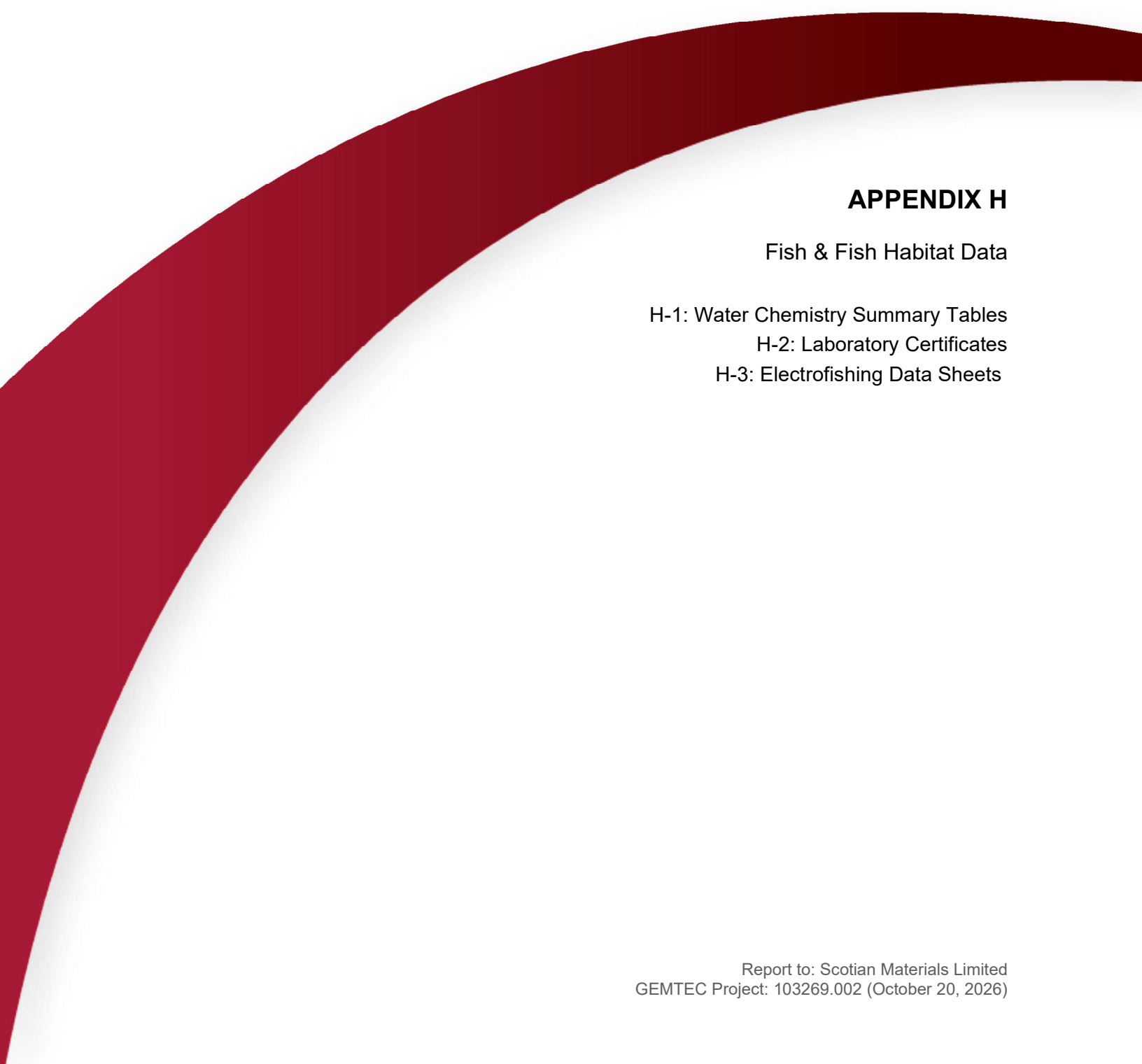




APPENDIX H

Fish & Fish Habitat Data

H-1: Water Chemistry Summary Tables

H-2: Laboratory Certificates

H-3: Electrofishing Data Sheets

Table 1: Total Metals in Surface Water

Metals	Units	RDL	Screening Criteria	Results			
			CCME WQG FWAL	2025-SW01	2025-SW01	2025-SW02	2025-SW02
			MAC ¹	2025-06-06 11:38	2025-11-27 12:00	2025-06-06 13:48	2025-11-27 12:00
Aluminum	µg/L	1	(see note) ^a	22	153	13	86
Antimony	µg/L	0.1	NV	<2	<2	<2	<2
Arsenic	µg/L	0.1	5	<2	<2	<2	<2
Barium	µg/L	0.1	NV	28	14	11	9
Beryllium	µg/L	0.02	NV	<2	<2	<2	<2
Bismuth	µg/L	0.05	NV	<2	<2	<2	<2
Boron	µg/L	10	1500	66	<50	33	<50
Cadmium	µg/L	0.005	(see note) ^b	0.17	<0.09	<0.09	<0.09
Calcium	µg/L	50	NV	0.0281	0.0126	0.0256	0.017
Cesium	µg/L	0.01	NV	-	-	-	-
Chromium	µg/L	0.5	NV	<1	1	<1	<1
Cobalt	µg/L	0.1	NV	<1	<1	<1	<1
Copper	µg/L	0.2	(see note) ^c	1	2	<1	25
Iron	µg/L	10	300	<50	165	<50	80
Lead	µg/L	0.05	(see note) ^d	<0.5	<0.5	<0.5	<0.5
Lithium	µg/L	1	NV	-	-	-	-
Magnesium	µg/L	5	NV	0.002	-	0.0028	-
Manganese	µg/L	0.1	(see note) ^e	44	1	121	1.7
Mercury	µg/L	0.005	NV	<0.026	16	<0.026	39
Molybdenum	µg/L	0.05	73	<2	<2	<2	<2
Nickel	µg/L	0.5	(see note) ^f	<2	<2	<2	<2
Phosphorous	µg/L	50	NV	0.0008	0.00081	0.00096	0.00093
Potassium	µg/L	50	NV	0.0017	0.0011	0.002	0.0018
Rubidium	µg/L	0.2	NV	-	-	-	-
Selenium	µg/L	0.05	1	<1	<1	<1	<1
Silver	µg/L	0.01	0.25	0.2	<0.1	<0.1	<0.1
Sodium	µg/L	50	NV	0.168	0.0612	0.0668	0.0322
Strontium	µg/L	0.2	NV	94	44	82	46
Sulfur	µg/L	-	NV	-	-	-	-
Tellurium	µg/L	0.2	NV	-	-	-	-
Thallium	µg/L	0.01	0.8	<0.1	<0.1	<0.1	<0.1
Thorium	µg/L	0.1	NV	-	-	-	-
Tin	µg/L	0.1	NV	<2	<2	<2	<2
Titanium	µg/L	0.3	NV	<2	5	<2	3
Tungsten	µg/L	0.1	NV	-	-	-	-
Uranium	µg/L	0.01	15	0.2	<0.2	<0.2	<0.2
Vanadium	µg/L	0.5	NV	<2	<2	<2	<2
Zinc	µg/L	1	30	-	-	-	-
Zirconium	µg/L	0.2	NV	<5	<5	<5	<5

Notes:

1. Canadian Council of Ministers of the Environment (CCME), current to 2017. Canadian Water Quality Guidelines (WQGs) for the Protection of Aquatic Life (freshwater, long term)
Exceedances of the CCME WQGs are **bold and underlined**
NV = No value; ND = No data; "-" = Not applicable
 - a. Aluminum guideline for FWAL = 5 µg/L for pH <6.5 and 100 µg/L for pH ≥6.5.
 - b. Cadmium guideline for FWAL is 0.04 ug/L at hardness <17 mg/L, otherwise calculated as $10^{(0.83[\log(\text{hardness})]-2.46)}$
 - c. Copper guideline = When water hardness is 0 to <82 mg/L, the guideline is 2 µg/L; when hardness is > 82 to < 180 mg/L equation: $e^{0.845[\ln(\text{hardness})]} - 1.465 \times 0.2$ µg/L is used to determine the copper guideline. At hardness >180 mg/L the guideline is 4 µg/L.
 - d. Lead guideline = When water hardness is 0 to <60 mg/L, the guideline is 1ug/L; when hardness is >60 to < 180 mg/L equation: $e^{1.273[\ln(\text{hardness})]} - 4.705$ ug/L is used to determine the lead guideline. At hardness >180 mg/L the guideline is 7 ug/L.
 - e. Manganese guideline calculated using the Manganese - Canadian Water Quality Guideline and Benchmark Calculator provided in Appendix B of the Scientific Criteria Document for the Development of the Canadian Water Quality Guidelines for the Protection of Aquatic Life. Criteria for manganese was posted December 19, 2019. All results were compared to guidelines in effect at the time of sampling.
 - f. Nickel guideline = When water hardness is 0 to <60 mg/L, the guideline is 25 ug/L; when hardness is > 60 to < 180 mg/L equation: $e^{0.76[\ln(\text{hardness})]} + 1.06$ ug/L is used to determine the nickel guideline. At hardness >180 mg/L the guideline is 150 ug/L.

Table 2: General Chemistry Concentrations in Surface Water

General Chemistry ²	Units	2024 RDL	Screening Criteria	Analytical Results			
			CCMW WQGs FWAL	2025-SW01	2025-SW01	2025-SW02	2025-SW02
				2025-06-06 11:38	2025-11-27 12:00	2025-06-06 13:48	2025-11-27 12:00
Calculated Parameters							
Anion Sum	mg/L	-	-	10.8	3.7	5.43	2.69
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	1	-	32	21	52	37
Calculated TDS	mg/L	10	-	588	215	293	154
Carb. Alkalinity (calc. as CaCO3)	mg/L	1	-	<10	<10	<10	<10
Cation Sum	me/L	-	-	8.92	3.43	4.47	2.45
Hardness (CaCO3)	mg/L	0.5	-	78.4	35.6	75.5	49.4
Ion Balance (% Difference)	%	-	-	9.6	3.8	9.7	4.6
Langelier Index (@ 20C)	N/A	-	-	-1.49	-3.61	-1.86	-3.22
Langelier Index (@ 4C)	N/A	-	-	-1.81	-3.93	-2.18	-3.54
Nitrate (N)	mg/L	0.02	3 ^a	0.18	0.23	0.16	0.29
Saturation pH (@ 20C)	N/A	-	-	8.71	9.2	8.51	8.81
Saturation pH (@ 4C)	N/A	-	-	9.03	9.52	8.83	9.13
Inorganics							
Total Alkalinity (Total as CaCO3)	mg/L	1	-	32	21	52	37
Dissolved Chloride (Cl-)	mg/L	0.5		336	91	131	44
Colour	TCU	2	-	<5	16	5	12
Nitrate + Nitrite (N)	mg/L	0.0032	-	0.29	0.91	0.16	0.86
Nitrite (N)	mg/L	0.01	0.06	0.11	0.68	<0.05	0.57
Nitrogen (Ammonia Nitrogen)	mg/L	0.005	(see note) ^b	<0.03	<0.03	<0.03	<0.03
Total Organic Carbon (C)	mg/L	0.5	-	2.3	4.2	3.3	4.7
Orthophosphate (P)	mg/L	0.001	-	<0.01	<0.01	<0.01	<0.01
pH	pH	-	6.5-9.0	7.22	5.59	6.65	5.59
Reactive Silica (SiO2)	mg/L	-	-	3.3	3.6	3.7	4
Dissolved Sulphate (SO4)	mg/L	0.3	-	32	31	33	31
Turbidity	NTU	0.1	-	1.65	4.01	1.37	2.13
Conductivity	uS/cm	1	-	1140	410	563	276

Notes:

1. Canadian Council of Ministers of the Environment (CCME), current to 2017. Canadian Water Quality Guidelines (WQGs) for the Protection of Aquatic Life (freshwater, long term)
2. General chemistry parameters are generally not considered potential COCs with the exception of chloride and sulphate.

- a. (1) Guideline references CCME Factsheet for the conversion of NO₃-L-1 to NO₃-N-L-1. The nitrate guideline in Table 2 within the factsheet was divided by 4.43 to present the guideline as "Nitrate (as N)".

Exceedances of the CCMW WQGs are **bold and underlined**

NV = No value; ND = No data; "-" = Not applicable

Table 3: Surface Water Field Parameters

Parameter	Unit	Screening Criteria	Results			
		CCME WQG FWAL	2025-SW01	2025-SW01	2025-SW02	2025-SW02
			6/6/2025	11/27/2025	6/6/2025	11/27/2025
pH	units	6.5-9	7.3	6.72	7.47	6.94
Conductivity C	µS/cm	NV	1120	424.1	558	289.6
Temperature	°C	-	12.6	8.2	85.6	7.8
Dissolved Oxygen	mg/L	6.5 ^a	7.31	9.54	13.1	11.6

Notes:

1. Canadian Council of Ministers of the Environment (CCME) Water Quality Guidelines (WQGs) for protection of freshwater aquatic life (FWAL).
- a. Lowest acceptable dissolved oxygen concentration for cold water biota; other life stages.

Exceedances of the CCME WQGs are **bold and underlined**

NV = No value; ND = No data; "-" = Not applicable

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ATTENTION TO: Jordan Murphy

PROJECT: 103269.002

AGAT WORK ORDER: 25X307046

WATER ANALYSIS REVIEWED BY: Chuandi Zhang, Inorganic Supervisor

DATE REPORTED: Jun 23, 2025

PAGES (INCLUDING COVER): 12

VERSION*: 2

Should you require any information regarding this analysis please contact your client services representative at (902) 468-8718

*Notes

VERSION 2:Version 2.0 supersedes Version 1.0. Work order 25X307046, version 1, issued June 18, 2025. Full report. 2025/6/23 JFH

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AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 25X307046

PROJECT: 103269.002

CLIENT NAME: GEMTEC LIMITED-HALIFAX
SAMPLING SITE:

ATTENTION TO: Jordan Murphy
SAMPLED BY:

11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
CANADA B3B 1M2
TEL (902)468-8718
FAX (902)468-8924
<http://www.agatlabs.com>

Mercury Analysis in Water (Total)				
DATE RECEIVED: 2025-06-06		DATE REPORTED: 2025-06-23		
SAMPLE DESCRIPTION:		2025-SW01	2025-SW02	
SAMPLE TYPE:		Water	Water	
DATE SAMPLED:		2025-06-06 11:38	2025-06-06 13:48	
Parameter	Unit	G / S	RDL	6800703
Total Mercury	ug/L	0.026	<0.026	<0.026

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
Analysis performed at AGAT Halifax (unless marked by *)

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 25X307046

PROJECT: 103269.002

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FAX (902)468-8924
<http://www.agatlabs.com>

CLIENT NAME: GEMTEC LIMITED-HALIFAX

SAMPLING SITE:

ATTENTION TO: Jordan Murphy

SAMPLED BY:

Standard Water Analysis + Total Metals						DATE REPORTED: 2025-06-23
SAMPLE DESCRIPTION: 2025-SW01						2025-SW02
SAMPLE TYPE: Water						Water
DATE SAMPLED: 2025-06-06 11:38						2025-06-06 13:48
Parameter	Unit	G / S	RDL	RDL		
pH		7.22		6.65		
Reactive Silica as SiO2	mg/L	3.3	0.5	0.5	3.7	
Chloride	mg/L	336	5	2	131	
Fluoride	mg/L	<0.12	0.12	0.12	<0.12	
Sulphate	mg/L	32	2	2	33	
Alkalinity	mg/L	32	5	5	52	
True Color	TCU	<5	5	5	5	
Turbidity	NTU	1.65	0.50	0.50	1.37	
Electrical Conductivity	umho/cm	1	1140	1	563	
Nitrate + Nitrite as N	mg/L	0.29	0.05	0.05	0.16	
Nitrate as N	mg/L	0.18	0.05	0.05	0.16	
Nitrite as N	mg/L	0.11	0.05	0.05	<0.05	
Ammonia as N	mg/L	<0.03	0.03	0.03	<0.03	
Total Organic Carbon	mg/L	2.3	0.50	0.50	3.3	
Ortho-Phosphate as P	mg/L	<0.01	0.01	0.01	<0.01	
Total Sodium	mg/L	168	0.1	0.1	66.8	
Total Potassium	mg/L	1.7	0.1	0.1	2.0	
Total Calcium	mg/L	28.1	0.1	0.1	25.6	
Total Magnesium	mg/L	2.0	0.1	0.1	2.8	
Bicarb. Alkalinity (as CaCO3)	mg/L	32	5	5	52	
Carb. Alkalinity (as CaCO3)	mg/L	<10	10	10	<10	
Hydroxide	mg/L	<5	5	5	<5	
Calculated TDS	mg/L	588	1	1	293	
Hardness	mg/L	78.4			75.5	
Langelier Index (@20C)	NA	-1.49			-1.86	
Langelier Index (@ 4C)	NA	-1.81			-2.18	
Saturation pH (@ 20C)	NA	8.71			8.51	
Saturation pH (@ 4C)	NA	9.03			8.83	
Anion Sum	me/L	10.8			5.43	

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PROJECT: 103269.002

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CLIENT NAME: GEMTEC LIMITED-HALIFAX

SAMPLING SITE:

ATTENTION TO: Jordan Murphy

SAMPLED BY:

Standard Water Analysis + Total Metals										DATE REPORTED: 2025-06-23
DATE RECEIVED: 2025-06-06										
SAMPLE DESCRIPTION:		2025-SW01		2025-SW02						
SAMPLE TYPE:		Water		Water						
DATE SAMPLED:		2025-06-06 11:38		2025-06-06 13:48						
Parameter	Unit	G / S	RDL	6800686	RDL	6800703				
Cation sum	me/L			8.92		4.47				
% Difference/ Ion Balance	%			9.6		9.7				
Total Aluminum	ug/L		5	22	5	13				
Total Antimony	ug/L		2	<2	2	<2				
Total Arsenic	ug/L		2	<2	2	<2				
Total Barium	ug/L		5	28	5	11				
Total Beryllium	ug/L		2	<2	2	<2				
Total Bismuth	ug/L		2	<2	2	<2				
Total Boron	ug/L		5	66	5	33				
Total Cadmium	ug/L		0.09	0.17	0.09	<0.09				
Total Chromium	ug/L		1	<1	1	<1				
Total Cobalt	ug/L		1	<1	1	<1				
Total Copper	ug/L		1	1	1	<1				
Total Iron	ug/L		50	<50	50	<50				
Total Lead	ug/L		0.5	<0.5	0.5	<0.5				
Total Manganese	ug/L		2	44	2	121				
Total Molybdenum	ug/L		2	<2	2	<2				
Total Nickel	ug/L		2	<2	2	<2				
Total Phosphorous	mg/L		0.02	0.80	0.02	0.96				
Total Selenium	ug/L		1	<1	1	<1				
Total Silver	ug/L		0.1	0.2	0.1	<0.1				
Total Strontium	ug/L		5	94	5	82				
Total Thallium	ug/L		0.1	<0.1	0.1	<0.1				
Total Tin	ug/L		2	<2	2	<2				
Total Titanium	ug/L		2	<2	2	<2				
Total Uranium	ug/L		0.2	0.2	0.2	<0.2				
Total Vanadium	ug/L		2	<2	2	<2				
Total Zinc	ug/L		5	<5	5	<5				

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CLIENT NAME: GEMTEC LIMITED-HALIFAX
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Certificate of Analysis

AGAT WORK ORDER: 25X307046

PROJECT: 103269.002

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ATTENTION TO: Jordan Murphy
SAMPLED BY:

Standard Water Analysis + Total Metals	
DATE RECEIVED: 2025-06-06	DATE REPORTED: 2025-06-23

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6800686-6800703 % Difference / Ion Balance, Hardness, Langelier Index, Nitrate + Nitrite, Hydroxide and Saturation pH are calculated parameters. The calculated parameters are non-accredited. The component parameters of the calculations are accredited.

pH has been analyzed past the recommended holding time of 15 minutes from sampling. Field measurement recommended for most accurate result

Analysis performed at AGAT Halifax (unless marked by *)

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Certificate of Analysis

AGAT WORK ORDER: 25X307046

PROJECT: 103269.002

CLIENT NAME: GEMTEC LIMITED-HALIFAX
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SAMPLED BY:

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FAX (902)468-8924
<http://www.agatlabs.com>

TSS				DATE RECEIVED: 2025-06-06	DATE REPORTED: 2025-06-23
SAMPLE DESCRIPTION: 2025-SW01 2025-SW02					
SAMPLE TYPE: Water		Water			
DATE SAMPLED: 2025-06-06 11:38		2025-06-06 13:48			
Parameter	Unit	G / S	RDL	6800686	6800703
Total Suspended Solids	mg/L	5	<5	<5	<5

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
6800686-6800703 pH has been analyzed past the recommended holding time of 15 minutes from sampling. Field measurement recommended for most accurate result
Analysis performed at AGAT Halifax (unless marked by *)

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 25X307046

PROJECT: 103269.002

CLIENT NAME: GEMTEC LIMITED-HALIFAX
SAMPLING SITE:

ATTENTION TO: Jordan Murphy
SAMPLED BY:

11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
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<http://www.agatlabs.com>

Total Phosphorous & TKN					
DATE RECEIVED: 2025-06-06		DATE REPORTED: 2025-06-23			
		SAMPLE DESCRIPTION:		2025-SW01	2025-SW02
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2025-06-06 11:38	2025-06-06 13:48
Parameter	Unit	G / S	RDL	6800686	6800703
Total Phosphorus	mg/L		0.006	<0.006	0.009
Total Kjeldahl Nitrogen	mg/L		0.10	<0.10	<0.10

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Quality Assurance

CLIENT NAME: GEMTEC LIMITED-HALIFAX

PROJECT: 103269.002

SAMPLING SITE:

AGAT WORK ORDER: 25X307046

ATTENTION TO: Jordan Murphy

SAMPLED BY:

Water Analysis															
RPT Date: Jun 23, 2025			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Standard Water Analysis + Total Metals

pH	6799456		6.40	5.95	7.3%	<	101%	80%	120%	NA			NA		
Reactive Silica as SiO2	6803961		10.0	10.0	0.2%	< 0.5	99%	80%	120%	98%	80%	120%	103%	80%	120%
Chloride	6804978		104	103	1.0%	< 1	102%	80%	120%	NA	80%	120%	NA	70%	130%
Fluoride	6800622		<0.12	<0.12	NA	< 0.12	111%	80%	120%	NA	80%	120%	100%	70%	130%
Sulphate	6800622		6	6	NA	< 2	110%	80%	120%	NA	80%	120%	104%	70%	130%
Alkalinity	6799456		12	11	NA	< 5	97%	80%	120%	NA			NA		
True Color	6803961		<5	<5	NA	< 5	88%	80%	120%	101%	80%	120%	NA		
Turbidity	6799456	6800699	0.27	0.29	NA	< 0.5	98%	80%	120%	NA			NA		
Electrical Conductivity	6799456		329	328	0.3%	< 1	98%	90%	110%	NA			NA		
Nitrate as N	6800622		2.62	2.80	6.6%	< 0.05	110%	80%	120%	NA	80%	120%	NA	70%	130%
Nitrite as N	6800622		0.09	<0.05	NA	< 0.05	99%	80%	120%	NA	80%	120%	88%	70%	130%
Ammonia as N	6803961		<0.03	<0.03	NA	< 0.03	99%	80%	120%	99%	80%	120%	99%	70%	130%
Total Organic Carbon	6799867		2.3	2.2	NA	< 0.5	92%	80%	120%	NA	80%	120%	90%	80%	120%
Ortho-Phosphate as P	6803961		<0.01	<0.01	NA	< 0.01	99%	80%	120%	100%	80%	120%	99%	80%	120%
Total Sodium	6799963		34.3	34.0	0.8%	< 0.1	91%	70%	130%	95%	80%	120%	NA	70%	130%
Total Potassium	6799963		3.7	3.7	1.1%	< 0.1	93%	70%	130%	91%	80%	120%	109%	70%	130%
Total Calcium	6799963		13.8	14.0	1.7%	< 0.1	96%	70%	130%	90%	80%	120%	109%	70%	130%
Total Magnesium	6799963		9.0	8.8	2.5%	< 0.1	90%	80%	130%	92%	80%	120%	102%	70%	130%
Bicarb. Alkalinity (as CaCO3)	6799456		12	11	NA	< 5	NA	80%	120%	NA			NA		
Carb. Alkalinity (as CaCO3)	6799456		<10	<10	NA	< 10	NA	80%	120%	NA			NA		
Hydroxide	6799456		<5	<5	NA	< 5	NA	80%	120%	NA			NA		
Total Aluminum	6799963		6	6	NA	< 5	81%	70%	130%	89%	80%	120%	104%	70%	130%
Total Antimony	6799963		<2	<2	NA	< 2	89%	70%	130%	92%	80%	120%	91%	70%	130%
Total Arsenic	6799963		<2	<2	NA	< 2	91%	70%	130%	90%	80%	120%	99%	70%	130%
Total Barium	6799963		12	12	NA	< 5	88%	70%	130%	90%	80%	120%	95%	70%	130%
Total Beryllium	6799963		<2	<2	NA	< 2	90%	70%	130%	84%	80%	120%	90%	70%	130%
Total Bismuth	6799963		<2	<2	NA	< 2	90%	70%	130%	94%	80%	120%	100%	70%	130%
Total Boron	6799963		36	30	16.9%	< 5	86%	70%	130%	98%	80%	120%	94%	70%	130%
Total Cadmium	6799963		<0.09	<0.09	NA	< 0.09	90%	70%	130%	92%	80%	120%	98%	70%	130%
Total Chromium	6799963		<1	<1	NA	< 1	89%	70%	130%	89%	80%	120%	98%	70%	130%
Total Cobalt	6799963		<1	<1	NA	< 1	91%	70%	130%	90%	80%	120%	98%	70%	130%
Total Copper	6799963		3	3	NA	< 1	91%	70%	130%	91%	80%	120%	99%	70%	130%
Total Iron	6799963		<50	<50	NA	< 50	91%	70%	130%	90%	80%	120%	100%	70%	130%
Total Lead	6799963		<0.5	<0.5	NA	< 0.5	88%	70%	130%	90%	80%	120%	97%	70%	130%
Total Manganese	6799963		<2	<2	NA	< 2	91%	70%	130%	88%	80%	120%	98%	70%	130%
Total Molybdenum	6799963		<2	<2	NA	< 2	88%	70%	130%	90%	80%	120%	91%	70%	130%
Total Nickel	6799963		<2	<2	NA	< 2	89%	70%	130%	88%	80%	120%	97%	70%	130%
Total Phosphorous	6799963		3.08	2.98	3.3%	< 0.02	87%	70%	130%	NA	80%	120%	NA	70%	130%
Total Selenium	6799963		<1	<1	NA	< 1	92%	70%	130%	86%	80%	120%	97%	70%	130%

Quality Assurance

CLIENT NAME: GEMTEC LIMITED-HALIFAX

PROJECT: 103269.002

SAMPLING SITE:

AGAT WORK ORDER: 25X307046

ATTENTION TO: Jordan Murphy

SAMPLED BY:

Water Analysis (Continued)

RPT Date: Jun 23, 2025			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Total Silver	6799963		<0.1	<0.1	NA	< 0.1	89%	70%	130%	91%	80%	120%	96%	70%	130%
Total Strontium	6799963		59	59	1.0%	< 5	94%	70%	130%	93%	80%	120%	101%	70%	130%
Total Thallium	6799963		<0.1	<0.1	NA	< 0.1	89%	70%	130%	93%	80%	120%	98%	70%	130%
Total Tin	6799963		<2	<2	NA	< 2	91%	70%	130%	91%	80%	120%	92%	70%	130%
Total Titanium	6799963		<2	<2	NA	< 2	87%	70%	130%	105%	80%	120%	92%	70%	130%
Total Uranium	6799963		<0.2	<0.2	NA	< 0.2	89%	70%	130%	91%	80%	120%	98%	70%	130%
Total Vanadium	6799963		<2	<2	NA	< 2	88%	70%	130%	88%	80%	120%	98%	70%	130%
Total Zinc	6799963		6	<5	NA	< 5	116%	70%	130%	96%	80%	120%	122%	70%	130%

Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

TSS

Total Suspended Solids	6800686	6800686	<5	<5	NA	< 5	104%	80%	120%	NA			92%	80%	120%
------------------------	---------	---------	----	----	----	-----	------	-----	------	----	--	--	-----	-----	------

Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

Mercury Analysis in Water (Total)

Total Mercury	6787009		<0.026	<0.026	NA	< 0.026	98%	80%	120%	93%	80%	120%	95%	70%	130%
---------------	---------	--	--------	--------	----	---------	-----	-----	------	-----	-----	------	-----	-----	------

Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

Total Phosphorous & TKN

Total Phosphorus	6827452		0.105	0.106	0.9%	< 0.006	97%	70%	130%	112%	80%	120%	NA	70%	130%
Total Kjeldahl Nitrogen	6800686	6800686	<0.10	<0.10	NA	< 0.10	105%	70%	130%	98%	80%	120%	118%	70%	130%

Comments: NA signifies Not Applicable.

Duplicate NA: results are under 5X the RDL and will not be calculated.

Matrix spike: Spike level < native concentration. Matrix spike acceptance limits do not apply.

Certified By:



Method Summary

CLIENT NAME: GEMTEC LIMITED-HALIFAX

PROJECT: 103269.002

SAMPLING SITE:

AGAT WORK ORDER: 25X307046

ATTENTION TO: Jordan Murphy

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Total Mercury	MET-121-6107	SM 3112 B	CV/AA
pH	INOR-121-6001	SM 4500 H+B	PC TITRATE
Reactive Silica as SiO ₂	INOR-121-6027	SM 4500-SiO ₂ F	COLORIMETER
Chloride	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Fluoride	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Alkalinity	INOR-121-6001	SM 2320 B	
True Color	INOR-121-6008	SM 2120 B	COLORIMETER
Turbidity	INOR-121-6001	SM 2130 B	PC TITRATE
Electrical Conductivity	INOR-121-6001	SM 2510 B	PC TITRATE
Nitrate + Nitrite as N	INOR-121-6005	SM 4110 B	CALCULATION
Nitrate as N	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-121-6047	SM 4500-NH ₃ H	COLORIMETER
Total Organic Carbon	INOR-121-6052	SM 5310 B	TOC ANALYZER
Ortho-Phosphate as P	INOR-121-6012	SM 4500-P G	COLORIMETER
Total Sodium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Potassium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Calcium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Magnesium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Bicarb. Alkalinity (as CaCO ₃)	INOR-121-6001	SM 2320 B	PC TITRATE
Carb. Alkalinity (as CaCO ₃)	INOR-121-6001	SM 2320 B	PC TITRATE
Hydroxide	INOR-121-6001	SM 2320 B	PC-TITRATE
Calculated TDS	CALCULATION	SM 1030E	CALCULATION
Hardness	CALCULATION	SM 2340B	CALCULATION
Langelier Index (@20C)	CALCULATION	CALCULATION	CALCULATION
Langelier Index (@ 4C)	CALCULATION	CALCULATION	CALCULATION
Saturation pH (@ 20C)	CALCULATION	CALCULATION	CALCULATION
Saturation pH (@ 4C)	CALCULATION	CALCULATION	CALCULATION
Anion Sum	CALCULATION	SM 1030E	CALCULATION
Cation sum	CALCULATION	SM 1030E	CALCULATION
% Difference/ Ion Balance	CALCULATION	SM 1030E	CALCULATION
Total Aluminum	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Antimony	MET121-6104 & MET-121-6105	SM 3125	ICP-MS
Total Arsenic	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Barium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Beryllium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Bismuth	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Boron	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Cadmium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS

Method Summary

CLIENT NAME: GEMTEC LIMITED-HALIFAX

PROJECT: 103269.002

SAMPLING SITE:

AGAT WORK ORDER: 25X307046

ATTENTION TO: Jordan Murphy

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Total Chromium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Cobalt	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Copper	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Iron	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Lead	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Manganese	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Molybdenum	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Nickel	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Phosphorous	MET-121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Selenium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Silver	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Strontium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Thallium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Tin	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Titanium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Uranium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Vanadium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Zinc	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Suspended Solids	INOR-121-6024, 6025	SM 2540C, D	GRAVIMETRIC
Total Phosphorus	INOR-93-6022	modified from SM 4500-P B and SM 4500-P E	SPECTROPHOTOMETER
Total Kjeldahl Nitrogen	INOR-93-6048	modified from EPA 351.2 and SM 4500-NORG D	LACHAT FIA



Laboratories



Have feedback?
Scan here for a
quick survey!

Unit 122 • 11 Morris Drive
Dartmouth, NS
B3B 1M2
P: 902.468.8718

Chain of Custody Record

Report Information

Company: GEMTEC Consulting Engineers and Scientists LTD
Contact: Jordan Murphy
Address: 450-11 Akertley Boulevard
Dartmouth, Nova Scotia
Phone: 709-693-1338 Fax:
Client Project #: 103269.002
AGAT Quotation: SOA
Please Note: If quotation number is not provided client will be billed full price for analysis.

Invoice To

Company: GEMTEC
Contact: accounts payable@gemtec.ca
Address:
Phone:
PO/Credit Card#:

Report Information (Please print):

1. Name: Jordan Muepft
Email: jordan.muepft@gemtec.ca
2. Name: Candace Stephens
Email: candace.stephens@gemtec.ca

Regulatory Requirements (Check):

☐ List Guidelines on Report ☐ Do not list Guidelines on Report

☐ PIRI ☐ Tier 1 ☐ Res ☐ Pot ☐ Coarse

☐ Tier 2 ☐ Com ☐ N/Pot ☐ Fine

☐ Gas ☐ Fuel ☐ Lube

☐ CCME ☐ CDWQ ☐ NSEQS-Cont Sites

☐ Industrial ☐ Commercial ☐ HRM 101

☐ Res/Park ☐ Storm Water ☐ Waste Water

☐ Agricultural ☐ FWAL ☐ Sediment

☐ Other

Report Format

☐ Single Sample per page

☒ Multiple Samples per page

☒ Excel Format Included

☐ Export

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Laboratory Use Only

Arrival Condition: ☐ Good ☐ Poor (see notes)

Arrival Temperature: 6.8, 6.3, 7.5

Hold Time: 25X 30-4046

AGAT Job Number: 25X 30-4046

Notes:

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days

Rush TAT ☐ Same day ☐ 1 day

☐ 2 days ☐ 3 days

Date Required:

Drinking Water Sample: ☐ Yes ☒ No

Salt Water Sample: ☐ Yes ☒ No

Reg. No.:

Field Filtered/Preserved

Standard Water Analysis

Mercury

Metals: ☒ Total ☐ Diss ☐ Available

☐ BOD ☐ CBOD

☐ PH

☒ TSS ☐ TDS ☐ VSS

☒ TKN

☒ Total Phosphorus

☐ Phenols

☐ Tier 1: TPH/BTEX (PIRI) ☐ low level

☐ Tier 2: TPH/BTEX Fractionation

☐ CCME-CWS TPH/BTEX

☐ VOC

☐ THM

☐ HAA

☐ PAH

☐ PCB

☐ TC + EC ☐ P/A ☐ MPN ☐ MF

☐ HPC ☐ Pseudomonas

☐ Fecal Coliform ☐ MPN ☐ MF

☐ Other:

☐ Other:

☐ Hazardous (Y/N)

Samples Relinquished By (Print Name)

Jordan Murphy

Samples Relinquished By (Sign)

Date/Time

6/6/2025 15:01

Samples Received By (Print Name)

Samples Received By (Sign)

Date/Time

Pink Copy - Client

Yellow Copy - AGAT

White Copy - AGAT

Page 1 of 1

Nº:

CLIENT NAME: SCOTIAN MATERIALS LTD
171 RESOURCE RD
GOFFS, NS B2T 0L2
902-481-9800

ATTENTION TO: Robert MacPherson

PROJECT: 103269.002

AGAT WORK ORDER: 25X377401

WATER ANALYSIS REVIEWED BY: Kaliegh Cullen, Report Writer

DATE REPORTED: Dec 09, 2025

PAGES (INCLUDING COVER): 18

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (902) 468-8718

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.
- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 25X377401

PROJECT: 103269.002

11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
CANADA B3B 1M2
TEL (902)468-8718
FAX (902)468-8924
<http://www.agatlabs.com>

CLIENT NAME: SCOTIAN MATERIALS LTD
SAMPLING SITE:

ATTENTION TO: Robert MacPherson
SAMPLED BY:

AGAT Halifax - Total Phosphorous, TKN									
DATE RECEIVED: 2025-11-28				DATE REPORTED: 2025-12-09					
		SAMPLE DESCRIPTION:		SW01		SW02			
		SAMPLE TYPE:		Water		Water			
		DATE SAMPLED:		2025-11-27		2025-11-27			
				12:00		12:00			
				G / S		RDL			
				7297588		7297595			
Parameter		Unit							
Total Phosphorus		mg/L		0.006		<0.006			
Total Kjeldahl Nitrogen		mg/L		0.10		<0.10			

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Kaleigh Cullen



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 25X377401

PROJECT: 103269.002

11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
CANADA B3B 1M2
TEL (902)468-8718
FAX (902)468-8924
<http://www.agatlabs.com>

CLIENT NAME: SCOTIAN MATERIALS LTD
SAMPLING SITE:

ATTENTION TO: Robert MacPherson
SAMPLED BY:

Mercury Analysis in Water (Dissolved)															
DATE RECEIVED: 2025-11-28		DATE REPORTED: 2025-12-09													
SAMPLE DESCRIPTION: SAMPLE TYPE: DATE SAMPLED: G / S		2025-MW01S		2025-MW01D		2025-MW02S		2025-MW02D		2025-MW03S		2025-MW03D		2025-MW-DUP2	
		Water		Water		Water		Water		Water		Water		Water	
		2025-11-27 12:00		2025-11-27 12:00		2025-11-28 12:00		2025-11-28 12:00		2025-11-28 12:00		2025-11-27 12:00		2025-11-27 12:00	
Unit		7297573		7297575		7297576		7297577		7297578		7297579		7297580	
Dissolved Mercury		0.026		<0.026		<0.026		<0.026		<0.026		<0.026		<0.026	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

Kaleigh Cullen



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 25X377401

PROJECT: 103269.002

11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
CANADA B3B 1M2
TEL (902)468-8718
FAX (902)468-8924
<http://www.agatlabs.com>

CLIENT NAME: SCOTIAN MATERIALS LTD
SAMPLING SITE:

ATTENTION TO: Robert MacPherson
SAMPLED BY:

Mercury Analysis in Water (Total)					
DATE RECEIVED: 2025-11-28		DATE REPORTED: 2025-12-09			
		SAMPLE DESCRIPTION:		SW01	SW02
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2025-11-27	2025-11-27
				12:00	12:00
		G / S	RDL	7297588	7297595
Parameter	Unit				
Total Mercury	ug/L	0.026	<0.026	<0.026	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

Kaleigh Cullen



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 25X377401

PROJECT: 103269.002

11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
CANADA B3B 1M2
TEL (902)468-8718
FAX (902)468-8924
<http://www.agatlabs.com>

CLIENT NAME: SCOTIAN MATERIALS LTD

SAMPLING SITE:

ATTENTION TO: Robert MacPherson

SAMPLED BY:

Standard Water Analysis + Dissolved Metals

DATE RECEIVED: 2025-11-28		DATE REPORTED: 2025-12-09									
SAMPLE DESCRIPTION:		2025-MW01S		2025-MW01D		2025-MW02S		2025-MW02D		2025-MW03S	
SAMPLE TYPE:		Water		Water		Water		Water		Water	
DATE SAMPLED:		2025-11-27		2025-11-27		2025-11-28		2025-11-28		2025-11-27	
		12:00		12:00		12:00		12:00		12:00	
Parameter	Unit	G / S	RDL	7297573	7297575	7297576	7297577	7297578	7297579	7297580	
pH				6.05	6.14	6.05	6.07	5.91	6.06	6.07	
Reactive Silica as SiO2	mg/L		0.5	13.9	15.1	8.6	14.8	8.4	15.5	8.0	
Chloride	mg/L		1	47	22	6	10	5	5	6	
Fluoride	mg/L		0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	
Sulphate	mg/L		2	7	5	11	11	22	5	11	
Alkalinity	mg/L		5	113	123	103	106	74	111	103	
True Color	TCU		5	<5	<5	<5	<5	<5	<5	<5	
Turbidity	NTU		0.5	17.7	4.32	107	5.38	74.1	49.1	111	
Electrical Conductivity	umho/cm		1	354	289	208	236	190	202	207	
Nitrate + Nitrite as N	mg/L		0.05	0.77	0.09	0.82	0.63	0.32	0.62	0.85	
Nitrate as N	mg/L		0.05	0.09	0.09	0.33	0.10	0.32	0.12	0.34	
Nitrite as N	mg/L		0.05	0.68	<0.05	0.49	0.53	<0.05	0.50	0.51	
Ammonia as N	mg/L		0.03	<0.03	0.08	0.12	<0.03	0.03	0.04	<0.03	
Total Organic Carbon	mg/L		0.50	0.90	0.72	0.61	0.51	1.1	0.98	0.66	
Ortho-Phosphate as P	mg/L		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Dissolved Sodium	mg/L		0.1	10.4	9.8	4.6	7.2	5.3	4.0	5.0	
Dissolved Potassium	mg/L		0.1	1.8	1.7	0.9	1.4	1.1	1.3	1.0	
Dissolved Calcium	mg/L		0.1	40.6	34.2	30.6	32.8	23.4	29.7	30.0	
Dissolved Magnesium	mg/L		0.1	10.5	8.6	3.3	4.6	2.6	2.2	3.4	
Bicarb. Alkalinity (as CaCO3)	mg/L		5	113	123	103	106	74	111	103	
Carb. Alkalinity (as CaCO3)	mg/L		10	<10	<10	<10	<10	<10	<10	<10	
Hydroxide	mg/L		5	<5	<5	<5	<5	<5	<5	<5	
Calculated TDS	mg/L		1	189	156	122	134	105	117	122	
Hardness	mg/L			145	121	90.0	101	69.1	83.2	88.9	
Langlier Index (@20C)	NA			-1.90	-1.84	-2.05	-1.99	-2.44	-2.02	-2.04	
Langlier Index (@ 4C)	NA			-2.22	-2.16	-2.37	-2.31	-2.76	-2.34	-2.36	
Saturation pH (@ 20C)	NA			7.95	7.98	8.10	8.06	8.35	8.08	8.11	
Saturation pH (@ 4C)	NA			8.27	8.30	8.42	8.38	8.67	8.40	8.43	
Anion Sum	me/L			3.79	3.19	2.52	2.68	2.10	2.51	2.52	

Certified By:

Kaleigh Cullen



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 25X377401

PROJECT: 103269.002

11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
CANADA B3B 1M2
TEL (902)468-8718
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<http://www.agatlabs.com>

CLIENT NAME: SCOTIAN MATERIALS LTD

SAMPLING SITE:

ATTENTION TO: Robert MacPherson

SAMPLED BY:

Standard Water Analysis + Dissolved Metals											
DATE RECEIVED: 2025-11-28				DATE REPORTED: 2025-12-09							
SAMPLE DESCRIPTION:				2025-MW01S		2025-MW01D		2025-MW02S		2025-MW03S	
SAMPLE TYPE:				Water		Water		Water		Water	
DATE SAMPLED:				2025-11-27 12:00		2025-11-27 12:00		2025-11-28 12:00		2025-11-27 12:00	
G / S				7297573		7297575		7297576		7297578	
RDL				<0.017		<0.017		<0.017		<0.017	
Parameter	Unit	G / S	RDL	2025-11-27 12:00	2025-11-27 12:00	2025-11-28 12:00	2025-11-28 12:00	2025-11-28 12:00	2025-11-27 12:00	2025-11-27 12:00	2025-11-27 12:00
Cation sum	me/L			3.41	2.89	2.04	2.37	1.65	1.88	2.03	
% Difference/ Ion Balance	%			5.3	4.9	10.6	6.0	12.2	14.4	10.9	
Dissolved Aluminum	ug/L		5	9	13	16	15	7	16	18	
Dissolved Antimony	ug/L		2	<2	<2	<2	4	<2	<2	<2	
Dissolved Arsenic	ug/L		2	9	11	29	53	4	38	30	
Dissolved Barium	ug/L		5	14	13	9	17	11	9	10	
Dissolved Beryllium	ug/L		2	<2	<2	<2	<2	<2	<2	<2	
Dissolved Bismuth	ug/L		2	<2	<2	<2	<2	<2	<2	<2	
Dissolved Boron	ug/L		50	81	66	<50	<50	<50	<50	<50	
Dissolved Cadmium	ug/L		0.017	<0.017	<0.017	<0.017	<0.017	0.019	<0.017	<0.017	
Dissolved Chromium	ug/L		1	<1	<1	<1	<1	<1	<1	<1	
Dissolved Cobalt	ug/L		1	<1	<1	<1	<1	<1	<1	<1	
Dissolved Copper	ug/L		2	<2	<2	<2	<2	<2	<2	<2	
Dissolved Iron	ug/L		50	55	<50	<50	84	<50	<50	<50	
Dissolved Lead	ug/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Dissolved Manganese	ug/L		2	388	19	14	91	2	35	14	
Dissolved Molybdenum	ug/L		2	2	<2	3	5	<2	<2	3	
Dissolved Nickel	ug/L		2	<2	<2	<2	<2	5	<2	<2	
Dissolved Phosphorus	mg/L		0.02	2.65	2.72	1.77	2.90	1.79	2.49	1.83	
Dissolved Selenium	ug/L		1	<1	<1	<1	<1	1	<1	<1	
Dissolved Silver	ug/L		0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Dissolved Strontium	ug/L		5	262	242	51	158	43	92	53	
Dissolved Thallium	ug/L		0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Dissolved Tin	ug/L		2	<2	<2	<2	<2	<2	<2	<2	
Dissolved Titanium	ug/L		2	<2	<2	<2	<2	<2	<2	<2	
Dissolved Uranium	ug/L		0.1	0.7	1.1	3.4	3.9	0.4	1.8	3.3	
Dissolved Vanadium	ug/L		2	<2	<2	<2	<2	<2	<2	<2	
Dissolved Zinc	ug/L		5	<5	<5	<5	<5	<5	<5	<5	

Certified By:

Kaleigh Cullen



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 25X377401

PROJECT: 103269.002

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CLIENT NAME: SCOTIAN MATERIALS LTD

SAMPLING SITE:

ATTENTION TO: Robert MacPherson

SAMPLED BY:

Standard Water Analysis + Dissolved Metals	
DATE RECEIVED: 2025-11-28	DATE REPORTED: 2025-12-09

Comments:

RDL - Reported Detection Limit; G / S - Guideline / Standard

7297573-7297577 Metals analysis completed on a filtered sample.

% Difference / Ion Balance, Hardness, Langelier Index, Nitrate + Nitrite, Hydroxide and Saturation pH are calculated parameters. The calculated parameters are non-accredited. The component parameters of the calculations are accredited.

pH has been analyzed past the recommended holding time of 15 minutes from sampling. Field measurement recommended for most accurate result

7297578-7297579 Metals analysis completed on a filtered sample.

% Difference / Ion Balance, Hardness, Langelier Index, Nitrate + Nitrite, Hydroxide and Saturation pH are calculated parameters. The calculated parameters are non-accredited. The component parameters of the calculations are accredited.

pH has been analyzed past the recommended holding time of 15 minutes from sampling. Field measurement recommended for most accurate result

Ion Balance is biased high, contributing parameters have been confirmed.

7297580

Metals analysis completed on a filtered sample.

% Difference / Ion Balance, Hardness, Langelier Index, Nitrate + Nitrite, Hydroxide and Saturation pH are calculated parameters. The calculated parameters are non-accredited. The component parameters of the calculations are accredited.

pH has been analyzed past the recommended holding time of 15 minutes from sampling. Field measurement recommended for most accurate result

Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

Kaleigh Cullen



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CLIENT NAME: SCOTIAN MATERIALS LTD

SAMPLING SITE:

ATTENTION TO: Robert MacPherson

SAMPLED BY:

Standard Water Analysis + Total Metals										DATE REPORTED: 2025-12-09
DATE RECEIVED: 2025-11-28										
Parameter		SAMPLE DESCRIPTION:		SW01		SW02				
		SAMPLE TYPE:		Water		Water				
		DATE SAMPLED:		2025-11-27		2025-11-27				
		G / S	RDL	7297588	7297595	12:00	12:00			
Unit										
pH	pH Units			5.59	5.59					
Reactive Silica as SiO2	mg/L	0.5		3.6	4.0					
Chloride	mg/L	1		91	44					
Fluoride	mg/L	0.12		<0.12	<0.12					
Sulphate	mg/L	2		31	31					
Alkalinity	mg/L	5		21	37					
True Color	TCU	5		16	12					
Turbidity	NTU	0.5		4.01	2.13					
Electrical Conductivity	umho/cm	1		410	276					
Nitrate + Nitrite as N	mg/L	0.05		0.91	0.86					
Nitrate as N	mg/L	0.05		0.23	0.29					
Nitrite as N	mg/L	0.05		0.68	0.57					
Ammonia as N	mg/L	0.03		<0.03	<0.03					
Total Organic Carbon	mg/L	0.50		4.2	4.7					
Ortho-Phosphate as P	mg/L	0.01		<0.01	<0.01					
Total Sodium	mg/L	0.1		61.2	32.2					
Total Potassium	mg/L	0.1		1.1	1.8					
Total Calcium	mg/L	0.1		12.6	17.0					
Total Magnesium	mg/L	0.1		1.0	1.7					
Bicarb. Alkalinity (as CaCO3)	mg/L	5		21	37					
Carb. Alkalinity (as CaCO3)	mg/L	10		<10	<10					
Hydroxide	mg/L	5		<5	<5					
Calculated TDS	mg/L	1		215	154					
Hardness	mg/L			35.6	49.4					
Langelier Index (@20C)	NA			-3.61	-3.22					
Langelier Index (@ 4C)	NA			-3.93	-3.54					
Saturation pH (@ 20C)	NA			9.20	8.81					
Saturation pH (@ 4C)	NA			9.52	9.13					
Anion Sum	me/L			3.70	2.69					

Certified By:

Kaleigh Cullen



AGAT Laboratories

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AGAT WORK ORDER: 25X377401

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CLIENT NAME: SCOTIAN MATERIALS LTD

SAMPLING SITE:

ATTENTION TO: Robert MacPherson

SAMPLED BY:

Standard Water Analysis + Total Metals										DATE REPORTED: 2025-12-09
DATE RECEIVED: 2025-11-28										
Parameter		SAMPLE DESCRIPTION:		SW01		SW02				
		SAMPLE TYPE:		Water		Water				
		DATE SAMPLED:		2025-11-27		2025-11-27				
		G / S	RDL	7297588	12:00	7297595	12:00			
Unit										
me/L	Cation sum			3.43		2.45				
%	% Difference/ Ion Balance			3.8		4.6				
ug/L	Total Aluminum		5	153		86				
ug/L	Total Antimony		2	<2		<2				
ug/L	Total Arsenic		2	<2		<2				
ug/L	Total Barium		5	14		9				
ug/L	Total Beryllium		2	<2		<2				
ug/L	Total Bismuth		2	<2		<2				
ug/L	Total Boron		50	<50		<50				
ug/L	Total Cadmium		0.09	<0.09		<0.09				
ug/L	Total Chromium		1	1		<1				
ug/L	Total Cobalt		1	<1		<1				
ug/L	Total Copper		1	2		25				
ug/L	Total Iron		50	165		80				
ug/L	Total Lead		0.5	<0.5		<0.5				
ug/L	Total Manganese		2	16		39				
ug/L	Total Molybdenum		2	<2		<2				
ug/L	Total Nickel		2	<2		<2				
mg/L	Total Phosphorous		0.02	0.81		0.93				
ug/L	Total Selenium		1	<1		<1				
ug/L	Total Silver		0.1	<0.1		<0.1				
ug/L	Total Strontium		5	44		46				
ug/L	Total Thallium		0.1	<0.1		<0.1				
ug/L	Total Tin		2	<2		<2				
ug/L	Total Titanium		2	5		3				
ug/L	Total Uranium		0.2	<0.2		<0.2				
ug/L	Total Vanadium		2	<2		<2				
ug/L	Total Zinc		5	<5		<5				

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AGAT WORK ORDER: 25X377401

PROJECT: 103269.002

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Standard Water Analysis + Total Metals	
DATE RECEIVED: 2025-11-28	DATE REPORTED: 2025-12-09

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

7297588-7297595 % Difference / Ion Balance, Hardness, Langelier Index, Nitrate + Nitrite, Hydroxide and Saturation pH are calculated parameters. The calculated parameters are non-accredited. The component parameters of the calculations are accredited.

pH has been analyzed past the recommended holding time of 15 minutes from sampling. Field measurement recommended for most accurate result

Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

Kaleigh Cullen



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 25X377401

PROJECT: 103269.002

CLIENT NAME: SCOTIAN MATERIALS LTD

SAMPLING SITE:

ATTENTION TO: Robert MacPherson

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<http://www.agatlabs.com>

TSS					DATE RECEIVED: 2025-11-28	DATE REPORTED: 2025-12-09
SAMPLE DESCRIPTION:		SW01	SW02			
SAMPLE TYPE:		Water	Water			
DATE SAMPLED:		2025-11-27 12:00	2025-11-27 12:00			
Parameter	Unit	G / S	RDL	7297588	7297595	
Total Suspended Solids	mg/L	5	<5		<5	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

Kaleigh Cullen

Quality Assurance

CLIENT NAME: SCOTIAN MATERIALS LTD

PROJECT: 103269.002

SAMPLING SITE:

AGAT WORK ORDER: 25X377401

ATTENTION TO: Robert MacPherson

SAMPLED BY:

Water Analysis															
RPT Date: Dec 09, 2025			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Standard Water Analysis + Dissolved Metals

pH	7297453		5.48	5.49	0.3%	<	101%	80%	120%	NA	80%	120%	NA	80%	120%
Reactive Silica as SiO2	7289696		7.4	7.1	4.5%	< 0.5	109%	80%	120%	116%	80%	120%	99%	80%	120%
Chloride	7297573	7297573	47	47	0.6%	< 1	105%	80%	120%	NA	80%	120%	NA	70%	130%
Fluoride	7297573	7297573	<0.12	<0.12	NA	< 0.12	95%	80%	120%	NA	80%	120%	97%	70%	130%
Sulphate	7297573	7297573	7	7	NA	< 2	86%	80%	120%	NA	80%	120%	82%	70%	130%
Alkalinity	7297453		25	26	2.1%	< 5	109%	80%	120%	NA			NA		
True Color	7289696		<5	<5	NA	< 5	98%	80%	120%	100%	80%	120%	NA		
Turbidity	7297568	7297568	5.16	5.21	1.0%	< 0.5	104%	80%	120%						
Electrical Conductivity	7297453		488	489	0.2%	< 1	98%	90%	110%	NA			NA		
Nitrate as N	7297573	7297573	0.09	0.11	NA	< 0.05	114%	80%	120%	NA	80%	120%	109%	70%	130%
Nitrite as N	7297573	7297573	0.68	0.66	2.7%	< 0.05	112%	80%	120%	NA	80%	120%	NA	70%	130%
Ammonia as N	7295978		0.08	0.12	NA	< 0.03	88%	80%	120%	85%	80%	120%	81%	70%	130%
Total Organic Carbon	7297569		1.2	1.3	NA	< 0.5	106%	80%	120%	NA	80%	120%	106%	80%	120%
Ortho-Phosphate as P	7289696		0.04	0.04	NA	< 0.01	97%	80%	120%	100%	80%	120%	106%	80%	120%
Dissolved Sodium	7295978		8.7	8.8	1.6%	< 0.1	102%	70%	130%	101%	80%	120%	106%	70%	130%
Dissolved Potassium	7295978		0.9	0.8	9.1%	< 0.1	102%	70%	130%	100%	80%	120%	99%	70%	130%
Dissolved Calcium	7295978		14.3	15.7	9.2%	< 0.1	101%	70%	130%	111%	80%	120%	99%	70%	130%
Dissolved Magnesium	7295978		2.5	2.5	0.4%	< 0.1	103%	70%	130%	101%	80%	120%	100%	70%	130%
Bicarb. Alkalinity (as CaCO3)	7297453		25	26	2.1%	< 5	NA	80%	120%	NA	80%	120%	NA	80%	120%
Carb. Alkalinity (as CaCO3)	7297453		<10	<10	NA	< 10	NA	80%	120%	NA	80%	120%	NA	80%	120%
Hydroxide	7297453		<5	<5	NA	< 5	NA	80%	120%	NA	80%	120%	NA	80%	120%
Dissolved Aluminum	7295978		15	13	NA	< 5	104%	70%	130%	102%	80%	120%	102%	70%	130%
Dissolved Antimony	7295978		<2	<2	NA	< 2	99%	70%	130%	97%	80%	120%	93%	70%	130%
Dissolved Arsenic	7295978		<2	<2	NA	< 2	97%	70%	130%	95%	80%	120%	95%	70%	130%
Dissolved Barium	7295978		37	38	1.8%	< 5	96%	70%	130%	97%	80%	120%	95%	70%	130%
Dissolved Beryllium	7295978		<2	<2	NA	< 2	97%	70%	130%	96%	80%	120%	96%	70%	130%
Dissolved Bismuth	7295978		<2	<2	NA	< 2	96%	70%	130%	97%	80%	120%	97%	70%	130%
Dissolved Boron	7295978		<50	<50	NA	< 50	93%	70%	130%	93%	80%	120%	91%	70%	130%
Dissolved Cadmium	7307777		0.092	<0.017	NA	< 0.017	98%	70%	130%	101%	80%	120%	99%	70%	130%
Dissolved Chromium	7295978		<1	<1	NA	< 1	99%	70%	130%	98%	80%	120%	97%	70%	130%
Dissolved Cobalt	7295978		<1	<1	NA	< 1	100%	70%	130%	99%	80%	120%	98%	70%	130%
Dissolved Copper	7295978		<2	<2	NA	< 2	98%	70%	130%	100%	80%	120%	98%	70%	130%
Dissolved Iron	7295978		<50	<50	NA	< 50	96%	70%	130%	97%	80%	120%	100%	70%	130%
Dissolved Lead	7295978		0.5	<0.5	NA	< 0.5	97%	70%	130%	99%	80%	120%	98%	70%	130%
Dissolved Manganese	7295978		<2	<2	NA	< 2	98%	70%	130%	96%	80%	120%	99%	70%	130%
Dissolved Molybdenum	7295978		<2	<2	NA	< 2	98%	70%	130%	95%	80%	120%	96%	70%	130%
Dissolved Nickel	7295978		<2	<2	NA	< 2	101%	70%	130%	98%	80%	120%	97%	70%	130%
Dissolved Phosphorus	7295978		2.62	2.87	9.3%	< 0.02	90%	80%	120%	105%	80%	120%	NA	70%	130%
Dissolved Selenium	7295978		<1	<1	NA	< 1	97%	70%	130%	95%	80%	120%	98%	70%	130%



Quality Assurance

CLIENT NAME: SCOTIAN MATERIALS LTD

PROJECT: 103269.002

SAMPLING SITE:

AGAT WORK ORDER: 25X377401

ATTENTION TO: Robert MacPherson

SAMPLED BY:

Water Analysis (Continued)

RPT Date: Dec 09, 2025			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Dissolved Silver	7295978		0.5	<0.1	NA	< 0.1	98%	70%	130%	94%	80%	120%	75%	70%	130%
Dissolved Strontium	7295978		63	62	0.4%	< 5	99%	70%	130%	98%	80%	120%	99%	70%	130%
Dissolved Thallium	7295978		0.5	<0.1	NA	< 0.1	95%	70%	130%	96%	80%	120%	96%	70%	130%
Dissolved Tin	7295978		<2	<2	NA	< 2	99%	70%	130%	98%	80%	120%	95%	70%	130%
Dissolved Titanium	7295978		<2	<2	NA	< 2	100%	70%	130%	100%	80%	120%	98%	70%	130%
Dissolved Uranium	7295978		0.6	0.3	NA	< 0.1	92%	70%	130%	93%	80%	120%	95%	70%	130%
Dissolved Vanadium	7295978		<2	<2	NA	< 2	100%	70%	130%	98%	80%	120%	98%	70%	130%
Dissolved Zinc	7295978		<5	<5	NA	< 5	96%	70%	130%	92%	80%	120%	90%	70%	130%

Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.
Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.

Mercury Analysis in Water (Dissolved)

Dissolved Mercury	7297573	7297573	<0.026	<0.026	NA	< 0.026	92%	80%	120%	82%	80%	120%	102%	70%	130%
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Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

TSS

Total Suspended Solids	7303974		7	8	NA	< 5	97%	80%	120%	NA			87%	80%	120%
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Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

Standard Water Analysis + Total Metals

pH	7297453		5.48	5.49	0.3%	<	101%	80%	120%	NA			NA		
Reactive Silica as SiO2	7303339		15.2	14.0	8.0%	< 0.5	109%	80%	120%	NA	80%	120%	NA	80%	120%
Chloride	7297573	7297573	47	47	0.6%	< 1	105%	80%	120%	NA	80%	120%	NA	70%	130%
Fluoride	7297573	7297573	<0.12	<0.12	NA	< 0.12	95%	80%	120%	NA	80%	120%	97%	70%	130%
Sulphate	7297573	7297573	7	7	NA	< 2	86%	80%	120%	NA	80%	120%	82%	70%	130%
Alkalinity	7297453		25	26	2.1%	< 5	109%	80%	120%	NA			NA		
True Color	7303339		<5	<5	NA	< 5	92%	80%	120%	101%	80%	120%	NA		
Turbidity	7297568	7297568	5.16	5.21	1.0%	< 0.5	104%	80%	120%						
Electrical Conductivity	7297453		488	489	0.2%	< 1	98%	90%	110%	NA			NA		
Nitrate as N	7297573	7297573	0.09	0.11	NA	< 0.05	114%	80%	120%	NA	80%	120%	109%	70%	130%
Nitrite as N	7297573	7297573	0.68	0.66	2.7%	< 0.05	112%	80%	120%	NA	80%	120%	NA	70%	130%
Ammonia as N	7303339		<0.03	<0.03	NA	< 0.03	90%	80%	120%	88%	80%	120%	90%	70%	130%
Total Organic Carbon	7297569		1.2	1.3	NA	< 0.5	106%	80%	120%	NA	80%	120%	106%	80%	120%
Ortho-Phosphate as P	7303339		<0.01	<0.01	NA	< 0.01	97%	80%	120%	NA	80%	120%	103%	80%	120%
Total Sodium	7297472		12.2	12.2	0.4%	< 0.1	100%	70%	130%	95%	80%	120%	99%	70%	130%
Total Potassium	7297472		0.6	0.6	0.4%	< 0.1	99%	70%	130%	94%	80%	120%	95%	70%	130%
Total Calcium	7297472		6.6	6.3	4.4%	< 0.1	101%	70%	130%	94%	80%	120%	97%	70%	130%
Total Magnesium	7297472		0.4	0.4	NA	< 0.1	100%	80%	130%	94%	80%	120%	96%	70%	130%
Bicarb. Alkalinity (as CaCO3)	7297453		25	26	2.1%	< 5	NA	80%	120%	NA			NA		
Carb. Alkalinity (as CaCO3)	7297453		<10	<10	NA	< 10	NA	80%	120%	NA			NA		

Quality Assurance

CLIENT NAME: SCOTIAN MATERIALS LTD

PROJECT: 103269.002

SAMPLING SITE:

AGAT WORK ORDER: 25X377401

ATTENTION TO: Robert MacPherson

SAMPLED BY:

Water Analysis (Continued)

RPT Date: Dec 09, 2025			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Hydroxide	7297453		<5	<5	NA	< 5	NA	80%	120%	NA			NA		
Total Aluminum	7297472		22	20	NA	< 5	98%	70%	130%	100%	80%	120%	98%	70%	130%
Total Antimony	7297472		<2	<2	NA	< 2	95%	70%	130%	94%	80%	120%	93%	70%	130%
Total Arsenic	7297472		<2	<2	NA	< 2	94%	70%	130%	91%	80%	120%	94%	70%	130%
Total Barium	7297472		<5	<5	NA	< 5	93%	70%	130%	95%	80%	120%	94%	70%	130%
Total Beryllium	7297472		<2	<2	NA	< 2	98%	70%	130%	94%	80%	120%	93%	70%	130%
Total Bismuth	7297472		<2	<2	NA	< 2	95%	70%	130%	94%	80%	120%	95%	70%	130%
Total Boron	7297472		<50	<50	NA	< 50	94%	70%	130%	90%	80%	120%	91%	70%	130%
Total Cadmium	7297472		<0.09	<0.09	NA	< 0.09	94%	70%	130%	93%	80%	120%	93%	70%	130%
Total Chromium	7297472		<1	<1	NA	< 1	95%	70%	130%	94%	80%	120%	97%	70%	130%
Total Cobalt	7297472		<1	<1	NA	< 1	97%	70%	130%	94%	80%	120%	96%	70%	130%
Total Copper	7297472		53	53	1.1%	< 1	96%	70%	130%	93%	80%	120%	95%	70%	130%
Total Iron	7297472		<50	<50	NA	< 50	96%	70%	130%	92%	80%	120%	95%	70%	130%
Total Lead	7297472		0.6	0.6	NA	< 0.5	96%	70%	130%	95%	80%	120%	95%	70%	130%
Total Manganese	7297472		11	11	2.3%	< 2	97%	70%	130%	93%	80%	120%	95%	70%	130%
Total Molybdenum	7297472		<2	<2	NA	< 2	95%	70%	130%	95%	80%	120%	92%	70%	130%
Total Nickel	7297472		6	5	NA	< 2	96%	70%	130%	93%	80%	120%	95%	70%	130%
Total Phosphorous	7297472		0.54	0.50	7.5%	< 0.02	101%	70%	130%	106%	80%	120%	101%	70%	130%
Total Selenium	7297472		<1	<1	NA	< 1	95%	70%	130%	95%	80%	120%	94%	70%	130%
Total Silver	7297472		<0.1	<0.1	NA	< 0.1	95%	70%	130%	94%	80%	120%	73%	70%	130%
Total Strontium	7297472		8	8	NA	< 5	97%	70%	130%	92%	80%	120%	95%	70%	130%
Total Thallium	7297472		<0.1	<0.1	NA	< 0.1	95%	70%	130%	94%	80%	120%	95%	70%	130%
Total Tin	7297472		<2	<2	NA	< 2	95%	70%	130%	96%	80%	120%	94%	70%	130%
Total Titanium	7297472		<2	<2	NA	< 2	98%	70%	130%	96%	80%	120%	96%	70%	130%
Total Uranium	7297472		<0.2	<0.2	NA	< 0.2	92%	70%	130%	92%	80%	120%	93%	70%	130%
Total Vanadium	7297472		<2	<2	NA	< 2	96%	70%	130%	92%	80%	120%	96%	70%	130%
Total Zinc	7297472		141	146	3.7%	< 5	93%	70%	130%	88%	80%	120%	88%	70%	130%

Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

AGAT Halifax - Total Phosphorous, TKN

Total Phosphorus	7297453	0.008	0.008	NA	< 0.006	99%	70%	130%	107%	80%	120%	99%	70%	130%
Total Kjeldahl Nitrogen	7293074	<0.10	<0.10	NA	< 0.10	101%	70%	130%	106%	80%	120%	114%	70%	130%

Comments: NA signifies Not Applicable.

Duplicate NA: results are under 5X the RDL and will not be calculated.

Certified By:



Method Summary

CLIENT NAME: SCOTIAN MATERIALS LTD

PROJECT: 103269.002

SAMPLING SITE:

AGAT WORK ORDER: 25X377401

ATTENTION TO: Robert MacPherson

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Total Phosphorus	INOR-93-6022	modified from SM 4500-P B and SM 4500-P E	SPECTROPHOTOMETER
Total Kjeldahl Nitrogen	INOR-93-6048	modified from EPA 351.2 and SM 4500-NORG D	LACHAT FIA
Dissolved Mercury	MET-121-6100 & MET-121-6107	SM 3112 B	CV/AA
Total Mercury	MET-121-6107	SM 3112 B	CV/AA
pH	INOR-121-6001	SM 4500 H+B	PC TITRATE
Reactive Silica as SiO ₂	INOR-121-6027	SM 4500-SiO ₂ F	COLORIMETER
Chloride	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Fluoride	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Alkalinity	INOR-121-6001	SM 2320 B	
True Color	INOR-121-6008	SM 2120 B	COLORIMETER
Turbidity	INOR-121-6001	SM 2130 B	PC TITRATE
Electrical Conductivity	INOR-121-6001	SM 2510 B	PC TITRATE
Nitrate + Nitrite as N	INOR-121-6005	SM 4110 B	CALCULATION
Nitrate as N	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-121-6047	SM 4500-NH ₃ H	COLORIMETER
Total Organic Carbon	INOR-121-6052	SM 5310 B	TOC ANALYZER
Ortho-Phosphate as P	INOR-121-6012	SM 4500-P G	COLORIMETER
Dissolved Sodium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Potassium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Calcium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Magnesium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Bicarb. Alkalinity (as CaCO ₃)	INOR-121-6001	SM 2320 B	PC TITRATE
Carb. Alkalinity (as CaCO ₃)	INOR-121-6001	SM 2320 B	PC TITRATE
Hydroxide	INOR-121-6001	SM 2320 B	PC-TITRATE
Calculated TDS	CALCULATION	SM 1030E	CALCULATION
Hardness	CALCULATION	SM 2340B	CALCULATION
Langelier Index (@20C)	CALCULATION	CALCULATION	CALCULATION
Langelier Index (@ 4C)	CALCULATION	CALCULATION	CALCULATION
Saturation pH (@ 20C)	CALCULATION	CALCULATION	CALCULATION
Saturation pH (@ 4C)	CALCULATION	CALCULATION	CALCULATION
Anion Sum	CALCULATION	SM 1030E	CALCULATION
Cation sum	CALCULATION	SM 1030E	CALCULATION
% Difference/ Ion Balance	CALCULATION	SM 1030E	CALCULATION
Dissolved Aluminum	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Antimony	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Arsenic	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Barium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Beryllium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS

Method Summary

CLIENT NAME: SCOTIAN MATERIALS LTD

PROJECT: 103269.002

SAMPLING SITE:

AGAT WORK ORDER: 25X377401

ATTENTION TO: Robert MacPherson

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Dissolved Bismuth	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Boron	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Cadmium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Chromium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Cobalt	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Copper	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Iron	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Lead	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Manganese	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Molybdenum	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Nickel	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Phosphorus	MET-121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Selenium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Silver	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Strontium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Thallium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Tin	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Titanium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Uranium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Vanadium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Dissolved Zinc	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Sodium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Potassium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Calcium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Magnesium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Aluminum	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Antimony	MET121-6104 & MET-121-6105	SM 3125	ICP-MS
Total Arsenic	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS

Method Summary

CLIENT NAME: SCOTIAN MATERIALS LTD

PROJECT: 103269.002

SAMPLING SITE:

AGAT WORK ORDER: 25X377401

ATTENTION TO: Robert MacPherson

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Total Barium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Beryllium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Bismuth	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Boron	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Cadmium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Chromium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Cobalt	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Copper	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Iron	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Lead	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Manganese	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Molybdenum	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Nickel	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Phosphorous	MET-121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Selenium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Silver	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Strontium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Thallium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Tin	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Titanium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Uranium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Vanadium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Zinc	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Suspended Solids	INOR-121-6024, 6025	SM 2540C, D	GRAVIMETRIC

ELECTROFISHING SITE FORM

Fish Collection Permit #: _____
 Session ID#: _____
 Date (yyyy-mm-dd): 2025-07-03
 Water Name: _____
 Tributary to: _____
 Site ID#: SW01
 Site Name: Goffs Quarry
 Agency: GEMTEC
 Personnel: CM, KW
 Second Agency/Contact: Section Materials
 Weather: Sunny 28°C Breezy

SITE COORDINATES:
 Start Waypoint ID#: SW01 End Waypoint ID#: _____
 Coordinates: _____
 x/long: _____
 y / lat: _____
 End Point: 20N 495696 496644

Projection: (e.g., UTM) UTM Datum: (e.g., NAD83) NAD83

Site Pictures: _____

Water ID: _____ Drainage Code: _____

Rating of the site for brook trout prior to electrofishing:

Angler Pressure: ☒ Low ☐ Moderate ☐ High
 Access Rating: ☒ Poor ☐ Fair ☐ Good ☐ Excellent
☒ Easy ☐ Moderate ☐ Difficult

ELECTROFISHING DETAILS: (Reminder: electrofishing MUST proceed in upstream direction!)

(check one of the choices under each of the following headings and provide additional details if required.)

Method Used:

- ☐ Diminishing Returns
☐ Catch Per Unit Effort
☒ Spot Check
☐ Salvage

Site Set-Up:

☒ Open ☐ Closed

Gear Used: Model

- ☒ Backpack VR24
☐ Boat
☐ Shore-based

Settings:

Voltage: 125
 Frequency: 60 Hz
 Duty-Cycle: 25%
 POW Setting: _____

Date: _____ (if different then habitat data)

Power Output (watts): _____

Sweep/Effort	1 (t= s)	2 (t= s)	3 (t= s)	4 (t= s)	5 (t= s)
# of Netters	<u>253</u>				

WATER CHEMISTRY: (see "Forms Manual" for details)

Specific Water Conductivity (Cs) = 1235 TDS (ppt) _____ pH 7.28

Dissolved Oxygen (mg/l) = 5.5
 (%) 59
 Water Clarity: ☐ Poor ☐ Fair ☒ Good

Temperature (oC)

	Water	Air	Time
Start	<u>17.9°C</u>	<u>28°C</u>	
End	<u>17.9°C</u>	<u>28°C</u>	<u>3:28pm</u>

 Water Level: ☐ Low ☒ Moderate ☐ High

SITE DIMENSIONS: SUMMARY

Length (m): 100 *See stream*
 Average Wetted Width (m): _____
 Average Bankfull Width (m): _____
 Average Wetted Depth (m): _____
 Average Bankfull Depth (m): _____
 Maximum Site Depth (m): _____
 Bankfull Area (m²): _____
 Wetted Area (m²): _____
 Channel Type: ☒ Main ☐ Side ☐ Split ☐ Bogan
 % Embeddness: ☒ 1 (< 20%) ☐ 2 (20 - 35%) ☐ 3 (35 - 50%) ☐ 4 (≥ 50%)

STREAM TYPE:

% of area	Qty
Riffle: <u>0</u>	
Run: <u>0</u>	
Rapid: <u>0</u>	
Pool: <u>0</u>	
Flat: <u>100</u>	
Other: _____	

SUBSTRATE TYPE: (% of wetted surface area)

Bedrock (ledge): See stream
 Boulder (> 460 mm): _____
 Rock (180 - 460 mm): _____
 Rubble (54 - 179 mm): _____
 Gravel (2.6 - 53 mm): _____
 Sand (0.06 - 2.5 mm): _____
 Fines (0.0005 - 0.05 mm): _____

Water Velocity (m/s): 0.0

☒ from meter ☐ from calculation

Water Flow (m³/sec): _____

Formula (CMS) = $\frac{W(m) \times D(m) \times A \times L(m)}{T(sec)}$

where W = width, D = depth, A = coefficient for the stream bottom, L = length, and T = average float time

	Coefficient	FLOAT TIME (sec) of Length of _____ m			
Smooth	0.9	¼ WAY	½ WAY	¾ WAY	Average
Rough	0.8				

Comments: *Specific portions of the form were filled out as per DND instruction.

*****MUST COMPLETE BACK SIDE OR SECOND PAGE OF FORM*****

ELECTROFISHING SITE FORM

Session ID#:

22

Site ID#:

SW01

Date (yyyy-mm-dd):

2025-07-03

Site Name:

Golf Quarry

STANDARDIZED STREAM TRANSECTS:

Indicate which transect was used for the flow measurement calculation.

Transect #	Stream Type	WIDTH (m):		WETTED DEPTH (m)					BANKFULL DEPTH (m)		
		Wet	Bankfull	1/4	1/2	3/4	DIFF.	MAX	1/4	1/2	3/4

STREAM BANK CHARACTERISTICS & CANOPY: based on the BANKFULL WIDTH

	% Bank Erosion			% Bank Vegetation			
	Stable	Bare Stable	Eroding	Bare	Grasses	Shrubs	Trees
LEFT	100				33	33	33
RIGHT	100				33	33	33

% OVERHEAD CANOPY

(e.g. mature trees)

- ☐ 0 0
☐ 1 ≤ 1-20%
☐ 2 21 - 40%
☐ 3 41 - 70%
☒ 4 71 - 90%
☐ 5 >90%

LARGE WOODY DEBRIS (LWD): Individual lengths (m)

(Record for each piece if it is Dry (D), Wet (W) and if Wet what Stream Type does the piece fall within).

LWD(m)											
S. Type											

LWD(m)											
S. Type											

% COVER BY TYPE:

	% Undercut		% OHV "Cover"	
	Wet	Bankfull	Wet	Bankfull
LEFT	10	0	75	75
RIGHT	10	0	75	75

POOL WITH STRUCTURE (PWS):

Individual Measurements

PWS#	Length (m)	Width (m)	Area (m ²)

% INSTREAM COVER BY TYPE: based on WETTED area

COVER TYPE	%
Turbulence	0
Instream vegetation	0
Instream SWD	5
Other: Cobble	10
Other: Boulder	0
Other: (specify)	

TOTAL BROOK TROUT COVER RATING: (visual estimate of the % stream wetted area that offers cover)

- ☒ <20%
 ☐ 20-40%
 ☐ 40-60%
 ☐ >60%

*****MUST COMPLETE FRONT SIDE OR FIRST PAGE OF FORM*****

Only Collect Pool Fished

ELECTROFISHING SITE FORM

Fish Collection Permit #:
Session ID#:
Date (yyyy-mm-dd): 2025-07-03
Water Name:
Tributary to:
Site ID#:
Site Name: Middle Creek
Agency: GEMTEC
Personnel: CM, JW
Second Agency/Contact: Scotian Materials
Weather: Sunny 28°C Breeze 2

SITE COORDINATES:
Start Waypoint ID#: Middle Creek End Waypoint ID#:
Coordinates: x/long: y / lat:
Projection: (e.g., UTM) UTM Datum: (e.g., NAD83) NAD83

Site Pictures: ☒

Rating of the site for brook trout prior to electrofishing:

Angler Pressure: Low ☒ Moderate ☐ High ☐ Access Rating: Easy ☒ Moderate ☐ Difficult ☐

ELECTROFISHING DETAILS: (Reminder: electrofishing MUST proceed in upstream direction!)

(check one of the choices under each of the following headings and provide additional details if required.)

Method Used: ☐ Diminishing Returns ☒ Catch Per Unit Effort ☒ Spot Check ☐ Salvage
Site Set-Up: Open ☒ Closed ☐
Gear Used: Model LR24 ☒ Backpack ☐ Boat ☐ Shore-based
Settings: Voltage: 125 Frequency: 60 Hz Duty-Cycle: 25% POW Setting:
Date: (if different then habitat data) Power Output (watts):
Sweep/Effort # of Netters: 1 (t=100 s) 2 (t= s) 3 (t= s) 4 (t= s) 5 (t= s)

WATER CHEMISTRY: (see "Forms Manual" for details)

Specific Water Conductivity (Cs) = 792 TDS (ppt) pH 7.42
Dissolved Oxygen (mg/l) = 6.2 Water Clarity: Poor ☐ Fair ☐ Good ☒
Temperature (oC): Water Start 16.9 End 16.9 Air 28.0 Time 4:20 PM Water Level: Low ☐ Moderate ☒ High ☐

SITE DIMENSIONS: SUMMARY Length (m): 100 **STREAM TYPE:** % of area Qty Riffle: 0 Run: 0 Rapid: 0 Pool: 100 Flat: 0 Other: (specify)
SUBSTRATE TYPE: (% of wetted surface area) Bedrock (ledge): See stream assessment Boulder (> 460 mm): Rock (180 - 460 mm): Rubble (54 - 179 mm): Gravel (2.6 - 53 mm): Sand (0.06 - 2.5 mm): Fines (0.0005 - 0.05 mm):

CHANNEL TYPE: ☒ Main ☐ Side ☐ Split ☐ Bogan
% Embeddness: ☐ 1 (< 20%) ☐ 2 (20 - 35%) ☐ 3 (35 - 50%) ☒ 4 (≥ 50%)

Water Velocity (m/s): 0.1
☒ from meter ☐ from calculation

Water Flow (m³/sec):

Formula (CMS) = $\frac{W(m) \times D(m) \times A \times L(m)}{T(sec)}$

Coefficient		FLOAT TIME (sec) of Length of m			
Smooth	0.9	¼ WAY	½ WAY	¾ WAY	Average
Rough	0.8				

where W = width, D = depth, A = coefficient for the stream bottom, L = length, and T = average float time

Comments: *Specific portions of the form were filled out as per DND instruction.

*****MUST COMPLETE BACK SIDE OR SECOND PAGE OF FORM*****

INDIVIDUAL FISH MEASUREMENTS FORM

Session ID #: 3

Date : 2018-07-03
(yyyy-mm-dd)

Water Name:

Site ID #: Middle Colvert

Sampling Method:

Angling

Netting

Electrofishing
Counting Facility

Other (specify):

Weighing device:

Scale

Comments:

[illegible]

BATCH COUNT/WEIGHT DATA BY SWEEP FOR SPECIES IN WHICH INDIVIDUALS WERE NOT MEASURED.

[illegible]

ELECTROFISHING SITE FORM

Fish Collection Permit #: _____
 Session ID#: _____
 Date (yyyy-mm-dd): 2000-07-03
 Water Name: _____
 Tributary to: _____
 Site ID#: SW01
 Site Name: Goff's Quarry
 Agency: GEMTEC
 Personnel: CM, KV
 Second Agency/Contact: Scotia Matrak
 Weather: Sunny, 25°C, 1 Bend

SITE COORDINATES:
 Start Waypoint ID#: SW02 End Waypoint ID#: _____
 Coordinates: _____
 x/long: _____
 y/lat: _____

Projection: (e.g., UTM) UTM Datum: (e.g., NAD83) NAD83

Site Pictures: ☒ _____

Water ID: _____ Drainage Code: _____

Rating of the site for brook trout prior to electrofishing:

Angler Pressure: ☒ Low ☐ Moderate ☐ High
 Access Rating: ☐ Poor ☒ Fair ☐ Good ☐ Excellent
☒ Easy ☐ Moderate ☐ Difficult

ELECTROFISHING DETAILS: (Reminder: electrofishing MUST proceed in upstream direction!)
 (check one of the choices under each of the following headings and provide additional details if required.)

Method Used: ☐ Diminishing Returns ☐ Catch Per Unit Effort ☒ Spot Check ☐ Salvage
Site Set-Up: ☐ Open ☒ Closed
Gear Used: Model LR24
☒ Backpack ☐ Boat ☐ Shore-based
Settings: Voltage: 125
 Frequency: 80 Hz
 Duty-Cycle: 25%
 POW Setting: _____
 Date: _____ (if different then habitat data) **Power Output (watts):** _____

Sweep/Effort	1 (t = 954 s)	2 (t = s)	3 (t = s)	4 (t = s)	5 (t = s)
# of Netters	<u>1</u>				

WATER CHEMISTRY: (see "Forms Manual" for details)

Specific Water Conductivity (Cs) = 551.7 TDS (ppt) _____ pH 7.37
 Dissolved Oxygen (mg/l) = 5.7 Water Clarity: ☐ Poor ☐ Fair ☒ Good
 (%) 57
 Temperature (oC):

	Water	Air	Time
Start		<u>25°C</u>	
End		<u>25°C</u>	<u>1:30 pm</u>

 Water Level: ☐ Low ☒ Moderate ☐ High

SITE DIMENSIONS: SUMMARY

Length (m): 100
 Average Wetted Width (m): 1.5
 Average Bankfull Width (m): 2.0
 Average Wetted Depth (m): 25cm
 Average Bankfull Depth (m): 25cm
 Maximum Site Depth (m): 0.75
 Bankfull Area (m²): 200m²
 Wetted Area (m²): 150m²

STREAM TYPE:

% of area	Qty
Riffle: <u>50</u>	<u>5</u>
Run: <u>10</u>	<u>2</u>
Rapid: <u>0</u>	<u>1</u>
Pool: <u>40</u>	<u>3</u>
Flat: <u>0</u>	<u>1</u>
Other: _____	

SUBSTRATE TYPE: (% of wetted surface area)

Bedrock (ledge):	<u>0</u>
Boulder (> 460 mm):	<u>0</u>
Rock (180 - 460 mm):	<u>75</u>
Rubble (54 - 179 mm):	<u>25</u>
Gravel (2.6 - 53 mm):	<u>25</u>
Sand (0.06 - 2.5 mm):	<u>15</u>
Fines (0.0005 - 0.05 mm):	<u>10</u>

CHANNEL TYPE: ☒ Main ☐ Side ☐ Split ☐ Bogan
% Embeddness: ☐ 1 (< 20%) ☐ 2 (20 - 35%) ☒ 3 (35 - 50%) ☐ 4 (≥ 50%)

Water Velocity (m/s): 0.3
☒ from meter ☐ from calculation

Water Flow (m³/sec): _____

Formula (CMS) = $\frac{W(m) \times D(m) \times A \times L(m)}{T(sec)}$

Coefficient		FLOAT TIME (sec) of Length of m			
Smooth	0.9	¼ WAY	½ WAY	¾ WAY	Average
Rough	0.8				

where W = width, D = depth, A = coefficient for the stream bottom, L = length, and T = average float time

Comments: *Specific portions of the form were filled out as per DND instruction.

*****MUST COMPLETE BACK SIDE OR SECOND PAGE OF FORM*****

ELECTROFISHING SITE FORM

Session ID#: _____

Site ID#: SW02

Date (yyyy-mm-dd): 2000-07-03

Site Name: SW02

STANDARDIZED STREAM TRANSECTS:

Indicate which transect was used for the flow measurement calculation.

Transect #	Stream Type	WIDTH (m):		WETTED DEPTH (m)					BANKFULL DEPTH (m)		
		Wet	Bankfull	1/4	1/2	3/4	DIFF.	MAX	1/4	1/2	3/4
1	Brook	1.5	2.0	11							

STREAM BANK CHARACTERISTICS & CANOPY: based on the BANKFULL WIDTH

	% Bank Erosion			% Bank Vegetation			
	Stable	Bare Stable	Eroding	Bare	Grasses	Shrubs	Trees
LEFT	100				10	10	80
RIGHT	100				10	10	80

% OVERHEAD CANOPY (e.g. mature trees)

- ☐ 0 0
☐ 1 ≤ 1-20%
☐ 2 21 - 40%
☐ 3 41 - 70%
☒ 4 71 - 90%
☐ 5 >90%

LARGE WOODY DEBRIS (LWD): Individual lengths (m)

(Record for each piece if it is Dry (D), Wet (W) and if Wet what Stream Type does the piece fall within).

LWD(m)	1.6	0.7	0.5	0.7	0.2					
S. Type	D	W	D	W	W					

LWD(m)										
S. Type										

% COVER BY TYPE:

	% Undercut		% OHV "Cover"	
	Wet	Bankfull	Wet	Bankfull
LEFT	50	—	100	100
RIGHT	50	—	100	100

POOL WITH STRUCTURE (PWS):

Individual Measurements

PWS#	Length (m)	Width (m)	Area (m2)
1	2	1.75	
2	3	2.25	
3	1.5	1.0	

% INSTREAM COVER BY TYPE: based on WETTED area

COVER TYPE	%
Turbulence	10
Instream vegetation	5
Instream SWD	50
Other: Cobble	20
Other: Boulder	—
Other: (specify)	

TOTAL BROOK TROUT COVER RATING: (visual estimate of the % stream wetted area that offers cover)

- ☐ <20%
 ☒ 20-40%
 ☐ 40-60%
 ☐ >60%

*****MUST COMPLETE FRONT SIDE OR FIRST PAGE OF FORM*****

INDIVIDUAL FISH MEASUREMENTS FORM

Session ID #: _____

Date : 2000-07-03
(yyyy-mm-dd)

(yyyy-mm-dd)

Water Name:

Site ID #: Electrofishing
Counting Facility

Other (specify):

Sampling Method:

Angling

Netting

Stocking

Trapping

Counting Facility

Weighing device:

Scale

Comments:

[illegible]

BATCH COUNT/WEIGHT DATA BY SWEEP FOR SPECIES IN WHICH INDIVIDUALS WERE NOT MEASURED.

[illegible]