TKN & Low Level Total Phosphorous - 0.002 mg/L

Sample Description				PML-2	PML-1	HWY102-1	LV	KL-1	KL-2	KL-3	KL-4	KL-5	LSD	HWY102-2
Date Sampled				08/28/202:	08/28/202:	08/28/202:	08/28/202:	08/28/202:	08/28/202:	08/28/202:	08/28/202:	08/28/202:	08/28/202:	08/28/2023
Parameter	**Unit**	**G / S**	**RDL**	**5244113**	**5244127**	**5244128**	**5244129**	**5244130**	**5244131**	**5244132**	**5244133**	**5244134**	**5244135**	**5244136**
Total Phosphorus	mg/L		0.002	0.002	0.005	<0.002	<0.002	<0.002	<0.002	<0.002	0.004	0.008	<0.002	0.002
Total Kjeldahl Nitrogen	mg/L		0.10	<0.10	<0.10	<0.10	0.34	<0.10	0.14	<0.10	<0.10	0.12	0.16	0.25

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

5244113-5244136 Total Phosphorous RDL is the calculated MDL.

Analysis performed at AGAT Toronto (unless marked by *)

Insufficient Sample : IS

Sample Not Received : SNR

AGAT Laboratories

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CLIENT NAME: WSP E&I CANADA LIMITED
50 TROOP AVENUE, UNIT 300
DARTMOUTH, NS B3B1Z1
(902) 468-2848
ATTENTION TO: JOYCE MCDONALD
PROJECT: TE201017
AGAT WORK ORDER: 23X062427
MICROBIOLOGY ANALYSIS REVIEWED BY: Ashleigh Dussault, Inorganics Laboratory Supervisor
MISCELLANEOUS ANALYSIS REVIEWED BY: Ashleigh Dussault, Inorganics Laboratory Supervisor
WATER ANALYSIS REVIEWED BY: Ashleigh Dussault, Inorganics Laboratory Supervisor
DATE REPORTED: Sep 11, 2023
PAGES (INCLUDING COVER): 17
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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.*
- *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.*

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Certificate of Analysis

AGAT WORK ORDER: 23X062427

PROJECT: TE201017

CLIENT NAME: WSP E&I CANADA LIMITED

ATTENTION TO: JOYCE MCDONALD

SAMPLING SITE:

SAMPLED BY:

Total Coliforms and E.coli Membrane Filtration

DATE RECEIVED: 2023-08-28

DATE REPORTED: 2023-09-11

			SAMPLE DESCRIPTION:	PML-2	PML-1	HWY102-1	LV	KL-1	KL-2	KL-3	KL-4
			SAMPLE TYPE:	Water	Water	Water	Water	Water	Water	Water	Water
			DATE SAMPLED:	2023-08-28 08:35	2023-08-28 08:55	2023-08-28 09:45	2023-08-28 10:15	2023-08-28 13:10	2023-08-28 12:00	2023-08-28 12:25	2023-08-28 12:35
Parameter	Unit	G / S	RDL	5244113	5244127	5244128	5244129	5244130	5244131	5244132	5244133
Total Coliforms (MF)	CFU/100 mL		1	>200	>200	>200	>200	>200	>200	>200	>200
E. Coli (MF)	CFU/100 mL		1	16	27	195	148	>200	93	24	23

		SAMPLE DESCRIPTION:	KL-5	LSD	HWY102-2
		SAMPLE TYPE:	Water	Water	Water
		DATE SAMPLED:	2023-08-28 12:55	2023-08-28 11:20	2023-08-28 13:30
Parameter	Unit	G / S RDL	5244134	5244135	5244136
Total Coliforms (MF)	CFU/100 mL	1	>200	>200	>200
E. Coli (MF)	CFU/100 mL	1	4	73	20

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

Analysis performed at AGAT Halifax (unless marked by *)

Certified By: Ashleigh Dussault

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Certificate of Analysis

AGAT WORK ORDER: 23X062427

PROJECT: TE201017

CLIENT NAME: WSP E&I CANADA LIMITED

ATTENTION TO: JOYCE MCDONALD

SAMPLING SITE:

SAMPLED BY:

Subcontracted Data Received

DATE RECEIVED: 2023-08-28

DATE REPORTED: 2023-09-11

			SAMPLE DESCRIPTION:	PML-2	PML-1	HWY102-1	LV	KL-1	KL-2	KL-3	KL-4
			SAMPLE TYPE:	Water	Water	Water	Water	Water	Water	Water	Water
			DATE SAMPLED:	2023-08-28 08:35	2023-08-28 08:55	2023-08-28 09:45	2023-08-28 10:15	2023-08-28 13:10	2023-08-28 12:00	2023-08-28 12:25	2023-08-28 12:35
Parameter	Unit	G / S	RDL	5244113	5244127	5244128	5244129	5244130	5244131	5244132	5244133
Subcontracted Data				Y	Y	Y	Y	Y	Y	Y	Y

			SAMPLE DESCRIPTION:	KL-5	LSD	HWY102-2
			SAMPLE TYPE:	Water	Water	Water
			DATE SAMPLED:	2023-08-28 12:55	2023-08-28 11:20	2023-08-28 13:30
Parameter	Unit	G / S	RDL	5244134	5244135	5244136
Subcontracted Data				Y	Y	Y

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

Analysis performed at AGAT Halifax (unless marked by *)

Certified By: Ashleigh Dussault

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AGAT WORK ORDER: 23X062427

PROJECT: TE201017

CLIENT NAME: WSP E&I CANADA LIMITED

ATTENTION TO: JOYCE MCDONALD

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2023-08-28

DATE REPORTED: 2023-09-11

SAMPLE DESCRIPTION:				PML-2	PML-1	HWY102-1	LV	KL-1	KL-2	KL-3	KL-4
SAMPLE TYPE:				Water	Water	Water	Water	Water	Water	Water	Water
DATE SAMPLED:				2023-08-28 08:35	2023-08-28 08:55	2023-08-28 09:45	2023-08-28 10:15	2023-08-28 13:10	2023-08-28 12:00	2023-08-28 12:25	2023-08-28 12:35
Parameter	Unit	G / S	RDL	5244113	5244127	5244128	5244129	5244130	5244131	5244132	5244133
pH				6.46	6.41	6.50	6.47	6.39	6.60	6.33	6.35
Reactive Silica as SiO2	mg/L		0.5	2.6	2.9	4.1	3.9	2.6	4.4	2.7	2.6
Chloride	mg/L		1	31	30	44	52	30	8	30	30
Fluoride	mg/L		0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
Sulphate	mg/L		2	7	7	11	14	6	5	7	7
Alkalinity	mg/L		5	9	9	20	17	8	12	8	8
True Color	TCU		5.00	45.9	56.4	55.8	47.9	67.1	128	58.5	56.2
Turbidity	NTU		0.50	0.64	0.79	1.31	6.60	1.63	4.03	0.83	0.50
Electrical Conductivity	umho/cm		1	147	147	223	257	142	66	143	143
Nitrate + Nitrite as N	mg/L		0.05	0.24	0.39	0.29	1.48	0.17	0.10	0.21	0.23
Nitrate as N	mg/L		0.05	0.24	0.39	0.29	1.48	0.17	0.10	0.21	0.23
Nitrite as N	mg/L		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ammonia as N	mg/L		0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Total Organic Carbon	mg/L		0.50	8.6	8.8	9.9	9.5	8.7	15	8.3	8.3
Ortho-Phosphate as P	mg/L		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Sodium	mg/L		0.1	19.9	21.0	28.9	36.7	20.3	7.4	19.4	19.7
Total Potassium	mg/L		0.1	1.0	1.0	2.0	2.0	0.9	1.0	1.0	1.0
Total Calcium	mg/L		0.1	5.7	5.1	10.5	9.1	5.0	4.0	5.3	5.1
Total Magnesium	mg/L		0.1	0.8	0.9	1.6	1.4	0.8	0.9	0.8	0.8
Bicarb. Alkalinity (as CaCO3)	mg/L		5	9	9	20	17	8	12	8	8
Carb. Alkalinity (as CaCO3)	mg/L		10	<10	<10	<10	<10	<10	<10	<10	<10
Hydroxide	mg/L		5	<5	<5	<5	<5	<5	<5	<5	<5
Calculated TDS	mg/L		1	72	73	112	133	69	35	70	70
Hardness	mg/L			17.5	16.4	32.8	28.5	15.8	13.7	16.5	16.0
Langelier Index (@20C)	NA			-3.40	-3.50	-2.77	-2.94	-3.58	-3.26	-3.61	-3.61
Langelier Index (@ 4C)	NA			-3.72	-3.82	-3.09	-3.26	-3.90	-3.58	-3.93	-3.93
Saturation pH (@ 20C)	NA			9.86	9.91	9.27	9.41	9.97	9.86	9.94	9.96
Saturation pH (@ 4C)	NA			10.2	10.2	9.59	9.73	10.3	10.2	10.3	10.3
Anion Sum	me/L			1.22	1.20	1.89	2.20	1.14	0.58	1.17	1.17

Certified By: Ashleigh Dussault

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Certificate of Analysis

AGAT WORK ORDER: 23X062427

PROJECT: TE201017

CLIENT NAME: WSP E&I CANADA LIMITED

ATTENTION TO: JOYCE MCDONALD

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2023-08-28

DATE REPORTED: 2023-09-11

SAMPLE DESCRIPTION:				PML-2	PML-1	HWY102-1	LV	KL-1	KL-2	KL-3	KL-4
SAMPLE TYPE:				Water	Water	Water	Water	Water	Water	Water	Water
DATE SAMPLED:				2023-08-28 08:35	2023-08-28 08:55	2023-08-28 09:45	2023-08-28 10:15	2023-08-28 13:10	2023-08-28 12:00	2023-08-28 12:25	2023-08-28 12:35
Parameter	Unit	G / S	RDL	5244113	5244127	5244128	5244129	5244130	5244131	5244132	5244133
Cation sum	me/L			1.27	1.30	1.99	2.31	1.27	0.69	1.24	1.23
% Difference/ Ion Balance	%			2.1	4.0	2.6	2.3	5.1	8.7	2.8	2.7
Total Aluminum	ug/L		5	167	189	157	600	285	412	197	186
Total Antimony	ug/L		2	<2	<2	<2	<2	<2	<2	<2	<2
Total Arsenic	ug/L		2	<2	<2	<2	<2	<2	<2	<2	<2
Total Barium	ug/L		5	16	16	54	69	11	15	13	14
Total Beryllium	ug/L		2	<2	<2	<2	<2	<2	<2	<2	<2
Total Bismuth	ug/L		2	<2	<2	<2	<2	<2	<2	<2	<2
Total Boron	ug/L		5	12	7	11	11	7	11	8	5
Total Cadmium	ug/L		0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09
Total Chromium	ug/L		2	<2	<2	<2	<2	<2	<2	5	<2
Total Cobalt	ug/L		1	<1	<1	<1	<1	<1	<1	<1	<1
Total Copper	ug/L		2	<2	<2	<2	9	<2	2	<2	<2
Total Iron	ug/L		50	192	256	260	621	299	512	318	176
Total Lead	ug/L		0.5	0.9	<0.5	<0.5	1.3	<0.5	0.8	<0.5	<0.5
Total Manganese	ug/L		2	53	65	20	60	56	20	49	44
Total Molybdenum	ug/L		2	<2	<2	<2	<2	<2	<2	<2	<2
Total Nickel	ug/L		2	<2	<2	<2	<2	<2	<2	<2	<2
Total Phosphorous	mg/L		0.07	0.78	0.84	1.33	1.49	0.80	1.48	0.77	0.79
Total Selenium	ug/L		1	<1	<1	<1	<1	<1	<1	<1	<1
Total Silver	ug/L		0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Strontium	ug/L		5	24	26	50	40	23	17	24	24
Total Thallium	ug/L		0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Tin	ug/L		2	<2	<2	<2	<2	<2	<2	<2	<2
Total Titanium	ug/L		3	<3	<3	<3	12	4	7	<3	<3
Total Uranium	ug/L		0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total Vanadium	ug/L		2	<2	<2	<2	<2	<2	<2	<2	<2
Total Zinc	ug/L		5	15	<5	5	36	15	12	8	26

Certified By: Ashleigh Dussault

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Certificate of Analysis

AGAT WORK ORDER: 23X062427

PROJECT: TE201017

CLIENT NAME: WSP E&I CANADA LIMITED

ATTENTION TO: JOYCE MCDONALD

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2023-08-28

DATE REPORTED: 2023-09-11

SAMPLE DESCRIPTION:				KL-5	LSD	HWY102-2
SAMPLE TYPE:				Water	Water	Water
DATE SAMPLED:				2023-08-28 12:55	2023-08-28 11:20	2023-08-28 13:30
Parameter	Unit	G / S	RDL	5244134	5244135	5244136
pH				6.34	6.47	6.47
Reactive Silica as SiO2	mg/L		0.5	2.4	3.1	5.3
Chloride	mg/L		1	29	14	91
Fluoride	mg/L		0.12	<0.12	<0.12	<0.12
Sulphate	mg/L		2	6	4	10
Alkalinity	mg/L		5	32	12	18
True Color	TCU		5.00	58.3	52.6	107
Turbidity	NTU		0.50	0.50	1.54	3.77
Electrical Conductivity	umho/cm		1	141	91	366
Nitrate + Nitrite as N	mg/L		0.05	0.20	0.06	0.08
Nitrate as N	mg/L		0.05	0.20	0.06	0.08
Nitrite as N	mg/L		0.05	<0.05	<0.05	<0.05
Ammonia as N	mg/L		0.03	<0.03	<0.03	<0.03
Total Organic Carbon	mg/L		0.50	9.4	11	13
Ortho-Phosphate as P	mg/L		0.01	<0.01	<0.01	<0.01
Total Sodium	mg/L		0.1	20.1	11.9	59.6
Total Potassium	mg/L		0.1	1.0	1.1	1.4
Total Calcium	mg/L		0.1	4.9	4.2	7.4
Total Magnesium	mg/L		0.1	0.8	1.0	1.1
Bicarb. Alkalinity (as CaCO3)	mg/L		5	32	12	18
Carb. Alkalinity (as CaCO3)	mg/L		10	<10	<10	<10
Hydroxide	mg/L		5	<5	<5	<5
Calculated TDS	mg/L		1	82	44	184
Hardness	mg/L			15.5	14.6	23.0
Langelier Index (@20C)	NA			-3.04	-3.38	-3.02
Langelier Index (@ 4C)	NA			-3.36	-3.70	-3.34
Saturation pH (@ 20C)	NA			9.38	9.85	9.49
Saturation pH (@ 4C)	NA			9.70	10.2	9.81
Anion Sum	me/L			1.60	0.72	3.14

Certified By: Ashleigh Dussault

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Certificate of Analysis

AGAT WORK ORDER: 23X062427

PROJECT: TE201017

CLIENT NAME: WSP E&I CANADA LIMITED

ATTENTION TO: JOYCE MCDONALD

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2023-08-28

DATE REPORTED: 2023-09-11

		SAMPLE DESCRIPTION:		KL-5	LSD	HWY102-2
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2023-08-28 12:55	2023-08-28 11:20	2023-08-28 13:30
Parameter	Unit	G / S	RDL	5244134	5244135	5244136
Cation sum	me/L			1.24	0.88	3.19
% Difference/ Ion Balance	%			12.6	9.6	0.8
Total Aluminum	ug/L		5	195	199	258
Total Antimony	ug/L		2	<2	<2	<2
Total Arsenic	ug/L		2	<2	<2	<2
Total Barium	ug/L		5	12	9	61
Total Beryllium	ug/L		2	<2	<2	<2
Total Bismuth	ug/L		2	<2	<2	<2
Total Boron	ug/L		5	7	15	7
Total Cadmium	ug/L		0.09	<0.09	<0.09	<0.09
Total Chromium	ug/L		2	<2	<2	<2
Total Cobalt	ug/L		1	<1	<1	<1
Total Copper	ug/L		2	<2	<2	4
Total Iron	ug/L		50	177	387	1950
Total Lead	ug/L		0.5	<0.5	<0.5	0.8
Total Manganese	ug/L		2	37	51	106
Total Molybdenum	ug/L		2	<2	<2	<2
Total Nickel	ug/L		2	<2	<2	<2
Total Phosphorous	mg/L		0.07	0.73	0.96	1.59
Total Selenium	ug/L		1	<1	<1	<1
Total Silver	ug/L		0.1	<0.1	<0.1	<0.1
Total Strontium	ug/L		5	23	19	36
Total Thallium	ug/L		0.1	<0.1	<0.1	<0.1
Total Tin	ug/L		2	<2	<2	<2
Total Titanium	ug/L		3	<3	4	4
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

Certified By: Ashleigh Dussault

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Certificate of Analysis

AGAT WORK ORDER: 23X062427

PROJECT: TE201017

CLIENT NAME: WSP E&I CANADA LIMITED

ATTENTION TO: JOYCE MCDONALD

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2023-08-28 **DATE REPORTED: 2023-09-11**

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

5244113-5244130 % 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

5244131 % 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
The cation and anion sums are at, or below, 1 me/L, therefore the acceptable criteria is a difference of less than 0.3me/L.

5244132-5244133 % 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

5244134 % 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.

5244135 % 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
The cation and anion sums are at, or below, 1 me/L, therefore the acceptable criteria is a difference of less than 0.3me/L.

5244136 % 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: Ashleigh Dussault

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PROJECT: TE201017

CLIENT NAME: WSP E&I CANADA LIMITED

ATTENTION TO: JOYCE MCDONALD

SAMPLING SITE:

SAMPLED BY:

TKN & Low Level Total Phosphorous - 0.002 mg/L

DATE RECEIVED: 2023-08-28

DATE REPORTED: 2023-09-11

			SAMPLE DESCRIPTION:	PML-2	PML-1	HWY102-1	LV	KL-1	KL-2	KL-3	KL-4
			SAMPLE TYPE:	Water	Water	Water	Water	Water	Water	Water	Water
			DATE SAMPLED:	2023-08-28 08:35	2023-08-28 08:55	2023-08-28 09:45	2023-08-28 10:15	2023-08-28 13:10	2023-08-28 12:00	2023-08-28 12:25	2023-08-28 12:35
Parameter	Unit	G / S	RDL	5244113	5244127	5244128	5244129	5244130	5244131	5244132	5244133
Total Phosphorus	mg/L		0.002	0.002	0.005	<0.002	<0.002	<0.002	<0.002	<0.002	0.004
Total Kjeldahl Nitrogen	mg/L		0.10	<0.10	<0.10	<0.10	0.34	<0.10	0.14	<0.10	<0.10

		SAMPLE DESCRIPTION:	KL-5	LSD	HWY102-2	
		SAMPLE TYPE:	Water	Water	Water	
		DATE SAMPLED:	2023-08-28 12:55	2023-08-28 11:20	2023-08-28 13:30	
Parameter	Unit	G / S	RDL	5244134	5244135	5244136
Total Phosphorus	mg/L		0.002	0.008	<0.002	0.002
Total Kjeldahl Nitrogen	mg/L		0.10	0.12	0.16	0.25

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

5244113-5244136 Total Phosphorous RDL is the calculated MDL.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Ashleigh Dussault

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23X062427

PROJECT: TE201017

CLIENT NAME: WSP E&I CANADA LIMITED

ATTENTION TO: JOYCE MCDONALD

SAMPLING SITE:

SAMPLED BY:

TSS

DATE RECEIVED: 2023-08-28

DATE REPORTED: 2023-09-11

			SAMPLE DESCRIPTION:	PML-2	PML-1	HWY102-1	LV	KL-1	KL-2	KL-3	KL-4
			SAMPLE TYPE:	Water	Water	Water	Water	Water	Water	Water	Water
			DATE SAMPLED:	2023-08-28 08:35	2023-08-28 08:55	2023-08-28 09:45	2023-08-28 10:15	2023-08-28 13:10	2023-08-28 12:00	2023-08-28 12:25	2023-08-28 12:35
Parameter	Unit	G / S	RDL	5244113	5244127	5244128	5244129	5244130	5244131	5244132	5244133
Total Suspended Solids	mg/L		5	<5	<5	<5	10	<5	5	<5	<5

		SAMPLE DESCRIPTION:	KL-5	LSD	HWY102-2
		SAMPLE TYPE:	Water	Water	Water
		DATE SAMPLED:	2023-08-28 12:55	2023-08-28 11:20	2023-08-28 13:30
Parameter	Unit	G / S RDL	5244134	5244135	5244136
Total Suspended Solids	mg/L	5	<5	<5	6

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

5244113-5244136 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: Ashleigh Dussault

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Quality Assurance

CLIENT NAME: WSP E&I CANADA LIMITED

AGAT WORK ORDER: 23X062427

PROJECT: TE201017

ATTENTION TO: JOYCE MCDONALD

SAMPLING SITE:

SAMPLED BY:

Water Analysis

RPT Date: Sep 11, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Standard Water Analysis + Total Metals															
pH	5244131	5244131	6.60	6.40	3.2%	<	101%	80%	120%						
Reactive Silica as SiO2	5233041		5.6	6.1	7.7%	< 0.5	101%	80%	120%	NA	80%	120%	103%	80%	120%
Chloride	5242934		6	6	3.8%	< 1	91%	80%	120%	NA	80%	120%	91%	70%	130%
Fluoride	5242934		0.15	0.17	NA	< 0.12	98%	80%	120%	NA	80%	120%	100%	70%	130%
Sulphate	5242934		<2	<2	NA	< 2	99%	80%	120%	NA	80%	120%	99%	70%	130%
Alkalinity	5244131	5244131	12	9	NA	< 5	109%	80%	120%						
True Color	5239652		<5.00	<5.00	NA	< 5	96%	80%	120%	100%	80%	120%			
Turbidity	5244131	5244131	4.03	3.90	3.2%	< 0.5	119%	80%	120%						
Electrical Conductivity	5244131	5244131	66	66	0.0%	< 1	95%	90%	110%						
Nitrate as N	5242934		<0.05	<0.05	NA	< 0.05	107%	80%	120%	NA	80%	120%	96%	70%	130%
Nitrite as N	5242934		<0.05	<0.05	NA	< 0.05	99%	80%	120%	NA	80%	120%	94%	70%	130%
Ammonia as N	5242935		<0.03	<0.03	NA	< 0.03	103%	80%	120%	101%	80%	120%	107%	70%	130%
Total Organic Carbon	5244113	5244113	8.6	8.8	2.7%	<0.5	115%	80%	120%	NA	80%	120%	112%	80%	120%
Ortho-Phosphate as P	5239652		<0.01	<0.01	NA	< 0.01	109%	80%	120%	91%	80%	120%	96%	80%	120%
Total Sodium	5244182		14.0	14.8	5.4%	< 0.1	99%	80%	120%	101%	80%	120%	NA	70%	130%
Total Potassium	5244182		1.2	1.3	4.6%	< 0.1	97%	80%	120%	101%	80%	120%	103%	70%	130%
Total Calcium	5244182		12.9	13.3	2.6%	< 0.1	95%	80%	120%	100%	80%	120%	NA	70%	130%
Total Magnesium	5244182		4.1	4.4	5.9%	< 0.1	99%	80%	120%	104%	80%	120%	112%	70%	130%
Bicarb. Alkalinity (as CaCO3)	5244131	5244131	12	9	NA	< 5	NA	80%	120%						
Carb. Alkalinity (as CaCO3)	5244131	5244131	<10	<10	NA	< 10	NA	80%	120%						
Hydroxide	5244131	5244131	<5	<5	NA	< 5	NA	80%	120%						
Total Aluminum	5244182		29	30	1.2%	< 5	93%	80%	120%	99%	80%	120%	107%	70%	130%
Total Antimony	5244182		<2	<2	NA	< 2	92%	80%	120%	93%	80%	120%	91%	70%	130%
Total Arsenic	5244182		7	7	NA	< 2	95%	80%	120%	100%	80%	120%	99%	70%	130%
Total Barium	5244182		<5	<5	NA	< 5	92%	80%	120%	94%	80%	120%	92%	70%	130%
Total Beryllium	5244182		<2	<2	NA	< 2	94%	80%	120%	106%	80%	120%	103%	70%	130%
Total Bismuth	5244182		<2	<2	NA	< 2	96%	80%	120%	73%	80%	120%	95%	70%	130%
Total Boron	5244182		6	9	NA	< 5	80%	80%	120%	80%	80%	120%	100%	70%	130%
Total Cadmium	5244182		0.10	0.11	NA	< 0.09	96%	80%	120%	98%	80%	120%	93%	70%	130%
Total Chromium	5244182		<2	<2	NA	< 1	98%	80%	120%	101%	80%	120%	98%	70%	130%
Total Cobalt	5244182		4	4	NA	< 1	99%	80%	120%	102%	80%	120%	100%	70%	130%
Total Copper	5244182		4	5	NA	< 1	99%	80%	120%	104%	80%	120%	99%	70%	130%
Total Iron	5244182		14800	15800	7.0%	< 50	100%	80%	120%	104%	80%	120%	NA	70%	130%
Total Lead	5244182		0.5	0.5	NA	< 0.5	96%	80%	120%	97%	80%	120%	95%	70%	130%
Total Manganese	5244182		915	977	6.5%	< 2	99%	80%	120%	102%	80%	120%	NA	70%	130%
Total Molybdenum	5244182		<2	<2	NA	< 2	94%	80%	120%	91%	80%	120%	91%	70%	130%
Total Nickel	5244182		3	3	NA	< 2	99%	80%	120%	103%	80%	120%	98%	70%	130%
Total Phosphorous	5244182		2.77	3.04	9.1%	< 0.02	100%	80%	120%	83%	80%	120%	NA	70%	130%
Total Selenium	5244182		<1	<1	NA	< 1	98%	80%	120%	103%	80%	120%	96%	70%	130%

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Quality Assurance

CLIENT NAME: WSP E&I CANADA LIMITED

AGAT WORK ORDER: 23X062427

PROJECT: TE201017

ATTENTION TO: JOYCE MCDONALD

SAMPLING SITE:

SAMPLED BY:

Water Analysis (Continued)

RPT Date: Sep 11, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Total Silver	5244182		<0.1	<0.1	NA	< 0.1	126%	80%	120%	126%	80%	120%	121%	70%	130%
Total Strontium	5244182		57	62	6.8%	< 5	97%	80%	120%	102%	80%	120%	112%	70%	130%
Total Thallium	5244182		<0.1	<0.1	NA	< 0.1	95%	80%	120%	97%	80%	120%	93%	70%	130%
Total Tin	5244182		<2	<2	NA	< 2	94%	80%	120%	93%	80%	120%	92%	70%	130%
Total Titanium	5244182		<3	<3	NA	< 2	97%	80%	120%	100%	80%	120%	98%	70%	130%
Total Uranium	5244182		<0.2	<0.2	NA	< 0.2	96%	80%	120%	96%	80%	120%	94%	70%	130%
Total Vanadium	5244182		<2	<2	NA	< 2	96%	80%	120%	101%	80%	120%	99%	70%	130%
Total Zinc	5244182		25	18	NA	< 5	97%	80%	120%	95%	80%	120%	99%	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.
More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.
Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.

TSS

Total Suspended Solids	5247421		<5	<5	NA	< 5	99%	80%	120%	NA			102%	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.

TKN & Low Level Total Phosphorous - 0.002 mg/L

Total Phosphorus	5246305		0.178	0.176	1.1%	< 0.002	99%	70%	130%	102%	80%	120%	NA	70%	130%
Total Kjeldahl Nitrogen	5247778		5.45	5.40	0.9%	< 0.10	102%	70%	130%	101%	80%	120%	96%	70%	130%

Comments: Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.

Certified By: Ashleigh Dussault

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QC Exceedance

CLIENT NAME: WSP E&I CANADA LIMITED

AGAT WORK ORDER: 23X062427

PROJECT: TE201017

ATTENTION TO: JOYCE MCDONALD

RPT Date: Sep 11, 2023		REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Sample Id	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper
Standard Water Analysis + Total Metals										
Total Bismuth		96%	80%	120%	73%	80%	120%	95%	70%	130%
Total Silver		126%	80%	120%	126%	80%	120%	121%	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.
More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.
Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.

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Method Summary

CLIENT NAME: WSP E&I CANADA LIMITED

AGAT WORK ORDER: 23X062427

PROJECT: TE201017

ATTENTION TO: JOYCE MCDONALD

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Total Coliforms (MF)	MIC-121-7002	Sm 9222 H	MF/INCUBATOR
E. Coli (MF)	MIC-121-7002	SM 9222 H	MF/INCUBATOR
Miscellaneous Analysis			
Subcontracted Data			

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Method Summary

CLIENT NAME: WSP E&I CANADA LIMITED

AGAT WORK ORDER: 23X062427

PROJECT: TE201017

ATTENTION TO: JOYCE MCDONALD

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
pH	INOR-121-6001	SM 4500 H+B	PC TITRATE
Reactive Silica as SiO2	INOR-121-6027	SM 4500-SiO2 F	COLORIMETER
Chloride	INORG-121-6005	SM 4110 B	ION CHROMATOGRAPH
Fluoride	INORG-121-6005	SM 4110 B	ION CHROMATOGRAPH
Sulphate	INORG-121-6005	SM 4110 B	ION CHROMATOGRAPH
Alkalinity	INOR-121-6001	SM 2320 B	
True Color	INOR-121-6008	SM 2120 B	LACHAT FIA
Turbidity	INOR-121-6001	SM 2130 B	PC TITRATE
Electrical Conductivity	INOR-121-6001	SM 2510 B	PC TITRATE
Nitrate + Nitrite as N	INORG-121-6005	SM 4110 B	CALCULATION
Nitrate as N	INORG-121-6005	SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INORG-121-6005	SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-121-6047	SM 4500-NH3 H	COLORIMETER
Total Organic Carbon	INOR-121-6026	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 CaCO3)	INORG-121-6001	SM 2320 B	PC TITRATE
Carb. Alkalinity (as CaCO3)	INORG-121-6001	SM 2320 B	PC TITRATE
Hydroxide	INORG-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

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Method Summary

CLIENT NAME: WSP E&I CANADA LIMITED

AGAT WORK ORDER: 23X062427

PROJECT: TE201017

ATTENTION TO: JOYCE MCDONALD

SAMPLING SITE:

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 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
Total Suspended Solids	INOR-121-6024, 6025	SM 2540C, D	GRAVIMETRIC

AGAT Laboratories

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Chain of Custody Record

Laboratory Use Only

Arrival Condition: ☐ Good ☐ Poor (see notes)
Arrival Temperature: 6.7, 16.8, 19.4
Hold Time:
AGAT Job Number: 23X062427
Notes:

Report Information

Company: WSP E&I Canada Limited
Contact: Joyce MacDonald
Address: 300-50 Troop Ave, Dartmouth, NS, B3B 1Z1
Phone: 468-2848 Fax:
Client Project #: TE201617
AGAT Quotation:
Please Note: If quotation number is not provided client will be billed full price for analysis.

Report Information (Please print):

1. Name: Joyce MacDonald
   Email: joyce.macdonald@wsp.com
2. Name: Jordan Murphy
   Email: jordan.murphy@wsp.com

Report Format

☐ Single Sample per page
☑ Multiple Samples per page
☑ Excel Format Included
☐ Export

Turnaround Time Required (TAT)

Regular TAT ☑ 5 to 7 working days
Rush TAT ☐ Same day ☐ 1 day ☐ 2 days ☐ 3 days
Date Required: '23AUG28 2:44PM

Regulatory Requirements (Check):

☐ List Guidelines on Report ☐ Do not list Guidelines on Report
☐ PIRI
☐ Tier 1 ☐ Tier 2 ☐ Res ☐ Com ☐ Gas ☐ Fuel ☐ Lube ☐ Pot ☐ N/Pot ☐ Coarse ☐ Fine
☐ CCME ☐ Industrial ☐ Commercial ☐ Res/Park ☐ Agricultural ☐ FWAL ☐ Sediment
☐ CDWQ ☐ NSEQS-Cont Sites
☐ HRM 101 ☐ Storm Water ☐ Waste Water
☐ Other

Drinking Water Sample: ☐ Yes ☐ No Salt Water Sample ☐ Yes ☐ No
Reg. No.:

Invoice To Same Yes ☑ / No ☐

Company:
Contact:
Address:
Phone: Fax:
PO/Credit Card#:

Sample Identification	Date/Time Sampled	Sample Matrix	# Containers	Comments – Site/Sample Info. Sample Containment	Field Filtered/Preserved	Standard Water Analysis	Metals: ☑ Total ☐ Diss ☐ Available	Mercury	☐ 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: Chlorophyll A (Lorenzen)	Other: Cation Scan (Ca, Mg, Si, Na)	Hazardous (Y/N)
PML-2	28/08/23 8:35	SW	8			✓	✓				✓	✓	✓										✓			✓	✓	
PML-1	8:55	↓	↓			✓	✓				✓	✓	✓										✓			✓	✓	
HWY102-1	9:45	↓	↓			✓	✓				✓	✓	✓										✓			✓	✓	
LU	10:15	↓	↓			✓	✓				✓	✓	✓										✓			✓	✓	
KL-1	13:10	↓	↓			✓	✓				✓	✓	✓										✓			✓	✓	
KL-2	12:00	↓	↓			✓	✓				✓	✓	✓										✓			✓	✓	
KL-3	12:25	↓	↓			✓	✓				✓	✓	✓										✓			✓	✓	
KL-4	12:35	↓	↓			✓	✓				✓	✓	✓										✓			✓	✓	
KL-5	12:55	↓	↓			✓	✓				✓	✓	✓										✓			✓	✓	
LSD	11:20	↓	↓			✓	✓				✓	✓	✓										✓			✓	✓	
HWY102-2	13:30 ↓	↓	↓			✓	✓				✓	✓	✓										✓			✓	✓	
						✓	✓				✓	✓	✓										✓			✓	✓	

Samples Relinquished By (Print Name): Jordan Murphy
Date/Time: 28/08/23 14:43
Samples Relinquished By (Sign): [signature]
Date/Time:
Samples Received By (Print Name):
Date/Time:
Samples Received By (Sign): [signature]
Date/Time:

Pink Copy - Client
Yellow Copy - AGAT
White Copy- AGAT

Page 1 of 1
Nº:

InnoTech ALBERTA
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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

RESULTS: Brianna Sandau 902-468-2430
AGAT Laboratories Ltd
11 Morris Dr. Unit 122

Dartmouth
NS B3B 1M2

INVOICE: Accounts Payable
11 Morris Dr. Unit 122

Dartmouth
NS B3B 1M2

CLIENT SAMPLE ID: 5244113 - PML-2
Matrix: Water
CANISTER ID:
PRIORITY: Normal
DESCRIPTION: Client Project # 23X062427
DATE SAMPLED: 23-Aug-23 8:35
DATE RECEIVED: 31-Aug-23
REPORT CREATED: 08-Sep-23
REPORT NUMBER: 23090003
VERSION: Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23090003-001	Chlorophylla (Phytoplankton)		1.1	ug/L	0.3	AC-020	05-Sep-23

Report certified by: Graham Knox, Admin. & Ops. Supervisor On behalf of: Adam Malcolm, Manager, Chemical Testing
Date: September 8, 2023 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
5244127 - PML-1		Water	23-Aug-23 8:55

DESCRIPTION: Client Project # 23X062427

REPORT NUMBER: 23090003 **REPORT CREATED:** 08-Sep-23 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23090003-002	Chlorophylla (Phytoplankton)		0.4	ug/L	0.3	AC-020	05-Sep-23

Report certified by: Graham Knox, Admin. & Ops. Supervisor On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: September 8, 2023 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
5244128 - HWY102-1		Water	23-Aug-23 9:45

DESCRIPTION: Client Project # 23X062427

REPORT NUMBER: 23090003 **REPORT CREATED:** 08-Sep-23 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23090003-003	Chlorophylla (Phytoplankton)		1.7	ug/L	0.3	AC-020	05-Sep-23

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TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
5244129 - LV		Water	23-Aug-23 10:15

DESCRIPTION: Client Project # 23X062427

REPORT NUMBER: 23090003 **REPORT CREATED:** 08-Sep-23 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23090003-004	Chlorophylla (Phytoplankton)		9.3	ug/L	0.3	AC-020	05-Sep-23

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TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
5244130 - KL-1		Water	23-Aug-23 13:10

DESCRIPTION: Client Project # 23X062427

REPORT NUMBER: 23090003 **REPORT CREATED:** 08-Sep-23 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23090003-005	Chlorophylla (Phytoplankton)		2.1	ug/L	0.3	AC-020	05-Sep-23

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TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
5244131 - KL-2		Water	23-Aug-23 12:00

DESCRIPTION: Client Project # 23X062427

REPORT NUMBER: 23090003 **REPORT CREATED:** 08-Sep-23 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23090003-006	Chlorophylla (Phytoplankton)		0.3	ug/L	0.3	AC-020	05-Sep-23

Report certified by: Graham Knox, Admin. & Ops. Supervisor On behalf of: Adam Malcolm, Manager, Chemical Testing

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
5244132 - KL-3		Water	23-Aug-23 12:25

DESCRIPTION: Client Project # 23X062427

REPORT NUMBER: 23090003 **REPORT CREATED:** 08-Sep-23 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23090003-007	Chlorophylla (Phytoplankton)		1.3	ug/L	0.3	AC-020	05-Sep-23

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TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
5244133 - KL-4		Water	23-Aug-23 12:35

DESCRIPTION: Client Project # 23X062427

REPORT NUMBER: 23090003 **REPORT CREATED:** 08-Sep-23 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23090003-008	Chlorophylla (Phytoplankton)		0.9	ug/L	0.3	AC-020	05-Sep-23

Report certified by: Graham Knox, Admin. & Ops. Supervisor On behalf of: Adam Malcolm, Manager, Chemical Testing
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TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
5244134 - KL-5		Water	23-Aug-23 12:55

DESCRIPTION: Client Project # 23X062427

REPORT NUMBER: 23090003 **REPORT CREATED:** 08-Sep-23 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23090003-009	Chlorophylla (Phytoplankton)		3.1	ug/L	0.3	AC-020	05-Sep-23

Report certified by: Graham Knox, Admin. & Ops. Supervisor On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: September 8, 2023 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
5244135 - LSD		Water	23-Aug-23 11:20

DESCRIPTION: Client Project # 23X062427

REPORT NUMBER: 23090003 **REPORT CREATED:** 08-Sep-23 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23090003-010	Chlorophylla (Phytoplankton)		0.9	ug/L	0.3	AC-020	05-Sep-23

Report certified by: Graham Knox, Admin. & Ops. Supervisor On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: September 8, 2023 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
5244136 - HWY102-2		Water	23-Aug-23 13:30

DESCRIPTION: Client Project # 23X062427

REPORT NUMBER: 23090003 **REPORT CREATED:** 08-Sep-23 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23090003-011	Chlorophylla (Phytoplankton)		0.3	ug/L	0.3	AC-020	05-Sep-23

Report certified by: Graham Knox, Admin. & Ops. Supervisor On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: September 8, 2023 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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Revision History

Order ID	Ver	Date	Reason
23090003	01	08-Sep-23	Report created

Methods

Method	Description
AC-020	Chlorophyll-a Phytoplankton (Fluorometric Analysis)

List of Analytical Method IDs within InnoTech's ISO/IEC 17025:2017 CALA Scope of Accreditation

Method ID	Description
AC-013	Mercury in Waters by Cold Vapor Atomic Fluorescence Detection (CVAFS)
AC-020	Ion Chromatographic Procedures using the Dionex ICS 3000 and 5000 Systems
AC-021	Elemental Analysis Methodology of Filter-collected Airborne Particulate Matter (PM) by ICP-MS
AC-026	Ion Chromatographic Procedures using the Dionex ICS 3000 and 5000 Systems
AC-029	Procedure for the Equilibration and Weighing of Membrane Filters and PUFs on the Mettler Toledo Micro Balance
AC-035	Analysis of Glyphosate, Aminomethylphosphonic Acid and Glufosinate in Water
AC-038	Trace Metal Analysis of Water Samples by ICP-MS
AC-048	Specific Conductance (Conductivity Meter Method)
AC-049	pH (Meter Method)
AC-054	Alkalinity Total and Phenolphthalein
AC-058	Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry
AC-060	Trace Metal Analysis of Soil Sediment and Industrial Waste Samples by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
AC-061	Trace Metal Analysis for Biological Samples by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
AC-065	Analysis of Naphthenic Acids in Water by HPLC-Orbitrap-MS analysis
AC-074	Pesticides in Water
AC-079	Alkylated PAH in Soil and Sediment
AC-080	Alkylated PAH in Water (SPE Extraction)
NA-006	Determination of BTEX, F1 Hydrocarbons and F2, F3 and F4 Hydrocarbons in Water
NA-024	Analysis of Reduced Sulfur Compounds in Air

Qualifiers

Data Qualifier	Translation
B	Blank contamination; Analyte detected above the method reporting limit in an associated blank
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J1	Reported value is estimated; Surrogate recoveries limits were exceeded
J2	Reported value is estimated; No known QC criteria for this component
J3	Reported value is estimated; The value failed to meet QC criteria for either precision or accuracy
J4	Reported value is estimated; The sample matrix interfered with the analysis
K	Off-scale low. Actual value is known to be less than the value given
L	Off-scale high. Actual value is known to be greater than value given
N	Non-target analyte; Tentatively identified compound (using mass spectroscopy)
Q	Sample held beyond the accepted holding time
R	Rejected data; Not suitable for the projects intended use
T	Value reported is less than the laboratory method detection limit
U	Compound was analyzed for but not detected
V	Analyte was detected in both the sample and the associated method blank

Order Comments

23090003

Client Project # 23X062427

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Sample Comments

Result Comments

Note:

1. Results relate only to items tested and apply to the sample as received.

2. This report shall not be reproduced, except in full, without the explicit approval of the laboratory.

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

RESULTS: Brianna Sandau 902-468-2430
AGAT Laboratories Ltd
11 Morris Dr. Unit 122

Dartmouth
NS B3B 1M2

INVOICE: Accounts Payable
11 Morris Dr. Unit 122

Dartmouth
NS B3B 1M2

CLIENT SAMPLE ID: 5244113 - PML-2
Matrix: Water
CANISTER ID:
PRIORITY: Normal
DESCRIPTION: Client Project # 23X062427
DATE SAMPLED: 23-Aug-23 8:35
DATE RECEIVED: 31-Aug-23
REPORT CREATED: 08-Sep-23
REPORT NUMBER: 23090003
VERSION: Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23090003-001	Chlorophylla (Phytoplankton)		1.1	ug/L	0.3	AC-020	05-Sep-23

Report certified by: Graham Knox, Admin. & Ops. Supervisor On behalf of: Adam Malcolm, Manager, Chemical Testing
Date: September 8, 2023 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
5244127 - PML-1		Water	23-Aug-23 8:55

DESCRIPTION: Client Project # 23X062427

REPORT NUMBER: 23090003 **REPORT CREATED:** 08-Sep-23 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23090003-002	Chlorophylla (Phytoplankton)		0.4	ug/L	0.3	AC-020	05-Sep-23

Report certified by: Graham Knox, Admin. & Ops. Supervisor On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: September 8, 2023 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
5244128 - HWY102-1		Water	23-Aug-23 9:45

DESCRIPTION: Client Project # 23X062427

REPORT NUMBER: 23090003 **REPORT CREATED:** 08-Sep-23 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23090003-003	Chlorophylla (Phytoplankton)		1.7	ug/L	0.3	AC-020	05-Sep-23

Report certified by: Graham Knox, Admin. & Ops. Supervisor On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: September 8, 2023 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
5244129 - LV		Water	23-Aug-23 10:15

DESCRIPTION: Client Project # 23X062427

REPORT NUMBER: 23090003 **REPORT CREATED:** 08-Sep-23 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23090003-004	Chlorophylla (Phytoplankton)		9.3	ug/L	0.3	AC-020	05-Sep-23

Report certified by: Graham Knox, Admin. & Ops. Supervisor On behalf of: Adam Malcolm, Manager, Chemical Testing

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
5244130 - KL-1		Water	23-Aug-23 13:10

DESCRIPTION: Client Project # 23X062427

REPORT NUMBER: 23090003 **REPORT CREATED:** 08-Sep-23 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23090003-005	Chlorophylla (Phytoplankton)		2.1	ug/L	0.3	AC-020	05-Sep-23

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
5244131 - KL-2		Water	23-Aug-23 12:00

DESCRIPTION: Client Project # 23X062427

REPORT NUMBER: 23090003 **REPORT CREATED:** 08-Sep-23 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23090003-006	Chlorophylla (Phytoplankton)		0.3	ug/L	0.3	AC-020	05-Sep-23

Report certified by: Graham Knox, Admin. & Ops. Supervisor On behalf of: Adam Malcolm, Manager, Chemical Testing

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
5244132 - KL-3		Water	23-Aug-23 12:25

DESCRIPTION: Client Project # 23X062427

REPORT NUMBER: 23090003 **REPORT CREATED:** 08-Sep-23 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23090003-007	Chlorophylla (Phytoplankton)		1.3	ug/L	0.3	AC-020	05-Sep-23

Report certified by: Graham Knox, Admin. & Ops. Supervisor On behalf of: Adam Malcolm, Manager, Chemical Testing
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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
5244133 - KL-4		Water	23-Aug-23 12:35

DESCRIPTION: Client Project # 23X062427

REPORT NUMBER: 23090003 **REPORT CREATED:** 08-Sep-23 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23090003-008	Chlorophylla (Phytoplankton)		0.9	ug/L	0.3	AC-020	05-Sep-23

Report certified by: Graham Knox, Admin. & Ops. Supervisor On behalf of: Adam Malcolm, Manager, Chemical Testing
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TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
5244134 - KL-5		Water	23-Aug-23 12:55

DESCRIPTION: Client Project # 23X062427

REPORT NUMBER: 23090003 **REPORT CREATED:** 08-Sep-23 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23090003-009	Chlorophylla (Phytoplankton)		3.1	ug/L	0.3	AC-020	05-Sep-23

Report certified by: Graham Knox, Admin. & Ops. Supervisor On behalf of: Adam Malcolm, Manager, Chemical Testing

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TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
5244135 - LSD		Water	23-Aug-23 11:20

DESCRIPTION: Client Project # 23X062427

REPORT NUMBER: 23090003 **REPORT CREATED:** 08-Sep-23 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23090003-010	Chlorophylla (Phytoplankton)		0.9	ug/L	0.3	AC-020	05-Sep-23

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
5244136 - HWY102-2		Water	23-Aug-23 13:30

DESCRIPTION: Client Project # 23X062427

REPORT NUMBER: 23090003 **REPORT CREATED:** 08-Sep-23 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
23090003-011	Chlorophylla (Phytoplankton)		0.3	ug/L	0.3	AC-020	05-Sep-23

Report certified by: Graham Knox, Admin. & Ops. Supervisor On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: September 8, 2023 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at https://directory.cala.ca//

Revision History

Order ID	Ver	Date	Reason
23090003	01	08-Sep-23	Report created

Methods

Method	Description
AC-020	Chlorophyll-a Phytoplankton (Fluorometric Analysis)

List of Analytical Method IDs within InnoTech's ISO/IEC 17025:2017 CALA Scope of Accreditation

Method ID	Description
AC-013	Mercury in Waters by Cold Vapor Atomic Fluorescence Detection (CVAFS)
AC-020	Ion Chromatographic Procedures using the Dionex ICS 3000 and 5000 Systems
AC-021	Elemental Analysis Methodology of Filter-collected Airborne Particulate Matter (PM) by ICP-MS
AC-026	Ion Chromatographic Procedures using the Dionex ICS 3000 and 5000 Systems
AC-029	Procedure for the Equilibration and Weighing of Membrane Filters and PUFs on the Mettler Toledo Micro Balance
AC-035	Analysis of Glyphosate, Aminomethylphosphonic Acid and Glufosinate in Water
AC-038	Trace Metal Analysis of Water Samples by ICP-MS
AC-048	Specific Conductance (Conductivity Meter Method)
AC-049	pH (Meter Method)
AC-054	Alkalinity Total and Phenolphthalein
AC-058	Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry
AC-060	Trace Metal Analysis of Soil Sediment and Industrial Waste Samples by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
AC-061	Trace Metal Analysis for Biological Samples by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
AC-065	Analysis of Naphthenic Acids in Water by HPLC-Orbitrap-MS analysis
AC-074	Pesticides in Water
AC-079	Alkylated PAH in Soil and Sediment
AC-080	Alkylated PAH in Water (SPE Extraction)
NA-006	Determination of BTEX, F1 Hydrocarbons and F2, F3 and F4 Hydrocarbons in Water
NA-024	Analysis of Reduced Sulfur Compounds in Air

Qualifiers

Data Qualifier	Translation
B	Blank contamination; Analyte detected above the method reporting limit in an associated blank
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J1	Reported value is estimated; Surrogate recoveries limits were exceeded
J2	Reported value is estimated; No known QC criteria for this component
J3	Reported value is estimated; The value failed to meet QC criteria for either precision or accuracy
J4	Reported value is estimated; The sample matrix interfered with the analysis
K	Off-scale low. Actual value is known to be less than the value given
L	Off-scale high. Actual value is known to be greater than value given
N	Non-target analyte; Tentatively identified compound (using mass spectroscopy)
Q	Sample held beyond the accepted holding time
R	Rejected data; Not suitable for the projects intended use
T	Value reported is less than the laboratory method detection limit
U	Compound was analyzed for but not detected
V	Analyte was detected in both the sample and the associated method blank

Order Comments

23090003

Client Project # 23X062427

PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

Sample Comments

Result Comments

Note:

1. Results relate only to items tested and apply to the sample as received.

2. This report shall not be reproduced, except in full, without the explicit approval of the laboratory.

HRM Bedford West - Field Report

Event: ~~Spring~~ Summer 2023 Event

Project:	Water Quality Monitoring - Bedford West	Sub-Area(s):	
Client:	Halifax Regional Munipality		
Site:	Papermill Lake	Site ID:	PML-2
Watercourse:		Location:	Bedford
Sample Type:	Surface Water	No. of bottles:	7 8
GPS Coordinates:	Same as previous events		
Wood Field Personnel:	JM, ~~NG~~ KC		

Site Conditions

Weather:	Clear, Sunny, 0% cloudcover.
Air Temperature:	16°
Cloud Cover:	0%
Wildlife Sightings:	Osprey, Ducks
Site Accessibility:	Boat (Canoe)
Site Access Detail :	Same as previous events.

Field Parameter Data

Date (d.m.y):	~~13.06.2023.~~ 28 August 23
Time (hh:mm):	8:35
Sample Depth (m):	Surface Water
pH:	6.58
Dissolved Oxygen (mg/L):	7.14
Secchi Depth (m):	Can see Bottom.
Water Temp (degrees C):	18.5°C
Conductivity (µs/cm):	156.9 / SPC 181.0

Additional Comments/Notes

HRM Bedford West - Field Report

Event: ~~2023 Spring Event~~ Summer

Project:	Water Quality Monitoring - Bedford West	Sub-Area(s):	
Client:	Halifax Regional Munipality		
Site:	Papermill Lake	Site ID:	PML-1
Watercourse:	Bedford west.	Location:	Bedford
Sample Type:	Surface Water	No. of bottles:	1 8
GPS Coordinates:	Same as previous events		
Wood Field Personnel:	JM, ~~NG~~ KC.		

Site Conditions

Weather:	~~Rain~~ Clear and Sunny
Air Temperature:	17°C
Cloud Cover:	0%
Wildlife Sightings:	Osprey
Site Accessibility:	Boat (canoe)
Site Access Detail :	Same as previous events.

Field Parameter Data

Date (d.m.y):	~~13.06.2023~~ 28 August 23
Time (hh:mm):	8:55
Sample Depth (m):	Surface Water
pH:	6.606
Dissolved Oxygen (mg/L):	8.19
Secchi Depth (m):	Can See Bottem
Water Temp (degrees C):	19.7°C
Conductivity (µs/cm):	130.3 SPC 144.9.

Additional Comments/Notes

Summer

HRM Bedford West - Field Report Event: 2023 ~~Spring~~ Event

Project:	Water Quality Monitoring - Bedford West	Sub-Area(s):	
Client:	Halifax Regional Munipality		
Site:	HWY 102 Bedford west	Site ID:	HWY-102-1
Watercourse:		Location:	Bedford
Sample Type:	Surface Water	No. of bottles:	X 8
GPS Coordinates:	Same as previous events		
Wood Field Personnel:	JM, ~~NG~~ KC		

Site Conditions

Weather:	Sunny ; Clear
Air Temperature:	19.C
Cloud Cover:	5%
Wildlife Sightings:	Ducks
Site Accessibility:	highway accross
Site Access Detail :	Same as previous events.

Field Parameter Data

Date (d.m.y):	~~13.06.2023~~ August 28 2023
Time (hh:mm):	9:45 AM
Sample Depth (m):	SW
pH:	7.75
Dissolved Oxygen (mg/L):	43.1 mg/L
Secchi Depth (m):	NA - Can see bottom
Water Temp (degrees C):	16.1°C
Conductivity (µs/cm):	18.19 ms/cm

Additional Comments/Notes

* lab labelled Bottles as "HWY101-1" *

HRM Bedford West - Field Report

Event: ~~2023 Spring Event~~ Summer

Project:	Water Quality Monitoring - Bedford West	Sub-Area(s):	
Client:	Halifax Regional Munipality		
Site:	Larry Uteck	Site ID:	LU
Watercourse:		Location:	Bedford
Sample Type:	Surface Water	No. of bottles:	7
GPS Coordinates:	Same as previous events		
Wood Field Personnel:	JM, NG KC		

Site Conditions

Weather:	Sunny
Air Temperature:	20°C
Cloud Cover:	5%
Wildlife Sightings:	
Site Accessibility:	Wooded / overgrown
Site Access Detail :	Same as previous events.

Field Parameter Data

Date (d.m.y):	~~13.06.2023~~ August 29 '23
Time (hh:mm):	10:15 AM
Sample Depth (m):	Surface
pH:	6.35
Dissolved Oxygen (mg/L):	4.91 mg/L
Secchi Depth (m):	NA
Water Temp (degrees C):	17.7 °C
Conductivity (µs/cm):	304.4 µs/cm

Additional Comments/Notes

Summer

HRM Bedford West - Field Report Event: 2023 ~~Spring~~ Event

Project:	Water Quality Monitoring - Bedford West	Sub-Area(s):	
Client:	Halifax Regional Munipality		
Site:		Site ID:	LSD
Watercourse:		Location:	Bedford
Sample Type:	Surface Water	No. of bottles:	7
GPS Coordinates:	Same as previous events		
Wood Field Personnel:	JM, ~~NG~~ KC		

Site Conditions

Weather:	Sunny
Air Temperature:	20°C
Cloud Cover:	5%
Wildlife Sightings:	Frogs
Site Accessibility:	
Site Access Detail :	~~Same as previous events~~ Access Path very Damaged from flooding - use caution

Field Parameter Data

Date (d.m.y):	13.06.2023
Time (hh:mm):	11:20 AM
Sample Depth (m):	Surface
pH:	6.87
Dissolved Oxygen (mg/L):	9.14 mg/L
Secchi Depth (m):	NA See Bottom
Water Temp (degrees C):	17.6
Conductivity (µs/cm):	77.7 MS/cm

Additional Comments/Notes

Summer

HRM Bedford West - Field Report Event: ~~2023 Spring~~ Event

Project:	Water Quality Monitoring - Bedford West	Sub-Area(s):	
Client:	Halifax Regional Munipality		
Site:		Site ID:	KL-7
Watercourse:		Location:	Bedford
Sample Type:	Surface Water	No. of bottles:	7
GPS Coordinates:	Same as previous events		
Wood Field Personnel:	JM, ~~NG~~ KC		

Site Conditions

Weather:	Sunny
Air Temperature:	~~20~~ 22 °C
Cloud Cover:	5%
Wildlife Sightings:	None
Site Accessibility:	lots of washout from storms
Site Access Detail :	~~Same as previous events.~~ access slightly impacted by culvert install @ Bridge + storm

Field Parameter Data

Date (d.m.y):	~~13.06.2023~~ August 28/23
Time (hh:mm):	12:00
Sample Depth (m):	Surface
pH:	6.41
Dissolved Oxygen (mg/L):	6.64 mg/L
Secchi Depth (m):	—
Water Temp (degrees C):	17.7 °C
Conductivity (µs/cm):	59.7 µS/cm

Additional Comments/Notes

Summer

HRM Bedford West - Field Report Event: 2023 ~~Spring~~ Event

Project:	Water Quality Monitoring - Bedford West	Sub-Area(s):	
Client:	Halifax Regional Munipality		
Site:	Kearney Lake	Site ID:	KL-3
Watercourse:		Location:	Bedford
Sample Type:	Surface Water	No. of bottles:	7
GPS Coordinates:	Same as previous events		
Wood Field Personnel:	JM, ~~NG~~ KC		

Site Conditions

Weather:	Clear, Sunny
Air Temperature:	22°C
Cloud Cover:	5%
Wildlife Sightings:	Crow.
Site Accessibility:	Good
Site Access Detail :	Same as previous events.

Field Parameter Data

Date (d.m.y):	~~13.06.2023~~ 28 Aug 2023
Time (hh:mm):	12:25
Sample Depth (m):	Surface water
pH:	6.50
Dissolved Oxygen (mg/L):	8.74
Secchi Depth (m):	Can See Bottom
Water Temp (degrees C):	21.1°C
Conductivity (µs/cm):	129.4 SPC 140.0

Additional Comments/Notes

Summer.

HRM Bedford West - Field Report Event: 2023 ~~Spring~~ Summer Event

Project:	Water Quality Monitoring - Bedford West	Sub-Area(s):	
Client:	Halifax Regional Munipality		
Site:	Kearney Lake	Site ID:	KL-4
Watercourse:		Location:	Bedford
Sample Type:	Surface Water	No. of bottles:	7
GPS Coordinates:	Same as previous events		
Wood Field Personnel:	JM, ~~NG~~ KC		

Site Conditions

Weather:	Clear Sunny
Air Temperature:	22 °C
Cloud Cover:	5 %
Wildlife Sightings:	Songbirds
Site Accessibility:	Good
Site Access Detail :	Same as previous events.

Field Parameter Data

Date (d.m.y):	~~13.06.2023~~ 28 August 2023
Time (hh:mm):	12:35
Sample Depth (m):	Surface water
pH:	6.30
Dissolved Oxygen (mg/L):	7.16
Secchi Depth (m):	Can see bottom
Water Temp (degrees C):	20.9 °C
Conductivity (µs/cm):	130.3 SPC 141.2

Additional Comments/Notes

Summer

HRM Bedford West - Field Report

Event: ~~2023 Spring~~ Event

Project:	Water Quality Monitoring - Bedford West	Sub-Area(s):	
Client:	Halifax Regional Munipality		
Site:	Kearney Lake	Site ID:	KL-5
Watercourse:		Location:	Bedford
Sample Type:	Surface Water	No. of bottles:	7 8
GPS Coordinates:	Same as previous events		
Wood Field Personnel:	JM, ~~NG~~ KC		

Site Conditions

Weather:	Sunny, clear
Air Temperature:	23°C
Cloud Cover:	5%
Wildlife Sightings:	NONE
Site Accessibility:	Good
Site Access Detail :	Same as previous events.

Field Parameter Data

Date (d.m.y):	~~13.06.2023~~ 28 August 2023
Time (hh:mm):	12:55
Sample Depth (m):	Surface Water
pH:	6.34
Dissolved Oxygen (mg/L):	7.57
Secchi Depth (m):	Can see bottom
Water Temp (degrees C):	22.3°C
Conductivity (µs/cm):	132.6 SPC 140.1

Additional Comments/Notes

Summer

HRM Bedford West - Field Report Event: 2023 ~~Spring~~ Event

Project:	Water Quality Monitoring - Bedford West	Sub-Area(s):	
Client:	Halifax Regional Munipality		
Site:	Kearney Lake	Site ID:	KL - 1
Watercourse:		Location:	Bedford
Sample Type:	Surface Water	No. of bottles:	7 X 8
GPS Coordinates:	Same as previous events		
Wood Field Personnel:	JM, ~~NG~~ KC		

Site Conditions

Weather:	Sunny Clear
Air Temperature:	23°C
Cloud Cover:	10 %
Wildlife Sightings:	NONE
Site Accessibility:	Good
Site Access Detail :	Same as previous events.

Field Parameter Data

Date (d.m.y):	~~13.06.2023~~ 28 August 2023
Time (hh:mm):	13:10
Sample Depth (m):	Surface Water
pH:	6.36
Dissolved Oxygen (mg/L):	6.606
Secchi Depth (m):	Can See Bottom
Water Temp (degrees C):	22.3°C
Conductivity (µs/cm):	133.5 SPC 140.9.

Additional Comments/Notes

Summer.

HRM Bedford West - Field Report Event: 2023 ~~Spring~~ ✓ Event

Project:	Water Quality Monitoring - Bedford West	Sub-Area(s):	
Client:	Halifax Regional Munipality		
Site:	Kearney Lake	Site ID:	HW4102-2
Watercourse:		Location:	Bedford
Sample Type:	Surface Water	No. of bottles:	7 x 8
GPS Coordinates:	Same as previous events		
Wood Field Personnel:	JM, ~~NG~~ KC		

Site Conditions

Weather:	Sunny & Clear.
Air Temperature:	23°C
Cloud Cover:	10%
Wildlife Sightings:	None.
Site Accessibility:	Good
Site Access Detail :	Same as previous events.

Field Parameter Data

Date (d.m.y):	~~13.06.2023~~ 28 August 2023
Time (hh:mm):	13:30
Sample Depth (m):	Surface Water.
pH:	6.03
Dissolved Oxygen (mg/L):	3.21
Secchi Depth (m):	Can See Bottom.
Water Temp (degrees C):	17.1 °C
Conductivity (µs/cm):	249.7 SPC 294.2

Additional Comments/Notes