-846 8082 A — Preparation Method: SW3550C
Clean up Method: SW846 3665A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
PCB-1016	ND	mg/kg	0.073		1	06/07/23	06/08/23 11:09	1029
PCB-1221	ND	mg/kg	0.073		1	06/07/23	06/08/23 11:09	1029
PCB-1232	ND	mg/kg	0.073		1	06/07/23	06/08/23 11:09	1029
PCB-1242	ND	mg/kg	0.073		1	06/07/23	06/08/23 11:09	1029
PCB-1248	ND	mg/kg	0.073		1	06/07/23	06/08/23 11:09	1029
PCB-1254	ND	mg/kg	0.073		1	06/07/23	06/08/23 11:09	1029
PCB-1260	ND	mg/kg	0.073		1	06/07/23	06/08/23 11:09	1029

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Certificate of Analysis

Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-1 **Date/Time Sampled: 06/07/2023 13:15** **PSS Sample ID: 23060726-014**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 65.6**

Polychlorinated Biphenyls — Analytical Method: SW-846 8082 A — Preparation Method: SW3550C
Clean up Method: SW846 3665A

Surrogate(s)	*Recovery*		*Limits*				
Decachlorobiphenyl	*109*	*%*	*48-145*	*1*	*06/07/23*	*06/08/23 11:09*	*1029*
Tetrachloro-m-xylene	*85*	*%*	*43-117*	*1*	*06/07/23*	*06/08/23 11:09*	*1029*

MDE TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 D — Preparation Method: SW5030
Qualifier(s): See Batch 204112 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	mg/kg	0.030		1	06/07/23	06/07/23 18:46	1045
Benzene	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Bromochloromethane	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Bromodichloromethane	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Bromoform	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Bromomethane	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
2-Butanone (MEK)	ND	mg/kg	0.0074		1	06/07/23	06/07/23 18:46	1045
Carbon Disulfide	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Carbon tetrachloride	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Chlorobenzene	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Chloroethane	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Chloroform	ND	mg/kg	0.0074		1	06/07/23	06/07/23 18:46	1045
Chloromethane	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Cyclohexane	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Dibromochloromethane	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
1,2-Dibromoethane	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
1,2-Dichlorobenzene	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
1,3-Dichlorobenzene	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
1,4-Dichlorobenzene	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Dichlorodifluoromethane	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
1,1-Dichloroethane	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
1,2-Dichloroethane	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
1,1-Dichloroethene	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
1,2-Dichloropropane	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
cis-1,2-Dichloroethene	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
cis-1,3-Dichloropropene	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045

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Certificate of Analysis

Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-1 **Date/Time Sampled: 06/07/2023 13:15** **PSS Sample ID: 23060726-014**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 65.6**

MDE TCL Volatile Organic Compounds Analytical Method: SW-846 8260 D Preparation Method: SW5030

Qualifier(s): See Batch 204112 on Case Narrative.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,2-Dichloroethene	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
trans-1,3-Dichloropropene	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Ethylbenzene	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
2-Hexanone (MBK)	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Isopropylbenzene	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Methyl Acetate	ND	mg/kg	0.037		1	06/07/23	06/07/23 18:46	1045
Methylcyclohexane	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Methylene chloride	ND	mg/kg	0.0074		1	06/07/23	06/07/23 18:46	1045
4-Methyl-2-Pentanone (MIBK)	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Methyl-t-Butyl Ether	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Naphthalene	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Styrene	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Tetrachloroethene	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Toluene	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
1,2,3-Trichlorobenzene	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
1,2,4-Trichlorobenzene	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
1,1,1-Trichloroethane	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
1,1,2-Trichloroethane	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Trichloroethene	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Trichlorofluoromethane	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
1,1,2-Trichlorotrifluoroethane	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
1,2,4-Trimethylbenzene	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
1,3,5-Trimethylbenzene	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045
Vinyl chloride	ND	mg/kg	0.0074		1	06/07/23	06/07/23 18:46	1045
m&p-Xylene	ND	mg/kg	0.0030		1	06/07/23	06/07/23 18:46	1045
o-Xylene	ND	mg/kg	0.0015		1	06/07/23	06/07/23 18:46	1045

Surrogate(s)	*Recovery*		*Limits*					
4-Bromofluorobenzene	*107*	*%*	*89-111*		*1*	*06/07/23*	*06/07/23 18:46*	*1045*
Dibromofluoromethane	*90*	*%*	*91-108*	*	*1*	*06/07/23*	*06/07/23 18:46*	*1045*
Toluene-D8	*96*	*%*	*93-104*		*1*	*06/07/23*	*06/07/23 18:46*	*1045*

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Certificate of Analysis

Project Name: Quantum Frederick
PSS Project No.: 23060726

Sample ID: GTA-TC-1 **Date/Time Sampled: 06/07/2023 13:15** **PSS Sample ID: 23060726-014**
Matrix: SOIL **Date/Time Received: 06/07/2023 15:00** **% Solids SM2540G-11: 65.6**

Cyanide Analytical Method: SW-846 9014 Preparation Method: SW9010C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Cyanide, Total	**0.12**	mg/kg	0.092		1	06/08/23	06/08/23 14:38	1053

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Project Name: Quantum Frederick

PSS Project No.: 23060726

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

Matrix spike and matrix spike duplicate analyses may not be performed due to insufficient sample quantity. In these instances, a laboratory control sample and laboratory control sample duplicate are analyzed unless otherwise noted or specified in the method.

Sample Receipt:

Sample aliquots for dissolved metals were not field filtered and were received unpreserved; as such, associated sample results are not suitable for compliance under the Clean Water Act and/or Safe Drinking Water Act.

Analytical:

Priority Pollutant Metals

Batch: 204169

Method exceedance: Continuing calibration verification standard (CCV) exceedance identified; see QC summary.
Method exceedance: Recovery of the mid-level initial calibration readback standard for lead was 84%; limits are 90 - 110%. The recovery of the low-level initial calibration readback standard met acceptance criteria.

Analytical:

Dissolved Priority Pollutant Metals

Batch: 204145

Method exceedance: Recovery of the low-level initial calibration readback standard for beryllium was 135%; limits are 80 - 120%. The recovery of the mid-level initial calibration readback standard met acceptance criteria.
All batch QC was also acceptable.

Analytical:

Inorganic Anions

Batch: 204156

Method exceedance: Continuing calibration verification standard (CCV) exceedance identified; see QC summary.
Matrix spike/matrix spike duplicate (MS/MSD) exceedance identified; see QC summary.
Laboratory control sample (LCS) exceedance identified; see QC summary.

Analytical:

MDE PP Metals

Batch: 204171

Method exceedance: Recovery of the mid-level initial calibration readback standard for lead was 84%; limits are 90 - 110%. The recovery of the low-level initial calibration readback standard met acceptance criteria.
Method exceedance: Continuing calibration verification standard (CCV) exceedances identified; see QC summary.
The concentration of the following analyte in the reference sample was greater than four times the matrix spike concentration : lead.

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Project Name: Quantum Frederick

PSS Project No.: 23060726

Analytical:

MDE TCL Volatile Organic Compounds

Batch: 204166

Continuing calibration verification standard (CCV) meets method criteria in that more than 80% of analytes are within acceptance limits, see QC summary.

Laboratory control sample (LCS) exceedances identified; see QC summary. Exceedances meet marginal exceedance criteria.

Analytical:

TCL Volatile Organic Compounds

Batch: 204112

Continuing calibration verification standard (CCV) meets method criteria in that more than 80% of analytes are within acceptance limits, see QC summary.

Method exceedance: Laboratory control sample (LCS) exceedance identified; see QC summary.

NELAP accreditation was held for all analyses performed unless noted below. See www.phaseonline.com for complete PSS scope of accreditation.

Prep Method(s): SW-846 5030

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Lab Chronology

Project Name: Quantum Frederick
PSS Project No.: 23060726

Method	Client Sample ID	Analysis Type	PSS Sample ID	Mtx	Prep Batch	Analytical Batch	Prepared	Analyzed
EPA 200.8	GTA-TC-11	Initial	23060726-001	W	95781	204169	06/07/2023 17:10	06/08/2023 12:10
	GTA-TC-10	Initial	23060726-003	W	95781	204169	06/07/2023 17:10	06/08/2023 12:24
	DUP	Initial	23060726-005	W	95781	204169	06/07/2023 17:10	06/08/2023 12:28
	GTA-TC-9	Initial	23060726-007	W	95781	204169	06/07/2023 17:10	06/08/2023 12:32
	GTA-TC-8	Initial	23060726-009	W	95781	204169	06/07/2023 17:10	06/08/2023 12:37
	GTA-TC-7	Initial	23060726-011	W	95781	204169	06/07/2023 17:10	06/08/2023 12:54
	GTA-TC-1	Initial	23060726-013	W	95781	204169	06/07/2023 17:10	06/08/2023 12:58
	95781-1-BKS	BKS	95781-1-BKS	W	95781	204169	06/07/2023 17:10	06/08/2023 12:04
	95781-1-BLK	BLK	95781-1-BLK	W	95781	204169	06/07/2023 17:10	06/08/2023 11:59
	GTA-TC-11 S	MS	23060726-001 S	W	95781	204169	06/07/2023 17:10	06/08/2023 12:15
	GTA-TC-11 SD	MSD	23060726-001 S	W	95781	204169	06/07/2023 17:10	06/08/2023 12:19
EPA 200.8 Dissolved	GTA-TC-11	Initial	23060726-001	W	95780	204145	06/07/2023 19:30	06/07/2023 22:53
	GTA-TC-10	Initial	23060726-003	W	95780	204145	06/07/2023 19:30	06/07/2023 22:58
	DUP	Initial	23060726-005	W	95780	204145	06/07/2023 19:30	06/07/2023 23:03
	GTA-TC-9	Initial	23060726-007	W	95780	204145	06/07/2023 19:30	06/07/2023 23:08
	GTA-TC-8	Initial	23060726-009	W	95780	204145	06/07/2023 19:30	06/07/2023 23:28
	GTA-TC-7	Initial	23060726-011	W	95780	204145	06/07/2023 19:30	06/07/2023 23:33
	GTA-TC-1	Initial	23060726-013	W	95780	204145	06/07/2023 19:30	06/07/2023 23:38
	95780-1-BKS	BKS	95780-1-BKS	W	95780	204145	06/07/2023 19:30	06/07/2023 22:33
	95780-1-BLK	BLK	95780-1-BLK	W	95780	204145	06/07/2023 19:30	06/07/2023 22:28
	GTA-DISCH-1 S	MS	23060713-001 S	W	95780	204145	06/07/2023 19:30	06/07/2023 22:43
	GTA-DISCH-1 SD	MSD	23060713-001 S	W	95780	204145	06/07/2023 19:30	06/07/2023 22:48
EPA 300.0	GTA-TC-11	Initial	23060726-001	W	95768	204153	06/07/2023 15:44	06/07/2023 18:00
	GTA-TC-10	Initial	23060726-003	W	95768	204153	06/07/2023 15:44	06/07/2023 18:23
	DUP	Initial	23060726-005	W	95768	204153	06/07/2023 15:44	06/07/2023 18:46
	GTA-TC-9	Initial	23060726-007	W	95768	204153	06/07/2023 15:44	06/07/2023 19:09
	GTA-TC-8	Initial	23060726-009	W	95768	204153	06/07/2023 15:44	06/07/2023 19:32
	GTA-TC-7	Initial	23060726-011	W	95768	204153	06/07/2023 15:44	06/07/2023 19:55
	GTA-TC-1	Initial	23060726-013	W	95768	204153	06/07/2023 15:44	06/07/2023 20:18
	95768-1-BKS	BKS	95768-1-BKS	W	95768	204153	06/07/2023 12:56	06/07/2023 16:05
	95768-1-BLK	BLK	95768-1-BLK	W	95768	204153	06/07/2023 12:56	06/07/2023 15:43
	BARC EAST BLM S	MS	23060710-001 S	W	95768	204153	06/07/2023 12:56	06/07/2023 17:14
	BARC EAST BLM SD	MSD	23060710-001 S	W	95768	204153	06/07/2023 12:56	06/07/2023 17:37
	GTA-TC-11	Initial	23060726-002	S	95774	204156	06/07/2023 15:30	06/08/2023 00:30
	GTA-TC-10	Initial	23060726-004	S	95774	204156	06/07/2023 15:30	06/08/2023 01:39
	DUP	Initial	23060726-006	S	95774	204156	06/07/2023 15:30	06/08/2023 02:02
	GTA-TC-9	Initial	23060726-008	S	95774	204156	06/07/2023 15:30	06/08/2023 02:25
	GTA-TC-8	Initial	23060726-010	S	95774	204156	06/07/2023 15:30	06/08/2023 02:48
	GTA-TC-7	Initial	23060726-012	S	95774	204156	06/07/2023 15:30	06/08/2023 03:11
	GTA-TC-1	Initial	23060726-014	S	95774	204156	06/07/2023 15:30	06/08/2023 03:34
	95774-1-BKS	BKS	95774-1-BKS	S	95774	204156	06/07/2023 15:30	06/08/2023 00:07
	95774-1-BLK	BLK	95774-1-BLK	S	95774	204156	06/07/2023 15:30	06/07/2023 23:44
	GTA-TC-11 S	MS	23060726-002 S	S	95774	204156	06/07/2023 15:30	06/08/2023 00:53
	GTA-TC-11 SD	MSD	23060726-002 S	S	95774	204156	06/07/2023 15:30	06/08/2023 01:16

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Lab Chronology

Project Name: Quantum Frederick
PSS Project No.: 23060726

Method	Client Sample ID	Analysis Type	PSS Sample ID	Mtx	Prep Batch	Analytical Batch	Prepared	Analyzed
SM 4500-CL G - 2011	GTA-TC-11	Initial	23060726-001	W	204165	204165	06/08/2023 16:08	06/08/2023 16:08
	GTA-TC-10	Initial	23060726-003	W	204165	204165	06/08/2023 16:08	06/08/2023 16:08
	DUP	Initial	23060726-005	W	204165	204165	06/08/2023 16:08	06/08/2023 16:08
	GTA-TC-9	Initial	23060726-007	W	204165	204165	06/08/2023 16:08	06/08/2023 16:08
	GTA-TC-8	Initial	23060726-009	W	204165	204165	06/08/2023 16:08	06/08/2023 16:08
	GTA-TC-7	Initial	23060726-011	W	204165	204165	06/08/2023 16:08	06/08/2023 16:08
	GTA-TC-1	Initial	23060726-013	W	204165	204165	06/08/2023 16:08	06/08/2023 16:08
	204165-1-BKS	BKS	204165-1-BKS	W	204165	204165	06/08/2023 16:08	06/08/2023 16:08
	204165-1-BLK	BLK	204165-1-BLK	W	204165	204165	06/08/2023 16:08	06/08/2023 16:08
	GTA-TC-11 D	MD	23060726-001 D	W	204165	204165	06/08/2023 16:08	06/08/2023 16:08
SM 4500-CN C,E - 2016	GTA-TC-11	Initial	23060726-001	W	95786	204160	06/08/2023 11:23	06/08/2023 13:47
	GTA-TC-10	Initial	23060726-003	W	95786	204160	06/08/2023 11:23	06/08/2023 13:53
	DUP	Initial	23060726-005	W	95786	204160	06/08/2023 11:23	06/08/2023 13:55
	GTA-TC-9	Initial	23060726-007	W	95786	204160	06/08/2023 11:23	06/08/2023 13:57
	GTA-TC-8	Initial	23060726-009	W	95786	204160	06/08/2023 11:23	06/08/2023 14:03
	GTA-TC-7	Initial	23060726-011	W	95786	204160	06/08/2023 11:23	06/08/2023 14:05
	GTA-TC-1	Initial	23060726-013	W	95786	204160	06/08/2023 11:23	06/08/2023 14:07
	95786-1-BKS	BKS	95786-1-BKS	W	95786	204160	06/08/2023 11:59	06/08/2023 13:41
	95786-1-BLK	BLK	95786-1-BLK	W	95786	204160	06/08/2023 11:59	06/08/2023 13:39
	95786-1-BSD	BSD	95786-1-BSD	W	95786	204160	06/08/2023 11:23	06/08/2023 13:43
	23060726-001 S	MS	23060726-001 S	W	95786	204160	06/08/2023 11:23	06/08/2023 13:49
	23060726-001 SD	MSD	23060726-001 S	W	95786	204160	06/08/2023 11:23	06/08/2023 13:51
SM2540G	GTA-TC-11	Initial	23060726-002	S	204114	204114	06/07/2023 15:02	06/07/2023 15:02
	GTA-TC-10	Initial	23060726-004	S	204114	204114	06/07/2023 15:02	06/07/2023 15:02
	DUP	Initial	23060726-006	S	204114	204114	06/07/2023 15:02	06/07/2023 15:02
	GTA-TC-9	Initial	23060726-008	S	204114	204114	06/07/2023 15:02	06/07/2023 15:02
	GTA-TC-8	Initial	23060726-010	S	204114	204114	06/07/2023 15:02	06/07/2023 15:02
	GTA-TC-7	Initial	23060726-012	S	204114	204114	06/07/2023 15:02	06/07/2023 15:02
	GTA-TC-1	Initial	23060726-014	S	204114	204114	06/07/2023 15:02	06/07/2023 15:02
	204114-1-BLK	BLK	204114-1-BLK	S	204114	204114	06/07/2023 15:02	06/07/2023 15:02
	GTA-2 D	MD	23060702-004 D	S	204114	204114	06/07/2023 15:02	06/07/2023 15:02
	GTA-TC-11 D	MD	23060726-002 D	S	204114	204114	06/07/2023 15:02	06/07/2023 15:02
SW-846 6020 B	GTA-TC-11	Initial	23060726-002	S	95776	204171	06/07/2023 17:31	06/08/2023 14:01
	GTA-TC-10	Initial	23060726-004	S	95776	204171	06/07/2023 17:31	06/08/2023 14:23
	DUP	Initial	23060726-006	S	95776	204171	06/07/2023 17:31	06/08/2023 14:27
	GTA-TC-9	Initial	23060726-008	S	95776	204171	06/07/2023 17:31	06/08/2023 14:44
	GTA-TC-8	Initial	23060726-010	S	95776	204171	06/07/2023 17:31	06/08/2023 14:49
	GTA-TC-7	Initial	23060726-012	S	95776	204171	06/07/2023 17:31	06/08/2023 14:53
	GTA-TC-1	Initial	23060726-014	S	95776	204171	06/07/2023 17:31	06/08/2023 14:57
	95776-1-BKS	BKS	95776-1-BKS	S	95776	204171	06/07/2023 17:31	06/08/2023 13:57
	95776-1-BLK	BLK	95776-1-BLK	S	95776	204171	06/07/2023 17:31	06/08/2023 13:53
	GTA-TC-11 S	MS	23060726-002 S	S	95776	204171	06/07/2023 17:31	06/08/2023 14:06
	GTA-TC-11 SD	MSD	23060726-002 S	S	95776	204171	06/07/2023 17:31	06/08/2023 14:10
SW-846 8082 A	GTA-TC-11	Initial	23060726-002	S	95773	204149	06/07/2023 15:32	06/08/2023 08:20

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Lab Chronology

Project Name: Quantum Frederick
PSS Project No.: 23060726

Method	Client Sample ID	Analysis Type	PSS Sample ID	Mtx	Prep Batch	Analytical Batch	Prepared	Analyzed
SW-846 8082 A	GTA-TC-10	Initial	23060726-004	S	95773	204149	06/07/2023 15:32	06/08/2023 08:49
	DUP	Initial	23060726-006	S	95773	204149	06/07/2023 15:32	06/08/2023 09:17
	GTA-TC-9	Initial	23060726-008	S	95773	204149	06/07/2023 15:32	06/08/2023 09:45
	GTA-TC-8	Initial	23060726-010	S	95773	204149	06/07/2023 15:32	06/08/2023 10:13
	GTA-TC-7	Initial	23060726-012	S	95773	204149	06/07/2023 15:32	06/08/2023 10:41
	GTA-TC-1	Initial	23060726-014	S	95773	204149	06/07/2023 15:32	06/08/2023 11:09
SW-846 8260 D	GTA-TC-11	Initial	23060726-002	S	95772	204112	06/07/2023 09:05	06/07/2023 16:32
	GTA-TC-10	Initial	23060726-004	S	95772	204112	06/07/2023 09:05	06/07/2023 16:54
	DUP	Initial	23060726-006	S	95772	204112	06/07/2023 09:05	06/07/2023 17:17
	GTA-TC-9	Initial	23060726-008	S	95772	204112	06/07/2023 09:05	06/07/2023 17:39
	GTA-TC-8	Initial	23060726-010	S	95772	204112	06/07/2023 09:05	06/07/2023 18:01
	GTA-TC-7	Initial	23060726-012	S	95772	204112	06/07/2023 09:05	06/07/2023 18:23
	GTA-TC-1	Initial	23060726-014	S	95772	204112	06/07/2023 09:05	06/07/2023 18:46
	95772-1-BKS	BKS	95772-1-BKS	S	95772	204112	06/07/2023 09:05	06/07/2023 10:14
	95772-1-BLK	BLK	95772-1-BLK	S	95772	204112	06/07/2023 09:05	06/07/2023 12:27
	95772-1-BSD	BSD	95772-1-BSD	S	95772	204112	06/07/2023 09:05	06/07/2023 10:36
	13842-Comp-1ft S	MS	23060515-001 S	S	95772	204112	06/07/2023 09:05	06/07/2023 10:58
	13842-Comp-1ft SD	MSD	23060515-001 S	S	95772	204112	06/07/2023 09:05	06/07/2023 11:20
	GTA-TC-11	Initial	23060726-001	W	95791	204166	06/08/2023 09:58	06/08/2023 11:50
	GTA-TC-10	Initial	23060726-003	W	95791	204166	06/08/2023 09:58	06/08/2023 12:12
	DUP	Initial	23060726-005	W	95791	204166	06/08/2023 09:58	06/08/2023 12:35
	GTA-TC-9	Initial	23060726-007	W	95791	204166	06/08/2023 09:58	06/08/2023 12:58
	GTA-TC-8	Initial	23060726-009	W	95791	204166	06/08/2023 09:58	06/08/2023 13:20
	GTA-TC-7	Initial	23060726-011	W	95791	204166	06/08/2023 09:58	06/08/2023 13:43
	GTA-TC-1	Initial	23060726-013	W	95791	204166	06/08/2023 09:58	06/08/2023 14:06
	95791-1-BKS	BKS	95791-1-BKS	W	95791	204166	06/08/2023 09:58	06/08/2023 09:58
	95791-1-BLK	BLK	95791-1-BLK	W	95791	204166	06/08/2023 09:58	06/08/2023 11:27
	GTA-TC-11 S	MS	23060726-001 S	W	95791	204166	06/08/2023 09:58	06/08/2023 14:29
	GTA-TC-11 SD	MSD	23060726-001 S	W	95791	204166	06/08/2023 09:58	06/08/2023 14:51
SW-846 9014	GTA-TC-11	Initial	23060726-002	S	95788	204162	06/08/2023 11:37	06/08/2023 14:23
	GTA-TC-10	Initial	23060726-004	S	95788	204162	06/08/2023 11:37	06/08/2023 14:29
	DUP	Initial	23060726-006	S	95788	204162	06/08/2023 11:37	06/08/2023 14:31
	GTA-TC-9	Initial	23060726-008	S	95788	204162	06/08/2023 11:37	06/08/2023 14:33
	GTA-TC-8	Initial	23060726-010	S	95788	204162	06/08/2023 11:37	06/08/2023 14:34
	GTA-TC-7	Initial	23060726-012	S	95788	204162	06/08/2023 11:37	06/08/2023 14:36
	GTA-TC-1	Initial	23060726-014	S	95788	204162	06/08/2023 11:37	06/08/2023 14:38
	95788-1-BKS	BKS	95788-1-BKS	S	95788	204162	06/08/2023 11:37	06/08/2023 14:19
	95788-1-BLK	BLK	95788-1-BLK	S	95788	204162	06/08/2023 11:37	06/08/2023 14:17
	95788-1-BSD	BSD	95788-1-BSD	S	95788	204162	06/08/2023 11:37	06/08/2023 14:21
	23060726-002 S	MS	23060726-002 S	S	95788	204162	06/08/2023 11:37	06/08/2023 14:25
	23060726-002 SD	MSD	23060726-002 S	S	95788	204162	06/08/2023 11:37	06/08/2023 14:27

Analytical Method: SM 4500-CL G -2011
Seq Number: 204165 Matrix: Water
MB Sample Id: 204165-1-BLK LCS Sample Id: 204165-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Flag
Total Chlorine	<0.2000	1.000	1.090	109	90-110	mg/L	

Analytical Method: SM 4500-CL G -2011
Seq Number: 204165 Matrix: Surface Water
Parent Sample Id: 23060726-001 MD Sample Id: 23060726-001 D

Parameter	Parent Result	MD Result	RPD	RPD Limit	Units	Flag
Total Chlorine	<0.2000	<0.2000	NC	20	mg/L	

Analytical Method: SM 4500-CN C,E -2016 Prep Method: SM4500CN-CPRE
Seq Number: 204160 Matrix: Water Date Prep: 06/08/23
MB Sample Id: 95786-1-BLK LCS Sample Id: 95786-1-BKS LCSD Sample Id: 95786-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	RPD	RPD Limit	Units	Flag
Cyanide, Total	<0.01000	0.1000	0.1006	101	0.1027	103	83-117	2	20	mg/L	

Analytical Method: SM 4500-CN C,E -2016 Prep Method: SM4500CN-CPRE
Seq Number: 204160 Matrix: Surface Water Date Prep: 06/08/23
Parent Sample Id: 23060726-001 MS Sample Id: 23060726-001 S MSD Sample Id: 23060726-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	RPD	RPD Limit	Units	Flag
Cyanide, Total	<0.01000	0.1000	0.1032	103	0.1026	103	67-124	1	20	mg/L	

Analytical Method: SW-846 9014 Prep Method: SW9010C
Seq Number: 204162 Matrix: Solid Date Prep: 06/08/23
MB Sample Id: 95788-1-BLK LCS Sample Id: 95788-1-BKS LCSD Sample Id: 95788-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	RPD	RPD Limit	Units	Flag
Cyanide, Total	<0.06061	0.6000	0.6136	102	0.6691	106	87-115	9	25	mg/kg	

Analytical Method: SW-846 9014 Prep Method: SW9010C
Seq Number: 204162 Matrix: Soil Date Prep: 06/08/23
Parent Sample Id: 23060726-002 MS Sample Id: 23060726-002 S MSD Sample Id: 23060726-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	RPD	RPD Limit	Units	Flag
Cyanide, Total	0.09084	0.7516	0.8260	98	0.8587	99	68-118	4	25	mg/kg	

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QC Summary

Project Name Quantum Frederick
PSS Project No.: 23060726

Analytical Method: EPA 200.8 Prep Method: E200.8_PREP
Seq Number: 204169 Matrix: Water Date Prep: 06/07/23
MB Sample Id: 95781-1-BLK LCS Sample Id: 95781-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Flag
Antimony	<5.000	25.00	24.26	97	85-115	ug/L	
Arsenic	<1.000	50.00	50.23	100	85-115	ug/L	
Beryllium	<1.000	50.00	47.55	95	85-115	ug/L	
Cadmium	<1.000	50.00	48.67	97	85-115	ug/L	
Chromium	<1.000	50.00	49.96	100	85-115	ug/L	
Copper	<1.000	50.00	49.96	100	85-115	ug/L	
Lead	<1.000	50.00	49.17	98	85-115	ug/L	
Mercury	<0.2000	1.000	0.9990	100	85-115	ug/L	
Nickel	<1.000	50.00	49.02	98	85-115	ug/L	
Selenium	<1.000	50.00	50.17	100	85-115	ug/L	
Silver	<1.000	5.000	4.978	100	85-115	ug/L	
Thallium	<1.000	50.00	47.00	94	85-115	ug/L	
Zinc	<20.00	100	98.75	99	85-115	ug/L	

Analytical Method: EPA 200.8 Prep Method: E200.8_PREP
Seq Number: 204169 Matrix: Surface Water Date Prep: 06/07/23
Parent Sample Id: 23060726-001 MS Sample Id: 23060726-001 S MSD Sample Id: 23060726-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	RPD	RPD Limit	Units	Flag
Antimony	<5.000	25.00	26.47	106	27.40	110	70-130	3	25	ug/L	
Arsenic	<1.000	50.00	55.65	111	57.58	115	70-130	3	25	ug/L	
Beryllium	<1.000	50.00	51.31	103	55.79	112	70-130	8	25	ug/L	
Cadmium	<1.000	50.00	52.60	105	54.61	109	70-130	4	25	ug/L	
Chromium	<1.000	50.00	54.89	110	56.39	113	70-130	3	25	ug/L	
Copper	1.265	50.00	53.37	104	54.77	107	70-130	3	25	ug/L	
Lead	<1.000	50.00	55.15	110	57.10	114	70-130	3	25	ug/L	
Mercury	<0.2000	1.000	1.148	115	1.161	116	70-130	1	25	ug/L	
Nickel	<1.000	50.00	52.34	105	53.94	108	70-130	3	25	ug/L	
Selenium	<1.000	50.00	53.91	108	56.57	113	70-130	5	25	ug/L	
Silver	<1.000	5.000	5.360	107	5.588	112	70-130	4	25	ug/L	
Thallium	<1.000	50.00	52.73	105	55.17	110	70-130	5	25	ug/L	
Zinc	<20.00	100	108.5	109	110.7	111	70-130	2	25	ug/L	

Analytical Method: EPA 200.8 Dissolved Prep Method: E200.8_PREP
Seq Number: 204145 Matrix: Water Date Prep: 06/07/23
MB Sample Id: 95780-1-BLK LCS Sample Id: 95780-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Flag
Antimony	<5.000	25.00	24.44	98	85-115	ug/L	
Arsenic	<1.000	50.00	52.23	104	85-115	ug/L	
Beryllium	<1.000	50.00	46.78	94	85-115	ug/L	
Cadmium	<1.000	50.00	49.27	99	85-115	ug/L	
Chromium	<1.000	50.00	50.99	102	85-115	ug/L	
Copper	<1.000	50.00	48.91	98	85-115	ug/L	
Lead	<1.000	50.00	48.77	98	85-115	ug/L	
Mercury	<0.2000	1.000	0.9880	99	85-115	ug/L	
Nickel	<1.000	50.00	48.96	98	85-115	ug/L	
Selenium	<1.000	50.00	51.54	103	85-115	ug/L	
Silver	<1.000	5.000	4.856	97	85-115	ug/L	
Thallium	<1.000	50.00	46.89	94	85-115	ug/L	
Zinc	<20.00	100	99.98	100	85-115	ug/L	

Analytical Method: EPA 300.0 Prep Method: E300.0P
Seq Number: 204153 Matrix: Water Date Prep: 06/07/23
MB Sample Id: 95768-1-BLK LCS Sample Id: 95768-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Flag
Fluoride	<0.2500	2.500	2.654	106	90-110	mg/kg	

Analytical Method: EPA 300.0 Prep Method: E300.0P
Seq Number: 204156 Matrix: Solid Date Prep: 06/07/23
MB Sample Id: 95774-1-BLK LCS Sample Id: 95774-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Flag
Fluoride	<2.451	25.25	27.94	111	90-110	mg/kg	H

Analytical Method: EPA 300.0 Prep Method: E300.0P
Seq Number: 204156 Matrix: Soil Date Prep: 06/07/23
Parent Sample Id: 23060726-002 MS Sample Id: 23060726-002 S MSD Sample Id: 23060726-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	RPD	RPD Limit	Units	Flag
Fluoride	<3.087	3.309	3.679	111	63.73	100	14-98	10	20	mg/kg	X

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QC Summary

Project Name Quantum Frederick
PSS Project No.: 23060726

Analytical Method: SW-846 6020 B
Prep Method: SW3050B
Seq Number: 204171 Matrix: Solid Date Prep: 06/07/23
MB Sample Id: 95776-1-BLK LCS Sample Id: 95776-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Flag
Antimony	<2.385	12.15	12.14	100	80-120	mg/kg	
Arsenic	<0.4770	24.31	25.14	103	80-120	mg/kg	
Beryllium	<0.4770	24.31	24.35	100	80-120	mg/kg	
Cadmium	<0.4770	24.31	24.08	99	80-120	mg/kg	
Chromium	<0.4770	24.31	24.87	102	80-120	mg/kg	
Copper	<0.4770	24.31	24.35	100	80-120	mg/kg	
Lead	<0.4770	24.31	26.38	109	80-120	mg/kg	
Mercury	<0.09539	0.4861	0.4993	103	80-120	mg/kg	
Nickel	<0.4770	24.31	24.23	100	80-120	mg/kg	
Selenium	<0.4770	24.31	26.62	110	80-120	mg/kg	
Silver	<0.4770	2.431	2.442	100	80-120	mg/kg	
Thallium	<0.4770	24.31	24.67	101	80-120	mg/kg	
Zinc	<9.539	48.61	48.18	99	80-120	mg/kg	

Analytical Method: SW-846 6020 B
Prep Method: SW3050B
Seq Number: 204171 Matrix: Soil Date Prep: 06/07/23
Parent Sample Id: 23060726-002 MS Sample Id: 23060726-002 S MSD Sample Id: 23060726-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	RPD	RPD Limit	Units	Flag
Antimony	<2.319	12.51	13.76	110	11.75	99	75-125	16	30	mg/kg	
Arsenic	2.916	25.01	29.67	107	27.00	102	75-125	9	30	mg/kg	
Beryllium	0.4712	25.01	26.86	106	22.97	95	75-125	16	30	mg/kg	
Cadmium	<0.4638	25.01	26.14	105	23.67	100	75-125	10	30	mg/kg	
Chromium	14.24	25.01	42.35	112	40.51	111	75-125	4	30	mg/kg	
Copper	3.328	25.01	29.38	104	27.37	102	75-125	7	30	mg/kg	
Lead	174.9	25.01	161.4	0	182.2	31	75-125	12	30	mg/kg	X
Mercury	<0.09276	0.5003	0.5298	106	0.4847	102	75-125	9	30	mg/kg	
Nickel	9.234	25.01	34.61	101	32.64	99	75-125	6	30	mg/kg	
Selenium	<0.4638	25.01	21.55	86	18.80	79	75-125	14	30	mg/kg	
Silver	<0.4638	2.501	2.707	108	2.440	103	75-125	10	30	mg/kg	
Thallium	<0.4638	25.01	26.49	106	23.83	101	75-125	11	20	mg/kg	
Zinc	23.51	50.03	75.18	103	71.26	101	75-125	5	30	mg/kg	

Analytical Method: SM2540G
Seq Number: 204114 Matrix: Soil
Parent Sample Id: 23060726-002 MD Sample Id: 23060726-002 D

Parameter	Parent Result	MD Result	RPD	RPD Limit	Units	Flag
Solids, percent	77.5	82.5	6	10	%	

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QC Summary

Project Name Quantum Frederick
PSS Project No.: 23060726

Analytical Method: SW-846 8260 D Prep Method: SW5030
Seq Number: 204112 Matrix: Solid Date Prep: 06/07/23
MB Sample Id: 95772-1-BLK LCS Sample Id: 95772-1-BKS LCSD Sample Id: 95772-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	RPD	RPD Limit	Units	Flag
Acetone	<0.02000	0.06000	0.06553	109	0.06281	105	40-147	4	25	mg/kg	
Benzene	<0.001000	0.06000	0.06121	102	0.06146	102	85-118	0	25	mg/kg	
Bromochloromethane	<0.001000	0.06000	0.05465	91	0.05709	95	84-121	4	25	mg/kg	
Bromodichloromethane	<0.001000	0.06000	0.05751	96	0.05878	98	88-121	2	25	mg/kg	
Bromoform	<0.001000	0.06000	0.05643	94	0.05282	88	78-129	7	25	mg/kg	
Bromomethane	<0.001000	0.06000	0.05010	84	0.04905	82	66-117	2	25	mg/kg	
2-Butanone (MEK)	<0.005000	0.06000	0.06408	107	0.06641	111	62-115	4	25	mg/kg	
Carbon Disulfide	<0.001000	0.06000	0.05996	100	0.06092	102	79-128	2	25	mg/kg	
Carbon tetrachloride	<0.001000	0.06000	0.06146	102	0.06070	101	87-121	1	25	mg/kg	
Chlorobenzene	<0.001000	0.06000	0.06351	106	0.05847	97	85-119	8	25	mg/kg	
Chloroethane	<0.001000	0.06000	0.06011	100	0.05482	91	75-115	9	25	mg/kg	
Chloroform	<0.005000	0.06000	0.05740	96	0.05931	99	82-116	3	25	mg/kg	
Chloromethane	<0.001000	0.06000	0.05608	93	0.05475	91	69-124	2	25	mg/kg	
Cyclohexane	<0.001000	0.06000	0.06301	105	0.06308	105	72-132	0	25	mg/kg	
1,2-Dibromo-3-chloropropane	<0.001000	0.06000	0.05768	96	0.05398	90	64-141	7	25	mg/kg	
Dibromochloromethane	<0.001000	0.06000	0.05966	99	0.05726	95	87-122	4	25	mg/kg	
1,2-Dibromoethane	<0.001000	0.06000	0.05836	97	0.05701	95	87-117	2	25	mg/kg	
1,2-Dichlorobenzene	<0.001000	0.06000	0.05869	98	0.05861	98	83-121	0	25	mg/kg	
1,3-Dichlorobenzene	<0.001000	0.06000	0.06223	104	0.05734	96	84-121	8	25	mg/kg	
1,4-Dichlorobenzene	<0.001000	0.06000	0.05999	100	0.05901	98	84-121	2	25	mg/kg	
Dichlorodifluoromethane	<0.001000	0.06000	0.06457	108	0.06192	103	56-134	4	25	mg/kg	
1,1-Dichloroethane	<0.001000	0.06000	0.05937	99	0.06168	103	83-120	4	25	mg/kg	
1,2-Dichloroethane	<0.001000	0.06000	0.05594	93	0.05860	98	85-118	5	25	mg/kg	
1,1-Dichloroethene	<0.001000	0.06000	0.05991	100	0.06033	101	83-122	1	25	mg/kg	
1,2-Dichloropropane	<0.001000	0.06000	0.06014	100	0.05978	100	84-120	1	25	mg/kg	
cis-1,2-Dichloroethene	<0.001000	0.06000	0.06027	100	0.06170	103	84-120	2	25	mg/kg	
cis-1,3-Dichloropropene	<0.001000	0.06000	0.06178	103	0.06149	102	84-120	0	25	mg/kg	
trans-1,2-Dichloroethene	<0.001000	0.06000	0.06078	101	0.06200	103	84-121	2	25	mg/kg	
trans-1,3-Dichloropropene	<0.001000	0.06000	0.06121	102	0.06140	102	80-123	0	25	mg/kg	
Ethylbenzene	<0.001000	0.06000	0.06742	112	0.06212	104	87-121	8	25	mg/kg	
2-Hexanone (MBK)	<0.001000	0.06000	0.06934	116	0.06716	112	72-119	3	25	mg/kg	
Isopropylbenzene	<0.001000	0.06000	0.06435	107	0.06348	106	85-121	1	25	mg/kg	
Methyl Acetate	<0.02500	0.06000	0.05382	90	0.05408	90	75-123	0	25	mg/kg	
Methylcyclohexane	<0.001000	0.06000	0.06435	107	0.06546	109	84-123	2	25	mg/kg	
Methylene chloride	<0.005000	0.06000	0.05319	89	0.05543	92	81-117	4	25	mg/kg	
4-Methyl-2-Pentanone (MIBK)	<0.001000	0.06000	0.05756	96	0.05852	98	75-118	2	25	mg/kg	
Methyl-t-Butyl Ether	<0.001000	0.06000	0.06569	109	0.06202	103	74-122	6	25	mg/kg	
Naphthalene	<0.001000	0.06000	0.07732	129	0.07198	120	77-120	7	25	mg/kg	H
Styrene	<0.001000	0.06000	0.06245	104	0.06142	102	83-124	2	25	mg/kg	
1,1,2,2-Tetrachloroethane	<0.001000	0.06000	0.05727	95	0.05564	93	75-123	3	25	mg/kg	
Tetrachloroethene	<0.001000	0.06000	0.06116	102	0.06160	103	82-119	1	25	mg/kg	
Toluene	<0.001000	0.06000	0.06231	104	0.06179	103	84-118	1	25	mg/kg	
1,2,3-Trichlorobenzene	<0.001000	0.06000	0.07587	126	0.07508	125	76-127	1	25	mg/kg	
1,2,4-Trichlorobenzene	<0.001000	0.06000	0.07402	123	0.06924	115	82-131	7	25	mg/kg	
1,1,1-Trichloroethane	<0.001000	0.06000	0.06489	108	0.06358	106	84-121	2	25	mg/kg	
1,1,2-Trichloroethane	<0.001000	0.06000	0.05696	95	0.05766	96	83-118	1	25	mg/kg	
Trichloroethene	<0.001000	0.06000	0.06193	103	0.06014	100	85-118	3	25	mg/kg	
Trichlorofluoromethane	<0.001000	0.06000	0.06117	102	0.06133	102	81-121	0	25	mg/kg	
1,1,2-Trichlorotrifluoroethane	<0.001000	0.06000	0.06082	101	0.06087	101	83-122	0	25	mg/kg	
1,2,4-Trimethylbenzene	<0.001000	0.06000	0.06406	107	0.06547	109	87-121	2	25	mg/kg	
1,3,5-Trimethylbenzene	<0.001000	0.06000	0.06823	114	0.06494	108	85-120	5	25	mg/kg	

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QC Summary

Project Name Quantum Frederick
PSS Project No.: 23060726

Analytical Method: SW-846 8260 D Prep Method: SW5030
Seq Number: 204112 Matrix: Solid Date Prep: 06/07/23
MB Sample Id: 95772-1-BLK LCS Sample Id: 95772-1-BKS LCSD Sample Id: 95772-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	RPD	RPD Limit	Units	Flag
Vinyl chloride	<0.005000	0.06000	0.06629	110	0.06701	112	69-129	1	25	mg/kg	
m&p-Xylene	<0.002000	0.1200	0.1291	108	0.1245	104	86-123	4	25	mg/kg	
o-Xylene	<0.001000	0.06000	0.06408	107	0.06015	100	84-121	6	25	mg/kg	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units
4-Bromofluorobenzene	109		100		96		89-111	%
Dibromofluoromethane	92		97		98		91-108	%
Toluene-D8	94		94		101		93-104	%

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QC Summary

Project Name Quantum Frederick
PSS Project No.: 23060726

Analytical Method: SW-846 8260 D
Seq Number: 204166
MB Sample Id: 95791-1-BLK

Matrix: Water
LCS Sample Id: 95791-1-BKS

Prep Method: SW5030B
Date Prep: 06/08/23

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Flag
Acetone	<5.000	50.00	56.87	114	49-154	ug/L	
Benzene	<1.000	50.00	53.22	106	76-112	ug/L	
Bromochloromethane	<1.000	50.00	47.95	96	74-119	ug/L	
Bromodichloromethane	<1.000	50.00	55.87	112	78-117	ug/L	
Bromoform	<1.000	50.00	52.02	104	69-123	ug/L	
Bromomethane	<1.000	50.00	45.66	91	42-118	ug/L	
2-Butanone (MEK)	<5.000	50.00	59.41	119	55-136	ug/L	
Carbon Disulfide	<1.000	50.00	58.13	116	80-124	ug/L	
Carbon tetrachloride	<1.000	50.00	48.93	98	77-119	ug/L	
Chlorobenzene	<1.000	50.00	51.97	104	76-114	ug/L	
Chloroethane	<1.000	50.00	58.18	116	61-113	ug/L	H
Chloroform	<1.000	50.00	52.41	105	75-113	ug/L	
Chloromethane	<1.000	50.00	57.47	115	41-148	ug/L	
Cyclohexane	<1.000	50.00	57.47	115	76-135	ug/L	
1,2-Dibromo-3-chloropropane	<1.000	50.00	57.53	115	52-131	ug/L	
Dibromochloromethane	<1.000	50.00	51.99	104	79-121	ug/L	
1,2-Dibromoethane	<1.000	50.00	52.78	106	77-119	ug/L	
1,2-Dichlorobenzene	<1.000	50.00	52.80	106	75-121	ug/L	
1,3-Dichlorobenzene	<1.000	50.00	52.14	104	77-120	ug/L	
Dichlorodifluoromethane	<1.000	50.00	56.76	114	49-122	ug/L	
1,4-Dichlorobenzene	<1.000	50.00	52.37	105	76-118	ug/L	
1,1-Dichloroethane	<1.000	50.00	56.77	114	75-118	ug/L	
1,2-Dichloroethane	<1.000	50.00	53.01	106	72-115	ug/L	
cis-1,2-Dichloroethene	<1.000	50.00	49.81	100	75-119	ug/L	
1,1-Dichloroethene	<1.000	50.00	45.78	92	74-119	ug/L	
1,2-Dichloropropane	<1.000	50.00	57.44	115	76-115	ug/L	
cis-1,3-Dichloropropene	<1.000	50.00	54.27	109	83-122	ug/L	
trans-1,3-Dichloropropene	<1.000	50.00	48.53	97	76-118	ug/L	
trans-1,2-Dichloroethene	<1.000	50.00	49.45	99	73-121	ug/L	
Ethylbenzene	<1.000	50.00	55.08	110	78-118	ug/L	
2-Hexanone (MBK)	<5.000	50.00	68.42	137	55-136	ug/L	H
Isopropylbenzene	<1.000	50.00	55.40	111	76-126	ug/L	
Methyl Acetate	<1.000	50.00	49.86	100	61-117	ug/L	
Methylcyclohexane	<1.000	50.00	49.72	99	82-126	ug/L	
Methylene chloride	<1.000	50.00	52.87	106	75-113	ug/L	
4-Methyl-2-Pentanone (MIBK)	<5.000	50.00	65.96	132	57-127	ug/L	H
Methyl-t-Butyl Ether	<1.000	50.00	49.08	98	71-114	ug/L	
Naphthalene	<1.000	50.00	53.86	108	60-122	ug/L	
Styrene	<1.000	50.00	54.65	109	81-124	ug/L	
1,1,2,2-Tetrachloroethane	<1.000	50.00	60.22	120	66-123	ug/L	
Tetrachloroethene	<1.000	50.00	45.63	91	76-123	ug/L	
Toluene	<1.000	50.00	50.61	101	77-112	ug/L	
1,2,3-Trichlorobenzene	<1.000	50.00	48.77	98	73-129	ug/L	
1,2,4-Trichlorobenzene	<1.000	50.00	49.20	98	73-130	ug/L	
1,1,1-Trichloroethane	<1.000	50.00	48.52	97	79-118	ug/L	
Trichloroethene	<1.000	50.00	49.35	99	77-112	ug/L	
1,1,2-Trichloroethane	<1.000	50.00	53.34	107	75-115	ug/L	
Trichlorofluoromethane	<1.000	50.00	48.55	97	74-125	ug/L	
1,1,2-Trichlorotrifluoroethane	<1.000	50.00	44.75	90	77-123	ug/L	
1,2,4-Trimethylbenzene	<1.000	50.00	55.75	112	76-127	ug/L	
1,3,5-Trimethylbenzene	<1.000	50.00	54.93	110	76-126	ug/L	

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QC Summary

Project Name Quantum Frederick
PSS Project No.: 23060726

Analytical Method: SW-846 8260 D
Prep Method: SW5030B
Seq Number: 204166
Matrix: Water
Date Prep: 06/08/23
MB Sample Id: 95791-1-BLK
LCS Sample Id: 95791-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Flag
Vinyl chloride	<1.000	50.00	58.75	118	53-151	ug/L	
m&p-Xylene	<2.000	100	106.1	106	79-121	ug/L	
o-Xylene	<1.000	50.00	52.59	105	78-122	ug/L	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	Limits	Units
4-Bromofluorobenzene	111		107		88-120	%
Dibromofluoromethane	97		99		92-107	%
Toluene-D8	98		98		95-106	%

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QC Summary

Project Name Quantum Frederick
PSS Project No.: 23060726

Analytical Method: SW-846 8260 D Prep Method: SW5030B
Seq Number: 204166 Matrix: Surface Water Date Prep: 06/08/23
Parent Sample Id: 23060726-001 MS Sample Id: 23060726-001 S MSD Sample Id: 23060726-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	RPD	RPD Limit	Units	Flag
Acetone	<5.000	50.00	28.17	56	28.31	57	32-96	0	25	ug/L	
Benzene	<1.000	50.00	49.49	99	47.17	94	73-114	5	25	ug/L	
Bromochloromethane	<1.000	50.00	43.37	87	42.83	86	70-114	1	25	ug/L	
Bromodichloromethane	<1.000	50.00	50.15	100	48.80	98	71-118	3	25	ug/L	
Bromoform	<1.000	50.00	43.40	87	42.82	86	59-127	1	25	ug/L	
Bromomethane	<1.000	50.00	44.40	89	41.71	83	26-131	6	25	ug/L	
2-Butanone (MEK)	<5.000	50.00	37.94	76	39.55	79	45-109	4	25	ug/L	
Carbon Disulfide	<1.000	50.00	54.50	109	51.81	104	71-130	5	25	ug/L	
Carbon tetrachloride	<1.000	50.00	45.50	91	43.45	87	74-119	5	25	ug/L	
Chlorobenzene	<1.000	50.00	46.65	93	44.61	89	73-115	4	25	ug/L	
Chloroethane	<1.000	50.00	54.74	109	50.69	101	60-124	8	25	ug/L	
Chloroform	<1.000	50.00	48.29	97	46.24	92	70-113	4	25	ug/L	
Chloromethane	<1.000	50.00	54.29	109	48.89	98	32-170	10	25	ug/L	
Cyclohexane	<1.000	50.00	55.20	110	51.62	103	64-144	7	25	ug/L	
1,2-Dibromo-3-chloropropane	<1.000	50.00	44.03	88	43.91	88	48-140	0	25	ug/L	
Dibromochloromethane	<1.000	50.00	44.31	89	43.64	87	73-120	2	25	ug/L	
1,2-Dibromoethane	<1.000	50.00	45.54	91	44.71	89	71-119	2	25	ug/L	
1,2-Dichlorobenzene	<1.000	50.00	45.01	90	42.25	85	68-122	6	25	ug/L	
1,3-Dichlorobenzene	<1.000	50.00	44.88	90	42.45	85	69-122	6	25	ug/L	
Dichlorodifluoromethane	<1.000	50.00	53.88	108	49.54	99	61-118	8	25	ug/L	
1,4-Dichlorobenzene	<1.000	50.00	45.07	90	42.47	85	68-120	6	25	ug/L	
1,1-Dichloroethane	<1.000	50.00	52.56	105	50.02	100	68-122	5	25	ug/L	
1,2-Dichloroethane	<1.000	50.00	47.77	96	46.62	93	61-120	2	25	ug/L	
cis-1,2-Dichloroethene	<1.000	50.00	45.82	92	44.37	89	71-116	3	25	ug/L	
1,1-Dichloroethene	<1.000	50.00	43.08	86	40.30	81	69-120	7	25	ug/L	
1,2-Dichloropropane	<1.000	50.00	52.65	105	50.77	102	69-119	4	25	ug/L	
cis-1,3-Dichloropropene	<1.000	50.00	47.49	95	46.56	93	72-123	2	25	ug/L	
trans-1,3-Dichloropropene	<1.000	50.00	41.41	83	41.36	83	67-123	0	25	ug/L	
trans-1,2-Dichloroethene	<1.000	50.00	46.13	92	43.78	88	70-118	5	25	ug/L	
Ethylbenzene	<1.000	50.00	49.77	100	47.14	94	74-121	5	25	ug/L	
2-Hexanone (MBK)	<5.000	50.00	49.38	99	50.25	101	44-131	2	25	ug/L	
Isopropylbenzene	<1.000	50.00	48.47	97	45.04	90	68-131	7	25	ug/L	
Methyl Acetate	<1.000	50.00	40.68	81	41.16	82	55-117	1	25	ug/L	
Methylcyclohexane	<1.000	50.00	46.84	94	44.16	88	71-126	6	25	ug/L	
Methylene chloride	<1.000	50.00	48.48	97	46.90	94	72-114	3	25	ug/L	
4-Methyl-2-Pentanone (MIBK)	<5.000	50.00	54.10	108	55.05	110	49-133	2	25	ug/L	
Methyl-t-Butyl Ether	<1.000	50.00	41.40	83	41.53	83	67-112	0	25	ug/L	
Naphthalene	<1.000	50.00	42.94	86	41.52	83	53-128	3	25	ug/L	
Styrene	<1.000	50.00	48.33	97	46.32	93	75-126	4	25	ug/L	
1,1,2,2-Tetrachloroethane	<1.000	50.00	48.53	97	47.04	94	61-125	3	25	ug/L	
Tetrachloroethene	<1.000	50.00	42.30	85	40.43	81	71-121	5	25	ug/L	
Toluene	<1.000	50.00	47.12	94	44.99	90	71-115	5	25	ug/L	
1,2,3-Trichlorobenzene	<1.000	50.00	39.76	80	38.14	76	60-124	4	25	ug/L	
1,2,4-Trichlorobenzene	<1.000	50.00	40.29	81	38.10	76	57-126	6	25	ug/L	
1,1,1-Trichloroethane	<1.000	50.00	44.70	89	42.76	86	72-121	4	25	ug/L	
Trichloroethene	<1.000	50.00	46.50	93	44.58	89	72-115	4	25	ug/L	
1,1,2-Trichloroethane	<1.000	50.00	47.39	95	46.48	93	70-114	2	25	ug/L	
Trichlorofluoromethane	<1.000	50.00	46.35	93	43.10	86	66-130	7	25	ug/L	
1,1,2-Trichlorotrifluoroethane	<1.000	50.00	42.62	85	39.74	79	71-121	7	25	ug/L	
1,2,4-Trimethylbenzene	<1.000	50.00	48.31	97	44.64	89	66-133	8	25	ug/L	
1,3,5-Trimethylbenzene	<1.000	50.00	47.96	96	44.25	89	66-133	8	25	ug/L	

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QC Summary

Project Name Quantum Frederick
PSS Project No.: 23060726

Analytical Method: SW-846 8260 D

Prep Method: SW5030B
Seq Number: 204166
Matrix: Surface Water
Date Prep: 06/08/23
Parent Sample Id: 23060726-001
MS Sample Id: 23060726-001 S
MSD Sample Id: 23060726-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	RPD	RPD Limit	Units	Flag
Vinyl chloride	<1.000	50.00	55.68	111	51.00	102	40-160	9	25	ug/L	
m&p-Xylene	<2.000	100	95.17	95	90.51	91	73-125	5	25	ug/L	
o-Xylene	<1.000	50.00	47.10	94	44.85	90	71-126	5	25	ug/L	

Surrogate	MS Result	MS Flag	MSD Result	MSD Flag	Limits	Units
4-Bromofluorobenzene	104		104		88-120	%
Dibromofluoromethane	98		98		92-107	%
Toluene-D8	99		100		95-106	%

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
H= Recovery of BS,BSD or both exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

Analytical Method: SM 4500-CL G -2011
Seq Number: 204165 Matrix: Water
CCV Sample Id: CCV-01 Analyzed Date: 06/08/23 16:08

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Total Chlorine	1.000	1.090	109	90-110	mg/L	

Analytical Method: SM 4500-CL G -2011
Seq Number: 204165 Matrix: Water
CCV Sample Id: CCV-02 Analyzed Date: 06/08/23 16:08

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Total Chlorine	1.637	1.585	97	90-110	mg/L	

Analytical Method: SM 4500-CL G -2011
Seq Number: 181400 Matrix: Water
Parent Sample Id: ICV-01 ICV Sample Id: ICV-01 Analyzed Date: 01/12/21 15:18

Parameter	Spike Amount	ICV Result	ICV %Rec	Limits	Units	Flag
Total Chlorine	1.000	1.100	110	90-110	mg/L	

Analytical Method: SM 4500-CL G -2011
Seq Number: 204165 Matrix: Water
Parent Sample Id: MRL-01 MRL Sample Id: MRL-01 Analyzed Date: 06/08/23 16:08

Parameter	Spike Amount	MRL Result	MRL %Rec	Limits	Units	Flag
Total Chlorine	0.2000	0.2040	102	50-150	mg/L	

Analytical Method: SM 4500-CN C,E -2016
Seq Number: 204160 Matrix: Water
CCV Sample Id: CCV-01 Analyzed Date: 06/08/23 13:34

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Cyanide, Total	100	100.1	100	90-110	ug/L	

Analytical Method: SM 4500-CN C,E -2016
Seq Number: 204160 Matrix: Water
CCV Sample Id: CCV-02 Analyzed Date: 06/08/23 13:59

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Cyanide, Total	100	103.7	104	90-110	ug/L	

Analytical Method: SM 4500-CN C,E -2016
Seq Number: 204160 Matrix: Water
CCV Sample Id: CCV-03 Analyzed Date: 06/08/23 14:13

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Cyanide, Total	100	100.5	101	90-110	ug/L	

Analytical Method: SM 4500-CN C,E -2016
Seq Number: 204096 Matrix: Water
Parent Sample Id: ICV ICV Sample Id: ICV Analyzed Date: 06/06/23 13:15

Parameter	Spike Amount	ICV Result	ICV %Rec	Limits	Units	Flag
Cyanide, Total	100	100.5	101	90-110	ug/L	

Analytical Method: SM 4500-CN C,E -2016
Seq Number: 204160 Matrix: Water
Parent Sample Id: MRL MRL Sample Id: MRL Analyzed Date: 06/08/23 13:45

Parameter	Spike Amount	MRL Result	MRL %Rec	Limits	Units	Flag
Cyanide, Total	10.00	12.36	124	50-150	ug/L	

Analytical Method: SW-846 9014
Seq Number: 204162 Matrix: Water
CCV Sample Id: CCV-01 Analyzed Date: 06/08/23 14:13

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Cyanide, Total	100	100.5	101	90-110	ug/L	

Analytical Method: SW-846 9014
Seq Number: 204162 Matrix: Water
CCV Sample Id: CCV-02 Analyzed Date: 06/08/23 14:40

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Cyanide, Total	100	103.3	103	90-110	ug/L	

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QC Summary

Project Name Quantum Frederick
PSS Project No.: 23060726

Analytical Method: EPA 200.8
Seq Number: 204169 Matrix: Water
CCV Sample Id: CCV 1 Analyzed Date: 06/08/23 12:45

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Antimony	50.00	54.33	109	85-115	ug/L	
Arsenic	100	111.7	112	85-115	ug/L	
Beryllium	100	107.7	108	85-115	ug/L	
Cadmium	100	109.7	110	85-115	ug/L	
Chromium	100	110	110	85-115	ug/L	
Copper	100	109.1	109	85-115	ug/L	
Lead	100	114.2	114	85-115	ug/L	
Mercury	1.000	1.092	109	85-115	ug/L	
Nickel	100	108.9	109	85-115	ug/L	
Selenium	100	116.1	116	85-115	ug/L	X
Silver	10.00	11.12	111	85-115	ug/L	
Thallium	100	111.3	111	85-115	ug/L	
Zinc	200	218.6	109	85-115	ug/L	

Analytical Method: EPA 200.8
Seq Number: 204169 Matrix: Water
CCV Sample Id: CCV 2 Analyzed Date: 06/08/23 13:40

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Antimony	50.00	54.79	110	85-115	ug/L	
Arsenic	100	111.8	112	85-115	ug/L	
Beryllium	100	108.2	108	85-115	ug/L	
Cadmium	100	108.8	109	85-115	ug/L	
Chromium	100	109.1	109	85-115	ug/L	
Copper	100	107.5	108	85-115	ug/L	
Lead	100	113	113	85-115	ug/L	
Mercury	1.000	1.052	105	85-115	ug/L	
Nickel	100	107.5	108	85-115	ug/L	
Selenium	100	114.9	115	85-115	ug/L	
Silver	10.00	10.91	109	85-115	ug/L	
Thallium	100	110.9	111	85-115	ug/L	
Zinc	200	218.3	109	85-115	ug/L	

Analytical Method: EPA 200.8

Seq Number: 204169 Matrix: Water

Parent Sample Id: ICV 1 ICV Sample Id: ICV 1 Analyzed Date: 06/08/23 11:42

Parameter	Spike Amount	ICV Result	ICV %Rec	Limits	Units	Flag
Antimony	25.00	23.86	95	90-110	ug/L	
Arsenic	50.00	49.42	99	90-110	ug/L	
Beryllium	50.00	44.77	90	90-110	ug/L	
Cadmium	50.00	48.04	96	90-110	ug/L	
Chromium	50.00	48.67	97	90-110	ug/L	
Copper	50.00	49.04	98	90-110	ug/L	
Lead	50.00	51.02	102	90-110	ug/L	
Mercury	1.000	0.9480	95	90-110	ug/L	
Nickel	50.00	48.42	97	90-110	ug/L	
Selenium	50.00	52.36	105	90-110	ug/L	
Silver	5.000	4.935	99	90-110	ug/L	
Thallium	50.00	46.97	94	90-110	ug/L	
Zinc	100	96.44	96	90-110	ug/L	

Analytical Method: EPA 200.8 Dissolved

Seq Number: 204145 Matrix: Water

CCV Sample Id: CCV 4 Analyzed Date: 06/07/23 22:14

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Antimony	50.00	50.45	101	85-115	ug/L	
Arsenic	100	107.2	107	85-115	ug/L	
Beryllium	100	100.3	100	85-115	ug/L	
Cadmium	100	100.4	100	85-115	ug/L	
Chromium	100	104.6	105	85-115	ug/L	
Copper	100	101.8	102	85-115	ug/L	
Lead	100	101.1	101	85-115	ug/L	
Mercury	1.000	0.9680	97	85-115	ug/L	
Nickel	100	101	101	85-115	ug/L	
Selenium	100	108.6	109	85-115	ug/L	
Silver	10.00	10.17	102	85-115	ug/L	
Thallium	100	102.4	102	85-115	ug/L	
Zinc	200	204	102	85-115	ug/L	

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Project Name Quantum Frederick
PSS Project No.: 23060726

Analytical Method: EPA 200.8 Dissolved
Seq Number: 204145 Matrix: Water
CCV Sample Id: CCV 5 Analyzed Date: 06/07/23 23:18

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Antimony	50.00	50.32	101	85-115	ug/L	
Arsenic	100	107.5	108	85-115	ug/L	
Beryllium	100	99.47	99	85-115	ug/L	
Cadmium	100	100.4	100	85-115	ug/L	
Chromium	100	105.8	106	85-115	ug/L	
Copper	100	102.5	103	85-115	ug/L	
Lead	100	114.1	114	85-115	ug/L	
Mercury	1.000	0.9800	98	85-115	ug/L	
Nickel	100	102.1	102	85-115	ug/L	
Selenium	100	109.3	109	85-115	ug/L	
Silver	10.00	10.10	101	85-115	ug/L	
Thallium	100	103.1	103	85-115	ug/L	
Zinc	200	206.3	103	85-115	ug/L	

Analytical Method: EPA 200.8 Dissolved
Seq Number: 204145 Matrix: Water
CCV Sample Id: CCV 6 Analyzed Date: 06/08/23 00:16

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Antimony	50.00	50.91	102	85-115	ug/L	
Arsenic	100	108.9	109	85-115	ug/L	
Beryllium	100	97.54	98	85-115	ug/L	
Cadmium	100	101.1	101	85-115	ug/L	
Chromium	100	106.2	106	85-115	ug/L	
Copper	100	102.1	102	85-115	ug/L	
Lead	100	99.67	100	85-115	ug/L	
Mercury	1.000	0.9860	99	85-115	ug/L	
Nickel	100	101.4	101	85-115	ug/L	
Selenium	100	108.9	109	85-115	ug/L	
Silver	10.00	10.20	102	85-115	ug/L	
Thallium	100	103.1	103	85-115	ug/L	
Zinc	200	206.4	103	85-115	ug/L	

Analytical Method: EPA 200.8 Dissolved

Seq Number: 204145 Matrix: Water
Parent Sample Id: ICV 1 ICV Sample Id: ICV 1 Analyzed Date: 06/07/23 17:55

Parameter	Spike Amount	ICV Result	ICV %Rec	Limits	Units	Flag
Antimony	25.00	25.15	101	90-110	ug/L	
Arsenic	50.00	52.10	104	90-110	ug/L	
Beryllium	50.00	52.46	105	90-110	ug/L	
Cadmium	50.00	51.00	102	90-110	ug/L	
Chromium	50.00	51.17	102	90-110	ug/L	
Copper	50.00	51.27	103	90-110	ug/L	
Lead	50.00	51.12	102	90-110	ug/L	
Mercury	1.000	1.021	102	90-110	ug/L	
Nickel	50.00	50.01	100	90-110	ug/L	
Selenium	50.00	50.97	102	90-110	ug/L	
Silver	5.000	5.090	102	90-110	ug/L	
Thallium	50.00	48.97	98	90-110	ug/L	
Zinc	100	101	101	90-110	ug/L	

Analytical Method: EPA 300.0

Seq Number: 204153 Matrix: Water
CCV Sample Id: CCV-01 Analyzed Date: 06/07/23 14:52

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Fluoride	2.500	2.554	102	90-110	mg/L	

Analytical Method: EPA 300.0

Seq Number: 204153 Matrix: Water
CCV Sample Id: CCV-02 Analyzed Date: 06/07/23 20:41

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Fluoride	2.500	2.664	107	90-110	mg/L	

Analytical Method: EPA 300.0

Seq Number: 204156 Matrix: Water
CCV Sample Id: CCV-01 Analyzed Date: 06/07/23 20:41

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Fluoride	2.500	2.664	107	90-110	mg/L	

Analytical Method: EPA 300.0
Seq Number: 204156 Matrix: Water
CCV Sample Id: CCV-02 Analyzed Date: 06/08/23 00:07

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Fluoride	2.500	2.766	111	90-110	mg/L	X

Analytical Method: EPA 300.0
Seq Number: 204156 Matrix: Water
CCV Sample Id: CCV-03 Analyzed Date: 06/08/23 03:57

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Fluoride	2.500	2.686	107	90-110	mg/L	

Analytical Method: EPA 300.0
Seq Number: 204034 Matrix: Water
Parent Sample Id: ICV-01 ICV Sample Id: ICV-01 Analyzed Date: 06/05/23 15:34

Parameter	Spike Amount	ICV Result	ICV %Rec	Limits	Units	Flag
Fluoride	2.500	2.537	101	90-110	mg/L	

Analytical Method: EPA 300.0
Seq Number: 204037 Matrix: Water
Parent Sample Id: ICV-01 ICV Sample Id: ICV-01 Analyzed Date: 06/05/23 15:34

Parameter	Spike Amount	ICV Result	ICV %Rec	Limits	Units	Flag
Fluoride	2.500	2.537	101	90-110	mg/L	

Analytical Method: SW-846 6020 B
Seq Number: 204171 Matrix: Solid
CCV Sample Id: CCV 2 Analyzed Date: 06/08/23 13:40

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Antimony	50.00	54.79	110	90-110	ug/kg	
Arsenic	100	111.8	112	90-110	ug/kg	X
Beryllium	100	108.2	108	90-110	ug/kg	
Cadmium	100	108.8	109	90-110	ug/kg	
Chromium	100	109.1	109	90-110	ug/kg	
Copper	100	107.5	108	90-110	ug/kg	
Lead	100	113	113	90-110	ug/kg	X
Mercury	1.000	1.052	105	90-110	ug/kg	
Nickel	100	107.5	108	90-110	ug/kg	
Selenium	100	114.9	115	90-110	ug/kg	X
Silver	10.00	10.91	109	90-110	ug/kg	
Thallium	100	110.9	111	90-110	ug/kg	X
Zinc	200	218.3	109	90-110	ug/kg	

Analytical Method: SW-846 6020 B
Seq Number: 204171 Matrix: Solid
CCV Sample Id: CCV 3 Analyzed Date: 06/08/23 14:36

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Antimony	50.00	52.34	105	90-110	ug/kg	
Arsenic	100	108.7	109	90-110	ug/kg	
Beryllium	100	95.15	95	90-110	ug/kg	
Cadmium	100	104.7	105	90-110	ug/kg	
Chromium	100	106.1	106	90-110	ug/kg	
Copper	100	104.9	105	90-110	ug/kg	
Lead	100	109.5	110	90-110	ug/kg	
Mercury	1.000	0.9930	99	90-110	ug/kg	
Nickel	100	104.6	105	90-110	ug/kg	
Selenium	100	111.4	111	90-110	ug/kg	X
Silver	10.00	10.56	106	90-110	ug/kg	
Thallium	100	108.7	109	90-110	ug/kg	
Zinc	200	210.6	105	90-110	ug/kg	

Analytical Method: SW-846 6020 B

Seq Number: 204171 Matrix: Solid

CCV Sample Id: CCV 4 Analyzed Date: 06/08/23 15:18

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Antimony	50.00	52.24	104	90-110	ug/kg	
Arsenic	100	108.7	109	90-110	ug/kg	
Beryllium	100	96.40	96	90-110	ug/kg	
Cadmium	100	103.6	104	90-110	ug/kg	
Chromium	100	106.2	106	90-110	ug/kg	
Copper	100	104.8	105	90-110	ug/kg	
Lead	100	109.3	109	90-110	ug/kg	
Mercury	1.000	1.011	101	90-110	ug/kg	
Nickel	100	105	105	90-110	ug/kg	
Selenium	100	111	111	90-110	ug/kg	X
Silver	10.00	10.44	104	90-110	ug/kg	
Thallium	100	108	108	90-110	ug/kg	
Zinc	200	210.5	105	90-110	ug/kg	

Analytical Method: SW-846 6020 B

Seq Number: 204171 Matrix: Solid

Parent Sample Id: ICV 1 ICV Sample Id: ICV 1 Analyzed Date: 06/08/23 11:42

Parameter	Spike Amount	ICV Result	ICV %Rec	Limits	Units	Flag
Antimony	25.00	23.86	95	90-110	ug/kg	
Arsenic	50.00	49.42	99	90-110	ug/kg	
Beryllium	50.00	44.77	90	90-110	ug/kg	
Cadmium	50.00	48.04	96	90-110	ug/kg	
Chromium	50.00	48.67	97	90-110	ug/kg	
Copper	50.00	49.04	98	90-110	ug/kg	
Lead	50.00	51.02	102	90-110	ug/kg	
Mercury	1.000	0.9480	95	90-110	ug/kg	
Nickel	50.00	48.42	97	90-110	ug/kg	
Selenium	50.00	52.36	105	90-110	ug/kg	
Silver	5.000	4.935	99	90-110	ug/kg	
Thallium	50.00	46.97	94	90-110	ug/kg	
Zinc	100	96.44	96	90-110	ug/kg	

Analytical Method: SW-846 8082 A

Seq Number: 204149 Matrix: Water

CCV Sample Id: CCV-01 Analyzed Date: 06/08/23 07:19

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
PCB-1016	100	88.54	89	80-120	ug/L	
PCB-1016	100	93.49	93	80-120	ug/L	
PCB-1016	100	94.73	95	80-120	ug/L	
PCB-1016	100	92.88	93	80-120	ug/L	
PCB-1016	100	94.81	95	80-120	ug/L	
PCB-1260	100	93.86	94	80-120	ug/L	
PCB-1260	100	93.39	93	80-120	ug/L	
PCB-1260	100	91.40	91	80-120	ug/L	
PCB-1260	100	93.02	93	80-120	ug/L	
PCB-1260	100	91.41	91	80-120	ug/L	

Surrogate	CCV Result	Limits	Units	Flag
Decachlorobiphenyl	111	80-120	%	
Tetrachloro-m-xylene	87	80-120	%	

Analytical Method: SW-846 8082 A

Seq Number: 178961 Matrix: Water

Parent Sample Id: ICV-01 ICV Sample Id: ICV-01 Analyzed Date: 10/20/20 12:18

Parameter	Spike Amount	ICV Result	ICV %Rec	Limits	Units	Flag
PCB-1016	100	107.2	107	80-120	ug/L	
PCB-1016	100	108.8	109	80-120	ug/L	
PCB-1016	100	103.1	103	80-120	ug/L	
PCB-1016	100	106.6	107	80-120	ug/L	
PCB-1016	100	106.7	107	80-120	ug/L	
PCB-1260	100	112	112	80-120	ug/L	
PCB-1260	100	106.8	107	80-120	ug/L	
PCB-1260	100	106	106	80-120	ug/L	
PCB-1260	100	104	104	80-120	ug/L	
PCB-1260	100	103.9	104	80-120	ug/L	

Surrogate	ICV Result	Limits	Units	Flag
Decachlorobiphenyl	82	80-120	%	
Tetrachloro-m-xylene	80	80-120	%	

Analytical Method: SW-846 8082 A

Seq Number: 178961 Matrix: Water
Parent Sample Id: ICV-02 ICV Sample Id: ICV-02 Analyzed Date: 10/20/20 16:36

Parameter	Spike Amount	ICV Result	ICV %Rec	Limits	Units	Flag
PCB-1221	100	104.5	105	80-120	ug/L	
PCB-1221	100	108.4	108	80-120	ug/L	
PCB-1221	100	101.2	101	80-120	ug/L	
PCB-1221	100	102.1	102	80-120	ug/L	
PCB-1221	100	102.3	102	80-120	ug/L	

Surrogate	ICV Result	Limits	Units	Flag

Analytical Method: SW-846 8082 A

Seq Number: 178961 Matrix: Water
Parent Sample Id: ICV-03 ICV Sample Id: ICV-03 Analyzed Date: 10/20/20 19:53

Parameter	Spike Amount	ICV Result	ICV %Rec	Limits	Units	Flag
PCB-1232	100	116.5	117	80-120	ug/L	
PCB-1232	100	116.3	116	80-120	ug/L	
PCB-1232	100	112.7	113	80-120	ug/L	
PCB-1232	100	114.6	115	80-120	ug/L	
PCB-1232	100	114	114	80-120	ug/L	

Surrogate	ICV Result	Limits	Units	Flag

Analytical Method: SW-846 8082 A

Seq Number: 178961 Matrix: Water
Parent Sample Id: ICV-04 ICV Sample Id: ICV-04 Analyzed Date: 10/20/20 23:12

Parameter	Spike Amount	ICV Result	ICV %Rec	Limits	Units	Flag
PCB-1242	100	116.2	116	80-120	ug/L	
PCB-1242	100	110.8	111	80-120	ug/L	
PCB-1242	100	113.8	114	80-120	ug/L	
PCB-1242	100	114.5	115	80-120	ug/L	
PCB-1242	100	113	113	80-120	ug/L	

Surrogate	ICV Result	Limits	Units	Flag

Analytical Method: SW-846 8082 A

Seq Number: 178961 Matrix: Water

Parent Sample Id: ICV-05 ICV Sample Id: ICV-05 Analyzed Date: 10/21/20 02:28

Parameter	Spike Amount	ICV Result	ICV %Rec	Limits	Units	Flag
PCB-1248	100	104.6	105	80-120	ug/L	
PCB-1248	100	106.6	107	80-120	ug/L	
PCB-1248	100	106.7	107	80-120	ug/L	
PCB-1248	100	105.8	106	80-120	ug/L	
PCB-1248	100	106.1	106	80-120	ug/L	

Surrogate	ICV Result	Limits	Units	Flag

Analytical Method: SW-846 8082 A

Seq Number: 178961 Matrix: Water

Parent Sample Id: ICV-06 ICV Sample Id: ICV-06 Analyzed Date: 10/21/20 05:44

Parameter	Spike Amount	ICV Result	ICV %Rec	Limits	Units	Flag
PCB-1254	100	106.1	106	80-120	ug/L	
PCB-1254	100	105.6	106	80-120	ug/L	
PCB-1254	100	107.8	108	80-120	ug/L	
PCB-1254	100	108.1	108	80-120	ug/L	
PCB-1254	100	104.5	105	80-120	ug/L	

Surrogate	ICV Result	Limits	Units	Flag

Analytical Method: SW-846 8260 D

Seq Number: 204112 Matrix: Solid

CCV Sample Id: CCV, VOC-1 Analyzed Date: 06/07/23 09:05

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Acetone	0.06000	0.06262	104	80-120	mg/kg	
Benzene	0.06000	0.06274	105	80-120	mg/kg	
Bromochloromethane	0.06000	0.05448	91	80-120	mg/kg	
Bromodichloromethane	0.06000	0.05844	97	80-120	mg/kg	
Bromoform	0.06000	0.05425	90	80-120	mg/kg	
Bromomethane	0.06000	0.04270	71	80-120	mg/kg	X
2-Butanone (MEK)	0.06000	0.06613	110	80-120	mg/kg	
Carbon Disulfide	0.06000	0.06184	103	80-120	mg/kg	
Carbon tetrachloride	0.06000	0.06438	107	80-120	mg/kg	
Chlorobenzene	0.06000	0.05972	100	80-120	mg/kg	
Chloroethane	0.06000	0.06076	101	80-120	mg/kg	
Chloroform	0.06000	0.05841	97	80-120	mg/kg	
Chloromethane	0.06000	0.05272	88	80-120	mg/kg	
Cyclohexane	0.06000	0.06503	108	80-120	mg/kg	
1,2-Dibromo-3-chloropropane	0.06000	0.05801	97	80-120	mg/kg	
Dibromochloromethane	0.06000	0.05476	91	80-120	mg/kg	
1,2-Dibromoethane	0.06000	0.05671	95	80-120	mg/kg	
1,2-Dichlorobenzene	0.06000	0.06265	104	80-120	mg/kg	
1,3-Dichlorobenzene	0.06000	0.06522	109	80-120	mg/kg	
1,4-Dichlorobenzene	0.06000	0.06194	103	80-120	mg/kg	
Dichlorodifluoromethane	0.06000	0.06631	111	80-120	mg/kg	
1,1-Dichloroethane	0.06000	0.06219	104	80-120	mg/kg	
1,2-Dichloroethane	0.06000	0.05757	96	80-120	mg/kg	
1,1-Dichloroethene	0.06000	0.06219	104	80-120	mg/kg	
1,2-Dichloropropane	0.06000	0.05847	97	80-120	mg/kg	
cis-1,2-Dichloroethene	0.06000	0.05925	99	80-120	mg/kg	
cis-1,3-Dichloropropene	0.06000	0.06232	104	80-120	mg/kg	
trans-1,2-Dichloroethene	0.06000	0.06205	103	80-120	mg/kg	
trans-1,3-Dichloropropene	0.06000	0.06230	104	80-120	mg/kg	
Ethylbenzene	0.06000	0.06476	108	80-120	mg/kg	
2-Hexanone (MBK)	0.06000	0.06644	111	80-120	mg/kg	
Isopropylbenzene	0.06000	0.06935	116	80-120	mg/kg	
Methyl Acetate	0.06000	0.05210	87	80-120	mg/kg	
Methylcyclohexane	0.06000	0.06824	114	80-120	mg/kg	
Methylene chloride	0.06000	0.05406	90	80-120	mg/kg	
4-Methyl-2-Pentanone (MIBK)	0.06000	0.05352	89	80-120	mg/kg	
Methyl-t-Butyl Ether	0.06000	0.06524	109	80-120	mg/kg	
Naphthalene	0.06000	0.05717	95	80-120	mg/kg	
Styrene	0.06000	0.05964	99	80-120	mg/kg	
1,1,2,2-Tetrachloroethane	0.06000	0.06106	102	80-120	mg/kg	
Tetrachloroethene	0.06000	0.06079	101	80-120	mg/kg	
Toluene	0.06000	0.06211	104	80-120	mg/kg	
1,2,3-Trichlorobenzene	0.06000	0.06135	102	80-120	mg/kg	
1,2,4-Trichlorobenzene	0.06000	0.06333	106	80-120	mg/kg	
1,1,1-Trichloroethane	0.06000	0.06712	112	80-120	mg/kg	
1,1,2-Trichloroethane	0.06000	0.05527	92	80-120	mg/kg	
Trichloroethene	0.06000	0.06206	103	80-120	mg/kg	
Trichlorofluoromethane	0.06000	0.06410	107	80-120	mg/kg	
1,1,2-Trichlorotrifluoroethane	0.06000	0.06239	104	80-120	mg/kg	
1,2,4-Trimethylbenzene	0.06000	0.07229	120	80-120	mg/kg	
1,3,5-Trimethylbenzene	0.06000	0.07158	119	80-120	mg/kg	

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QC Summary

Project Name Quantum Frederick
PSS Project No.: 23060726

Analytical Method: SW-846 8260 D

Seq Number: 204112 Matrix: Solid

CCV Sample Id: CCV, VOC-1 Analyzed Date: 06/07/23 09:05

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Vinyl chloride	0.06000	0.06648	111	80-120	mg/kg	
m&p-Xylene	0.1200	0.1243	104	80-120	mg/kg	
o-Xylene	0.06000	0.06144	102	80-120	mg/kg	

Surrogate	CCV Result	Limits	Units	Flag
4-Bromofluorobenzene	104	80-120	%	
Dibromofluoromethane	95	80-120	%	
Toluene-D8	99	80-120	%	

Analytical Method: SW-846 8260 D

Seq Number: 204166 Matrix: Water

CCV Sample Id: CCV-01 Analyzed Date: 06/08/23 09:58

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Acetone	50.00	56.87	114	80-120	ug/L	
Benzene	50.00	53.22	106	80-120	ug/L	
Bromochloromethane	50.00	47.95	96	80-120	ug/L	
Bromodichloromethane	50.00	55.87	112	80-120	ug/L	
Bromoform	50.00	52.02	104	80-120	ug/L	
Bromomethane	50.00	45.66	91	80-120	ug/L	
2-Butanone (MEK)	50.00	59.41	119	80-120	ug/L	
Carbon Disulfide	50.00	58.13	116	80-120	ug/L	
Carbon tetrachloride	50.00	48.93	98	80-120	ug/L	
Chlorobenzene	50.00	51.97	104	80-120	ug/L	
Chloroethane	50.00	58.18	116	80-120	ug/L	
Chloroform	50.00	52.41	105	80-120	ug/L	
Chloromethane	50.00	57.47	115	80-120	ug/L	
Cyclohexane	50.00	57.47	115	80-120	ug/L	
1,2-Dibromo-3-chloropropane	50.00	57.53	115	80-120	ug/L	
Dibromochloromethane	50.00	51.99	104	80-120	ug/L	
1,2-Dibromoethane	50.00	52.78	106	80-120	ug/L	
1,2-Dichlorobenzene	50.00	52.80	106	80-120	ug/L	
1,3-Dichlorobenzene	50.00	52.14	104	80-120	ug/L	
Dichlorodifluoromethane	50.00	56.76	114	80-120	ug/L	
1,4-Dichlorobenzene	50.00	52.37	105	80-120	ug/L	
1,1-Dichloroethane	50.00	56.77	114	80-120	ug/L	
1,2-Dichloroethane	50.00	53.01	106	80-120	ug/L	
cis-1,2-Dichloroethene	50.00	49.81	100	80-120	ug/L	
1,1-Dichloroethene	50.00	45.78	92	80-120	ug/L	
1,2-Dichloropropane	50.00	57.44	115	80-120	ug/L	
cis-1,3-Dichloropropene	50.00	54.27	109	80-120	ug/L	
trans-1,3-Dichloropropene	50.00	48.53	97	80-120	ug/L	
trans-1,2-Dichloroethene	50.00	49.45	99	80-120	ug/L	
Ethylbenzene	50.00	55.08	110	80-120	ug/L	
2-Hexanone (MBK)	50.00	68.42	137	80-120	ug/L	X
Isopropylbenzene	50.00	55.40	111	80-120	ug/L	
Methyl Acetate	50.00	49.86	100	80-120	ug/L	
Methylcyclohexane	50.00	49.72	99	80-120	ug/L	
Methylene chloride	50.00	52.87	106	80-120	ug/L	
4-Methyl-2-Pentanone (MIBK)	50.00	65.96	132	80-120	ug/L	X
Methyl-t-Butyl Ether	50.00	49.08	98	80-120	ug/L	
Naphthalene	50.00	53.86	108	80-120	ug/L	
Styrene	50.00	54.65	109	80-120	ug/L	
1,1,2,2-Tetrachloroethane	50.00	60.22	120	80-120	ug/L	
Tetrachloroethene	50.00	45.63	91	80-120	ug/L	
Toluene	50.00	50.61	101	80-120	ug/L	
1,2,3-Trichlorobenzene	50.00	48.77	98	80-120	ug/L	
1,2,4-Trichlorobenzene	50.00	49.20	98	80-120	ug/L	
1,1,1-Trichloroethane	50.00	48.52	97	80-120	ug/L	
Trichloroethene	50.00	49.35	99	80-120	ug/L	
1,1,2-Trichloroethane	50.00	53.34	107	80-120	ug/L	
Trichlorofluoromethane	50.00	48.55	97	80-120	ug/L	
1,1,2-Trichlorotrifluoroethane	50.00	44.75	90	80-120	ug/L	
1,2,4-Trimethylbenzene	50.00	55.75	112	80-120	ug/L	
1,3,5-Trimethylbenzene	50.00	54.93	110	80-120	ug/L	

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QC Summary

Project Name Quantum Frederick
PSS Project No.: 23060726

Analytical Method: SW-846 8260 D

Seq Number: 204166 Matrix: Water

CCV Sample Id: CCV-01 Analyzed Date: 06/08/23 09:58

Parameter	Spike Amount	CCV Result	CCV %Rec	Limits	Units	Flag
Vinyl chloride	50.00	58.75	118	80-120	ug/L	
m&p-Xylene	100	106.1	106	80-120	ug/L	
o-Xylene	50.00	52.59	105	80-120	ug/L	

Surrogate	CCV Result	Limits	Units	Flag
4-Bromofluorobenzene	107	80-120	%	
Dibromofluoromethane	99	80-120	%	
Toluene-D8	98	80-120	%	

Analytical Method: SW-846 8260 D

Seq Number: 203365 Matrix: Water

Parent Sample Id: ICV-01 ICV Sample Id: ICV-01 Analyzed Date: 05/10/23 12:41

Parameter	Spike Amount	ICV Result	ICV %Rec	Limits	Units	Flag
Acetone	50.00	44.92	90	70-130	ug/L	
Benzene	50.00	47.90	96	70-130	ug/L	
Bromochloromethane	50.00	46.91	94	70-130	ug/L	
Bromodichloromethane	50.00	49.95	100	70-130	ug/L	
Bromoform	50.00	45.02	90	70-130	ug/L	
Bromomethane	50.00	46.46	93	70-130	ug/L	
2-Butanone (MEK)	50.00	45.39	91	70-130	ug/L	
Carbon Disulfide	50.00	49.58	99	70-130	ug/L	
Carbon tetrachloride	50.00	48.79	98	70-130	ug/L	
Chlorobenzene	50.00	47.96	96	70-130	ug/L	
Chloroethane	50.00	47.23	94	70-130	ug/L	
Chloroform	50.00	47.86	96	70-130	ug/L	
Chloromethane	50.00	47.85	96	70-130	ug/L	
Cyclohexane	50.00	48.54	97	70-130	ug/L	
1,2-Dibromo-3-chloropropane	50.00	44.59	89	70-130	ug/L	
Dibromochloromethane	50.00	46.12	92	70-130	ug/L	
1,2-Dibromoethane	50.00	47.99	96	70-130	ug/L	
1,2-Dichlorobenzene	50.00	47.36	95	70-130	ug/L	
1,3-Dichlorobenzene	50.00	47.53	95	70-130	ug/L	
Dichlorodifluoromethane	50.00	42.92	86	70-130	ug/L	
1,4-Dichlorobenzene	50.00	47.56	95	70-130	ug/L	
1,1-Dichloroethane	50.00	48.31	97	70-130	ug/L	
1,2-Dichloroethane	50.00	47.38	95	70-130	ug/L	
cis-1,2-Dichloroethene	50.00	47.15	94	70-130	ug/L	
1,1-Dichloroethene	50.00	47.17	94	70-130	ug/L	
1,2-Dichloropropane	50.00	48.24	96	70-130	ug/L	
cis-1,3-Dichloropropene	50.00	50.40	101	70-130	ug/L	
trans-1,3-Dichloropropene	50.00	46.31	93	70-130	ug/L	
trans-1,2-Dichloroethene	50.00	46.78	94	70-130	ug/L	
Ethylbenzene	50.00	49.23	98	70-130	ug/L	
2-Hexanone (MBK)	50.00	47.16	94	70-130	ug/L	
Isopropylbenzene	50.00	49.22	98	70-130	ug/L	
Methyl Acetate	50.00	44.65	89	70-130	ug/L	
Methylcyclohexane	50.00	49.09	98	70-130	ug/L	
Methylene chloride	50.00	46.97	94	70-130	ug/L	
4-Methyl-2-Pentanone (MIBK)	50.00	46.44	93	70-130	ug/L	
Methyl-t-Butyl Ether	50.00	46.61	93	70-130	ug/L	
Naphthalene	50.00	46.34	93	70-130	ug/L	
Styrene	50.00	50.11	100	70-130	ug/L	
1,1,2,2-Tetrachloroethane	50.00	46.51	93	70-130	ug/L	
Tetrachloroethene	50.00	47.08	94	70-130	ug/L	
Toluene	50.00	47.80	96	70-130	ug/L	
1,2,3-Trichlorobenzene	50.00	45.40	91	70-130	ug/L	
1,2,4-Trichlorobenzene	50.00	46.02	92	70-130	ug/L	
1,1,1-Trichloroethane	50.00	48.14	96	70-130	ug/L	
Trichloroethene	50.00	47.39	95	70-130	ug/L	
1,1,2-Trichloroethane	50.00	47.10	94	70-130	ug/L	
Trichlorofluoromethane	50.00	47.72	95	70-130	ug/L	
1,1,2-Trichlorotrifluoroethane	50.00	47.53	95	70-130	ug/L	
1,2,4-Trimethylbenzene	50.00	49.21	98	70-130	ug/L	
1,3,5-Trimethylbenzene	50.00	49.04	98	70-130	ug/L	

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QC Summary

Project Name Quantum Frederick
PSS Project No.: 23060726

Analytical Method: SW-846 8260 D

Seq Number: 203365 Matrix: Water
Parent Sample Id: ICV-01 ICV Sample Id: ICV-01 Analyzed Date: 05/10/23 12:41

Parameter	Spike Amount	ICV Result	ICV %Rec	Limits	Units	Flag
Vinyl chloride	50.00	39.90	80	70-130	ug/L	
m&p-Xylene	100	98.57	99	70-130	ug/L	
o-Xylene	50.00	48.32	97	70-130	ug/L	

Surrogate	ICV Result	Limits	Units	Flag
4-Bromofluorobenzene	101	70-130	%	
Dibromofluoromethane	99	70-130	%	
Toluene-D8	100	70-130	%	

Analytical Method: SW-846 8260 D

Seq Number: 203852 Matrix: Solid

Parent Sample Id: ICV-01 ICV Sample Id: ICV-01 Analyzed Date: 05/30/23 15:40

Parameter	Spike Amount	ICV Result	ICV %Rec	Limits	Units	Flag
Acetone	0.06000	0.06517	109	70-130	mg/kg	
Benzene	0.06000	0.05282	88	70-130	mg/kg	
Bromochloromethane	0.06000	0.05594	93	70-130	mg/kg	
Bromodichloromethane	0.06000	0.05595	93	70-130	mg/kg	
Bromoform	0.06000	0.06117	102	70-130	mg/kg	
Bromomethane	0.06000	0.06458	108	70-130	mg/kg	
2-Butanone (MEK)	0.06000	0.06587	110	70-130	mg/kg	
Carbon Disulfide	0.06000	0.05436	91	70-130	mg/kg	
Carbon tetrachloride	0.06000	0.05395	90	70-130	mg/kg	
Chlorobenzene	0.06000	0.05691	95	70-130	mg/kg	
Chloroethane	0.06000	0.05668	94	70-130	mg/kg	
Chloroform	0.06000	0.05330	89	70-130	mg/kg	
Chloromethane	0.06000	0.05405	90	70-130	mg/kg	
Cyclohexane	0.06000	0.05301	88	70-130	mg/kg	
1,2-Dibromo-3-chloropropane	0.06000	0.06109	102	70-130	mg/kg	
Dibromochloromethane	0.06000	0.06066	101	70-130	mg/kg	
1,2-Dibromoethane	0.06000	0.06310	105	70-130	mg/kg	
1,2-Dichlorobenzene	0.06000	0.05619	94	70-130	mg/kg	
1,3-Dichlorobenzene	0.06000	0.05729	95	70-130	mg/kg	
1,4-Dichlorobenzene	0.06000	0.05827	97	70-130	mg/kg	
Dichlorodifluoromethane	0.06000	0.05405	90	70-130	mg/kg	
1,1-Dichloroethane	0.06000	0.05314	89	70-130	mg/kg	
1,2-Dichloroethane	0.06000	0.05615	94	70-130	mg/kg	
1,1-Dichloroethene	0.06000	0.05345	89	70-130	mg/kg	
1,2-Dichloropropane	0.06000	0.05312	89	70-130	mg/kg	
cis-1,2-Dichloroethene	0.06000	0.05290	88	70-130	mg/kg	
cis-1,3-Dichloropropene	0.06000	0.05850	98	70-130	mg/kg	
trans-1,2-Dichloroethene	0.06000	0.05447	91	70-130	mg/kg	
trans-1,3-Dichloropropene	0.06000	0.05983	100	70-130	mg/kg	
Ethylbenzene	0.06000	0.05757	96	70-130	mg/kg	
2-Hexanone (MBK)	0.06000	0.06537	109	70-130	mg/kg	
Isopropylbenzene	0.06000	0.05884	98	70-130	mg/kg	
Methyl Acetate	0.06000	0.05831	97	70-130	mg/kg	
Methylcyclohexane	0.06000	0.05678	95	70-130	mg/kg	
Methylene chloride	0.06000	0.05679	95	70-130	mg/kg	
4-Methyl-2-Pentanone (MIBK)	0.06000	0.06215	104	70-130	mg/kg	
Methyl-t-Butyl Ether	0.06000	0.05756	96	70-130	mg/kg	
Naphthalene	0.06000	0.05233	87	70-130	mg/kg	
Styrene	0.06000	0.06042	101	70-130	mg/kg	
1,1,2,2-Tetrachloroethane	0.06000	0.06205	103	70-130	mg/kg	
Tetrachloroethene	0.06000	0.05372	90	70-130	mg/kg	
Toluene	0.06000	0.05475	91	70-130	mg/kg	
1,2,3-Trichlorobenzene	0.06000	0.05386	90	70-130	mg/kg	
1,2,4-Trichlorobenzene	0.06000	0.05359	89	70-130	mg/kg	
1,1,1-Trichloroethane	0.06000	0.05515	92	70-130	mg/kg	
1,1,2-Trichloroethane	0.06000	0.05741	96	70-130	mg/kg	
Trichloroethene	0.06000	0.05396	90	70-130	mg/kg	
Trichlorofluoromethane	0.06000	0.05477	91	70-130	mg/kg	
1,1,2-Trichlorotrifluoroethane	0.06000	0.05367	89	70-130	mg/kg	
1,2,4-Trimethylbenzene	0.06000	0.05905	98	70-130	mg/kg	
1,3,5-Trimethylbenzene	0.06000	0.05975	100	70-130	mg/kg	

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QC Summary

Project Name Quantum Frederick
PSS Project No.: 23060726

Analytical Method: SW-846 8260 D

Seq Number: 203852 Matrix: Solid
Parent Sample Id: ICV-01 ICV Sample Id: ICV-01 Analyzed Date: 05/30/23 15:40

Parameter	Spike Amount	ICV Result	ICV %Rec	Limits	Units	Flag
Vinyl chloride	0.06000	0.05806	97	70-130	mg/kg	
m&p-Xylene	0.1200	0.1135	95	70-130	mg/kg	
o-Xylene	0.06000	0.05492	92	70-130	mg/kg	

Surrogate	ICV Result	Limits	Units	Flag
4-Bromofluorobenzene	101	70-130	%	
Dibromofluoromethane	99	70-130	%	
Toluene-D8	97	70-130	%	

X = Recovery outside of QC Criteria

PHASE SEPARATION SCIENCE

CHAIN OF CUSTODY FORM

All fields must be completed accurately. Shaded sections for lab use only.

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① PSS CLIENT: GTA | OFFICE LOCATION: BALTIMORE | PSS Work Order #: 23060726 | PAGE 1 OF 2

BILL TO (if different): | PHONE #: (443) 286-5506

CONTACT: KEVIN PLOCEK | EMAIL: KPLOCEK@GTAENG.COM

PROJECT NAME: 31223314 | PROJECT #: 31223314

SITE LOCATION: FREDERICK | P.O. #:

SAMPLER(S): CMM | DW CERT #:

Matrix Codes: **SW**=Surface Water **DW**=Drinking Water **GW**=Ground Water **WW**=Waste Water **O**=Oil **S**=Soil **SOL**=Solid **A**=Air **WI**=Wipe

Preservative Codes: 1 - HCL; 2 - H_2SO_4; 3 - HNO_3; 4 - NaOH; 5 - E624KIT; 6 - ICE; 7 - Sodium Thiosulfate; 8 - Ascorbic Acid; 9 - TerraCore Kit

② ③

PSS ID	SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	MATRIX Use Codes	# OF CONTAINERS	SAMPLE TYPE: C=COMPOSITE G=GRAB	Preservatives Use Codes	Analysis/ Method Required: VOCs	Total Metals	Dissolved Metals	Fluoride	Total Cyanide	Chlorine	PCBs					
1	GTA-TC-11	6/7/23	10:00	SW	8	G		X	X	X	X	X	X						
2	GTA-TC-11	6/7/23	10:00	S	2	G		X	X		X	X		X					
3	GTA-TC-10	6/7/23	10:40	SW	8	G		X	X	X	X	X	X						
4	GTA-TC-10	6/7/23	10:40	S	2	G		X	X		X	X		X					
5	DUP	6/7/23	11:00	SW	8	G		X	X	X	X	X	X						
6	DUP	6/7/23	11:00	S	2	G		X	X		X	X		X					
7	GTA-TC-9	6/7/23	11:30	SW	8	G		X	X	X	X	X	X						
8	GTA-TC-9	6/7/23	11:30	S	2	G		X	X		X	X		X					
9	GTA-TC-8	6/7/23	12:00	SW	8	G		X	X	X	X	X	X						
10	GTA-TC-8	6/7/23	12:00	S	2	G		X	X		X	X		X					

⑤

Relinquished By: (1)	Date	Time	Received By:
CMM	6/7/23	1500	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

④

Requested TAT (One TAT per COC)
☐ 5-Day ☐ 3-Day ☐ 2-Day
☐ Next Day ☒ Emergency ☐ Other

STATE RESULTS REPORTED TO:
☐ MD ☐ DE ☐ PA ☐ VA ☐ WV
☐ OTHER _____

COMPLIANCE?
☐ DW ☐ WW

EDD FORMAT TYPE

Ice Present: YES

Custody Seal: ABS

Coolers: 2 Temp: 6.2-9.3°C

Shipping Carrier: CLIENT

Special Instructions:

PHASE SEPARATION SCIENCE

CHAIN OF CUSTODY FORM

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① PSS CLIENT: GTA | OFFICE LOCATION: BALTIMORE | PSS Work Order #: 25060726 | PAGE 2 OF 2

BILL TO (if different): | PHONE #: (443) 28C-55CC

CONTACT: KEVIN PLOCEK | EMAIL: KPLOCEK@GTAENV.COM

PROJECT NAME: 3122314 | PROJECT #: 3122314

SITE LOCATION: FREDERICK | P.O. #:

SAMPLER(S): CMM | DW CERT #:

Matrix Codes: **SW**=Surface Water **DW**=Drinking Water **GW**=Ground Water **WW**=Waste Water **O**=Oil **S**=Soil **SOL**=Solid **A**=Air **WI**=Wipe

② Preservatives Use Codes | Analysis/ Method Required ③ | Preservative Codes: 1 - HCL; 2 - H_2SO_4; 3 - HNO_3; 4 - NaOH; 5 - E624KIT; 6 - ICE; 7 - Sodium Thiosulfate; 8 - Ascorbic Acid; 9 - TerraCore Kit

PSS ID	SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	MATRIX Use Codes	# OF CONTAINERS	SAMPLE TYPE: C=COMPOSITE G=GRAB	VOCs	Total Metals	Dissolved Metals	Fluoride	Total Cyanide	Chloride	PCBs
11	GTA-TC-7	6/7/23	12:40	SW	8	G	X	X	X	X	X	X	
12	GTA-TC-7	6/7/23	12:40	S	2	G	X	X	[illegible]	X	X		X
13	GTA-TC-1	6/7/23	13:15	SW	8	G	X	X	X	X	X	X	
14	GTA-TC-1	6/7/23	13:15	S	2	G	X	X		X	X		X

⑤

Relinquished By: (1)	Date	Time	Received By:
CMM	6/7/23	1500	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

④ **Requested TAT (One TAT per COC)**
☐ 5-Day ☐ 3-Day ☐ 2-Day
☐ Next Day ☒ Emergency ☐ Other

STATE RESULTS REPORTED TO:
☐ MD ☐ DE ☐ PA ☐ VA ☐ WV
☐ OTHER

COMPLIANCE?
☐ DW ☐ WW

EDD FORMAT TYPE

Special Instructions:

Ice Present: PRES

Custody Seal: ABS

Coolers: 2 Temp: 6.2-9.3°C

Shipping Carrier: CLIENT

This chain of custody is a legal document. The client (PSS Client), by signing, or having client's agent sign, this "Chain of Custody Form", agrees to pay for the above requested services per the latest version of the Service Brochure or PSS-provided quotation including any and all attorney's or other reasonable fees if collection becomes necessary.

PHASE SEPARATION SCIENCE

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Sample Receipt Checklist

Project Name: Quantum Frederick
PSS Project No.: 23060726

Client Name GTA - Baltimore
Disposal Date 07/12/2023

Received By Lynn Jackson
Date Received 06/07/2023 03:00:00 PM
Delivered By Client
Tracking No Not Applicable
Logged In By Tyler Enwright

Shipping Container(s)
No. of Coolers 1

		Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	9.3
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

Documentation

		Sampler Name	Colleen McMullen
COC agrees with sample labels?	Yes	MD DW Cert. No.	N/A
Chain of Custody	Yes		

Sample Container

		Custody Seal(s) Intact?	Not Applicable
Appropriate for Specified Analysis?	Yes	Seal(s) Signed / Dated	Not Applicable
Intact?	Yes		
Labeled and Labels Legible?	Yes		

Holding Time

		Total No. of Samples Received	14
All Samples Received Within Holding Time(s)?	Yes	Total No. of Containers Received	72

Preservation

Total Metals	(pH<2)	Yes
Dissolved Metals, filtered within 15 minutes of collection	(pH<2)	No
Orthophosphorus, filtered within 15 minutes of collection		N/A
Cyanides	(pH>12)	Yes
Sulfide	(pH>9)	N/A
TOC, DOC (field filtered), COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes
624 VOC (Rcvd at least one unpreserved VOA vial)		N/A
524 VOC (Rcvd with trip blanks)	(pH<2)	N/A

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Sample Receipt Checklist

Project Name: Quantum Frederick
PSS Project No.: 23060726

Client Name	GTA - Baltimore	**Received By**	Lynn Jackson
Disposal Date	07/12/2023	**Date Received**	06/07/2023 03:00:00 PM
		Delivered By	Client
		Tracking No	Not Applicable
		Logged In By	Tyler Enwright

Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Sample aliquots for dissolved metals were not field filtered and were received unpreserved; as such, associated sample results are not suitable for compliance under the Clean Water Act and/or Safe Drinking Water Act.

Samples Inspected/Checklist Completed By: Tyler Enwright Date: 06/07/2023

PM Review and Approval: Lynn Jackson Date: 06/07/2023