

**CLIENT NAME: WSP E&I CANADA LIMITED
1 SPECTACLE LAKE DRIVE
DARTMOUTH, NS B3B 1X7
(902) 468-2848**

ATTENTION TO: Jihan Selim-Omar

PROJECT: CA0033982.0870

AGAT WORK ORDER: 24X190536

MICROBIOLOGY ANALYSIS REVIEWED BY: Kaliegh Cullen, Report Writer

MISCELLANEOUS ANALYSIS REVIEWED BY: Kaliegh Cullen, Report Writer

WATER ANALYSIS REVIEWED BY: Kaliegh Cullen, Report Writer

DATE REPORTED: Sep 11, 2024

PAGES (INCLUDING COVER): 15

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.
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- 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.



Certificate of Analysis

AGAT WORK ORDER: 24X190536

PROJECT: CA0033982.0870

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

CLIENT NAME: WSP E&I CANADA LIMITED

ATTENTION TO: Jihan Selim-Omar

SAMPLING SITE:

SAMPLED BY:

Total Coliforms and E.coli Membrane Filtration

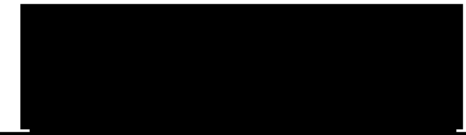
DATE RECEIVED: 2024-08-28

DATE REPORTED: 2024-09-11

		SAMPLE DESCRIPTION:		KL-1	KL-2	KL-3	KL-4	KL-5	HWY-102-1	HWY-102-2	LSD
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2024-08-28 15:15	2024-08-28 09:40	2024-08-28 10:05	2024-08-28 10:30	2024-08-28 15:00	2024-08-28 13:30	2024-08-28 13:50	2024-08-28 12:00
Parameter	Unit	G / S	RDL	6105192	6105197	6105198	6105199	6105200	6105201	6105202	6105203
Total Coliforms (MF)	CFU/100 mL		1	>200	>200	>200	>200	>200	>200	>200	>200
E. Coli (MF)	CFU/100 mL		1	27	7	58	8	7	>200	>200	>200
		SAMPLE DESCRIPTION:		LU							
		SAMPLE TYPE:		Water							
		DATE SAMPLED:		2024-08-28 14:20							
Parameter	Unit	G / S	RDL	6105204							
Total Coliforms (MF)	CFU/100 mL		1	>200							
E. Coli (MF)	CFU/100 mL		1	33							

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

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CLIENT NAME: WSP E&I CANADA LIMITED

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SAMPLING SITE:

SAMPLED BY:

Subcontracted Data Received

DATE RECEIVED: 2024-08-28

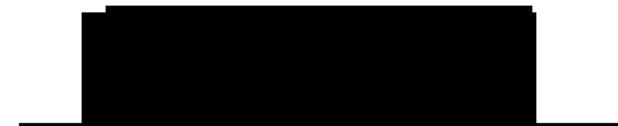
DATE REPORTED: 2024-09-11

		SAMPLE DESCRIPTION:		KL-1	KL-2	KL-3	KL-4	KL-5	HWY-102-1	HWY-102-2	LSD
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2024-08-28 15:15	2024-08-28 09:40	2024-08-28 10:05	2024-08-28 10:30	2024-08-28 15:00	2024-08-28 13:30	2024-08-28 13:50	2024-08-28 12:00
Parameter	Unit	G / S	RDL	6105192	6105197	6105198	6105199	6105200	6105201	6105202	6105203
Subcontracted Data				Y	Y	Y	Y	Y	Y	Y	Y
		SAMPLE DESCRIPTION:		LU							
		SAMPLE TYPE:		Water							
		DATE SAMPLED:		2024-08-28 14:20							
Parameter	Unit	G / S	RDL	6105204							
Subcontracted Data				Y							

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

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CLIENT NAME: WSP E&I CANADA LIMITED

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SAMPLING SITE:

SAMPLED BY:

Low Level Total Phosphorous - 0.002 mg/L, TKN

DATE RECEIVED: 2024-08-28

DATE REPORTED: 2024-09-11

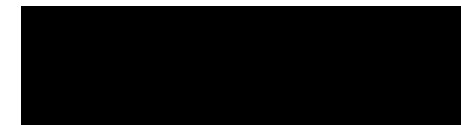
Parameter	Unit	G / S	RDL	SAMPLE DESCRIPTION:		KL-1	KL-2	KL-3	KL-4	KL-5	HWY-102-1
				Water	Water	Water	Water	Water	Water		
DATE SAMPLED:				2024-08-28 15:15	2024-08-28 09:40	2024-08-28 10:05	2024-08-28 10:30	2024-08-28 15:00		2024-08-28 13:30	
G / S				6105192	6105197	6105198	6105199	RDL	6105200	RDL	6105201
Total Phosphorus	mg/L		0.003	0.041	0.015	0.012	0.014	0.008	0.058	0.003	0.016
Total Kjeldahl Nitrogen	mg/L		0.10	<0.10	<0.10	<0.10	<0.10	0.10	<0.10	0.10	<0.10
Parameter	Unit	G / S	RDL	SAMPLE DESCRIPTION:		HWY-102-2	LSD	LU			
				Water	Water	Water					
DATE SAMPLED:				2024-08-28 13:50	2024-08-28 12:00	2024-08-28 14:20					
G / S				6105202	6105203	6105204					
Total Phosphorus	mg/L		0.003	0.030	0.054	0.026					
Total Kjeldahl Nitrogen	mg/L		0.10	<0.10	0.60	<0.10					

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

6105192-6105204 Total Phosphorous RDL is the calculated MDL.
 Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

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SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2024-08-28

DATE REPORTED: 2024-09-11

Parameter	Unit	SAMPLE DESCRIPTION:		KL-1	KL-2	KL-3	KL-4	KL-5	HWY-102-1	HWY-102-2	LSD
		G / S	RDL	Water	Water	Water	Water	Water	Water	Water	Water
				2024-08-28 15:15 6105192	2024-08-28 09:40 6105197	2024-08-28 10:05 6105198	2024-08-28 10:30 6105199	2024-08-28 15:00 6105200	2024-08-28 13:30 6105201	2024-08-28 13:50 6105202	2024-08-28 12:00 6105203
pH				7.11	6.97	6.92	6.89	6.90	7.08	6.99	7.05
Reactive Silica as SiO2	mg/L		0.5	1.4	4.2	1.5	2.0	1.6	4.4	6.8	3.1
Chloride	mg/L		1	53	25	58	66	50	109	105	31
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	13	8	9	7	12	7	4
Alkalinity	mg/L		5	11	26	14	18	14	29	25	27
True Color	TCU		5	6	18	7	5	7	25	24	22
Turbidity	NTU		0.50	0.90	1.0	0.95	0.5	0.81	1.07	3.31	4.33
Electrical Conductivity	umho/cm		1	228	171	238	280	223	460	432	174
Nitrate + Nitrite as N	mg/L		0.05	0.85	0.19	0.08	0.28	0.07	<0.05	<0.05	<0.05
Nitrate as N	mg/L		0.05	0.85	0.19	0.08	0.28	0.07	<0.05	<0.05	<0.05
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	0.06	<0.03
Total Organic Carbon	mg/L		0.50	3.5	5.1	3.4	3.0	3.4	6.9	6.1	9.1
Ortho-Phosphate as P	mg/L		0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Sodium	mg/L		0.1	31.4	17.4	34.2	36.9	31.1	58.3	58.8	19.9
Total Potassium	mg/L		0.1	1.0	1.7	1.2	1.5	1.0	2.5	2.2	1.6
Total Calcium	mg/L		0.1	7.3	10.6	8.0	12.9	6.9	20.8	21.2	9.7
Total Magnesium	mg/L		0.1	1.2	2.4	1.3	2.2	1.2	3.0	3.2	2.3
Bicarb. Alkalinity (as CaCO3)	mg/L		5	11	26	14	18	14	29	25	27
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	112	87	120	141	106	223	216	93
Hardness	mg/L			23.2	36.4	25.3	41.3	22.2	64.3	66.1	33.7
Langelier Index (@20C)	NA			-2.58	-2.17	-2.63	-2.35	-2.70	-1.76	-1.91	-2.12
Langelier Index (@ 4C)	NA			-2.90	-2.49	-2.95	-2.67	-3.02	-2.08	-2.23	-2.44
Saturation pH (@ 20C)	NA			9.69	9.14	9.55	9.24	9.60	8.84	8.90	9.17
Saturation pH (@ 4C)	NA			10.0	9.46	9.87	9.56	9.92	9.16	9.22	9.49
Anion Sum	me/L			1.92	1.51	2.09	2.43	1.84	3.90	3.61	1.50

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Certificate of Analysis

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CLIENT NAME: WSP E&I CANADA LIMITED

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SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2024-08-28

DATE REPORTED: 2024-09-11

Parameter	Unit	SAMPLE DESCRIPTION:		KL-1	KL-2	KL-3	KL-4	KL-5	HWY-102-1	HWY-102-2	LSD
		G / S	RDL	Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2024-08-28	2024-08-28	2024-08-28	2024-08-28	2024-08-28	2024-08-28	2024-08-28	2024-08-28
				15:15	09:40	10:05	10:30	15:00	13:30	13:50	12:00
				6105192	6105197	6105198	6105199	6105200	6105201	6105202	6105203
Cation sum	me/L			1.88	1.55	2.03	2.49	1.83	3.90	4.06	2.06
% Difference/ Ion Balance	%			1.2	1.2	1.3	1.3	0.4	0	5.9	15.7
Total Aluminum	ug/L	5		125	53	39	33	36	48	139	2240
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		17	26	22	51	16	99	183	46
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		7	25	<5	9	7	13	11	19
Total Cadmium	ug/L	0.09		<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	0.15
Total Chromium	ug/L	1		<1	<1	<1	<1	<1	<1	<1	2
Total Cobalt	ug/L	1		<1	<1	<1	<1	<1	<1	<1	4
Total Copper	ug/L	1		<1	2	<1	<1	<1	<1	<1	5
Total Iron	ug/L	50		192	271	98	89	<50	281	2800	4740
Total Lead	ug/L	0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	6.3
Total Manganese	ug/L	2		49	83	74	442	18	70	223	1600
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	3
Total Phosphorous	mg/L	0.02		0.49	1.28	0.41	0.63	0.46	1.12	1.86	1.66
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		33	43	37	56	31	100	109	43
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	2		<2	<2	<2	<2	<2	<2	<2	46
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		<5	<5	<5	<5	9	<5	<5	26

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Certificate of Analysis

AGAT WORK ORDER: 24X190536

PROJECT: CA0033982.0870

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CLIENT NAME: WSP E&I CANADA LIMITED

ATTENTION TO: Jihan Selim-Omar

SAMPLING SITE:

SAMPLED BY:

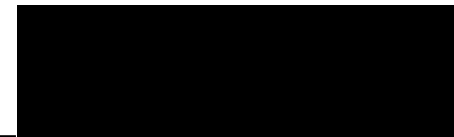
Standard Water Analysis + Total Metals

DATE RECEIVED: 2024-08-28

DATE REPORTED: 2024-09-11

		SAMPLE DESCRIPTION:		LU
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2024-08-28 14:20
Parameter	Unit	G / S	RDL	6105204
pH				7.27
Reactive Silica as SiO2	mg/L		0.5	1.0
Chloride	mg/L		2	139
Fluoride	mg/L		0.12	<0.12
Sulphate	mg/L		2	20
Alkalinity	mg/L		5	28
True Color	TCU		5	10
Turbidity	NTU		0.50	2.64
Electrical Conductivity	umho/cm		1	574
Nitrate + Nitrite as N	mg/L		0.05	1.15
Nitrate as N	mg/L		0.05	1.15
Nitrite as N	mg/L		0.05	<0.05
Ammonia as N	mg/L		0.03	<0.03
Total Organic Carbon	mg/L		0.50	4.9
Ortho-Phosphate as P	mg/L		0.01	<0.01
Total Sodium	mg/L		0.1	83.4
Total Potassium	mg/L		0.1	2.8
Total Calcium	mg/L		0.1	22.8
Total Magnesium	mg/L		0.1	3.3
Bicarb. Alkalinity (as CaCO3)	mg/L		5	28
Carb. Alkalinity (as CaCO3)	mg/L		10	<10
Hydroxide	mg/L		5	<5
Calculated TDS	mg/L		1	294
Hardness	mg/L			70.5
Langelier Index (@20C)	NA			-1.56
Langelier Index (@ 4C)	NA			-1.88
Saturation pH (@ 20C)	NA			8.83
Saturation pH (@ 4C)	NA			9.15
Anion Sum	me/L			4.98

Certified By:





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SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2024-08-28

DATE REPORTED: 2024-09-11

SAMPLE DESCRIPTION: LU
 SAMPLE TYPE: Water
 DATE SAMPLED: 2024-08-28
 14:20
 6105204

Parameter	Unit	G / S	RDL	6105204
Cation sum	me/L			5.14
% Difference/ Ion Balance	%			1.6
Total Aluminum	ug/L		5	146
Total Antimony	ug/L		2	<2
Total Arsenic	ug/L		2	<2
Total Barium	ug/L		5	125
Total Beryllium	ug/L		2	<2
Total Bismuth	ug/L		2	<2
Total Boron	ug/L		5	30
Total Cadmium	ug/L		0.09	<0.09
Total Chromium	ug/L		1	<1
Total Cobalt	ug/L		1	<1
Total Copper	ug/L		1	2
Total Iron	ug/L		50	397
Total Lead	ug/L		0.5	<0.5
Total Manganese	ug/L		2	54
Total Molybdenum	ug/L		2	<2
Total Nickel	ug/L		2	<2
Total Phosphorous	mg/L		0.02	0.34
Total Selenium	ug/L		1	<1
Total Silver	ug/L		0.1	<0.1
Total Strontium	ug/L		5	105
Total Thallium	ug/L		0.1	<0.1
Total Tin	ug/L		2	<2
Total Titanium	ug/L		2	<2
Total Uranium	ug/L		0.2	<0.2
Total Vanadium	ug/L		2	<2
Total Zinc	ug/L		5	18

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SAMPLING SITE:

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Standard Water Analysis + Total Metals

DATE RECEIVED: 2024-08-28

DATE REPORTED: 2024-09-11

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

6105192-6105202 % 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

6105203 % 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

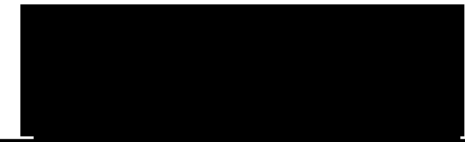
Ion Balance is biased high, contributing parameters have been confirmed.

6105204 % 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:



Quality Assurance

CLIENT NAME: WSP E&I CANADA LIMITED

AGAT WORK ORDER: 24X190536

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ATTENTION TO: Jihan Selim-Omar

SAMPLING SITE:

SAMPLED BY:

Water Analysis															
RPT Date: Sep 11, 2024			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	6100563		7.30	7.33	0.5%	<	100%	80%	120%	NA			NA		
Reactive Silica as SiO2	6100563		4.1	4.1	0.6%	< 0.5	99%	80%	120%	102%	80%	120%	106%	80%	120%
Chloride	6105145		22	22	0.2%	< 1	106%	80%	120%	NA	80%	120%	NA	70%	130%
Fluoride	6105145		<0.12	<0.12	NA	< 0.12	117%	80%	120%	NA	80%	120%	117%	70%	130%
Sulphate	6105145		27	29	4.8%	< 2	109%	80%	120%	NA	80%	120%	NA	70%	130%
Alkalinity	6104121		16	8	NA	< 5	92%	80%	120%	NA			NA		
True Color	6100563		<5	<5	NA	< 5	88%	80%	120%	101%	80%	120%	NA		
Turbidity	6105083		0.66	0.63	NA	< 0.5	92%	80%	120%	NA			NA		
Electrical Conductivity	6100563		2160	2090	3.3%	< 1	98%	90%	110%	NA			NA		
Nitrate as N	6105145		<0.05	<0.05	NA	< 0.05	111%	80%	120%	NA	80%	120%	114%	70%	130%
Nitrite as N	6105145		<0.05	<0.05	NA	< 0.05	102%	80%	120%	NA	80%	120%	102%	70%	130%
Ammonia as N	6105144		<0.03	<0.03	NA	< 0.03	99%	80%	120%	101%	80%	120%	99%	70%	130%
Total Organic Carbon	6104631		21	21	1.5%	< 0.5	98%	80%	120%	NA	80%	120%	91%	80%	120%
Ortho-Phosphate as P	6100563		<0.01	<0.01	NA	< 0.01	96%	80%	120%	101%	80%	120%	91%	80%	120%
Total Sodium	6106546		11.9	11.9	0.1%	< 0.1	104%	80%	120%	101%	80%	120%	101%	70%	130%
Total Potassium	6106546		0.4	0.4	NA	< 0.1	103%	80%	120%	103%	80%	120%	100%	70%	130%
Total Calcium	6106546		7.2	7.0	1.8%	< 0.1	100%	80%	120%	101%	80%	120%	101%	70%	130%
Total Magnesium	6106546		0.4	0.4	NA	< 0.1	105%	80%	120%	104%	80%	120%	101%	70%	130%
Bicarb. Alkalinity (as CaCO3)	6104121		16	8	NA	< 5	NA	80%	120%	NA			NA		
Carb. Alkalinity (as CaCO3)	6100563		<10	<10	NA	< 10	NA	80%	120%	NA			NA		
Hydroxide	6100563		<5	<5	NA	< 5	NA	80%	120%	NA			NA		
Total Aluminum	6106546		71	63	12.7%	< 5	97%	80%	120%	99%	80%	120%	101%	70%	130%
Total Antimony	6106546		<2	<2	NA	< 2	93%	80%	120%	91%	80%	120%	91%	70%	130%
Total Arsenic	6106546		<2	<2	NA	< 2	98%	80%	120%	97%	80%	120%	94%	70%	130%
Total Barium	6106546		<5	5	NA	< 5	93%	80%	120%	90%	80%	120%	90%	70%	130%
Total Beryllium	6106546		<2	<2	NA	< 2	107%	80%	120%	103%	80%	120%	111%	70%	130%
Total Bismuth	6106546		<2	<2	NA	< 2	96%	80%	120%	95%	80%	120%	95%	70%	130%
Total Boron	6106546		18	11	NA	< 5	102%	80%	120%	95%	80%	120%	102%	70%	130%
Total Cadmium	6106546		<0.09	<0.09	NA	< 0.09	93%	80%	120%	92%	80%	120%	88%	70%	130%
Total Chromium	6106546		<1	<1	NA	< 1	100%	80%	120%	98%	80%	120%	94%	70%	130%
Total Cobalt	6106546		<1	<1	NA	< 1	99%	80%	120%	98%	80%	120%	93%	70%	130%
Total Copper	6106546		30	30	0.8%	< 1	100%	80%	120%	100%	80%	120%	93%	70%	130%
Total Iron	6106546		64	64	NA	< 50	101%	80%	120%	101%	80%	120%	97%	70%	130%
Total Lead	6106546		<0.5	<0.5	NA	< 0.5	97%	80%	120%	97%	80%	120%	95%	70%	130%
Total Manganese	6106546		93	94	0.3%	< 2	100%	80%	120%	99%	80%	120%	98%	70%	130%
Total Molybdenum	6106546		<2	<2	NA	< 2	90%	80%	120%	90%	80%	120%	86%	70%	130%
Total Nickel	6106546		<2	<2	NA	< 2	100%	80%	120%	99%	80%	120%	94%	70%	130%
Total Phosphorous	6106546		0.21	0.24	11.4%	< 0.02	89%	80%	120%	91%	80%	120%	98%	70%	130%
Total Selenium	6106546		<1	<1	NA	< 1	95%	80%	120%	103%	80%	120%	93%	70%	130%

Quality Assurance

CLIENT NAME: WSP E&I CANADA LIMITED
 PROJECT: CA0033982.0870
 SAMPLING SITE:

AGAT WORK ORDER: 24X190536
 ATTENTION TO: Jihan Selim-Omar
 SAMPLED BY:

Water Analysis (Continued)

RPT Date: Sep 11, 2024			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	6106546		<0.1	<0.1	NA	< 0.1	94%	80%	120%	93%	80%	120%	88%	70%	130%	
Total Strontium	6106546		11	11	NA	< 5	98%	80%	120%	98%	80%	120%	96%	70%	130%	
Total Thallium	6106546		<0.1	<0.1	NA	< 0.1	97%	80%	120%	96%	80%	120%	96%	70%	130%	
Total Tin	6106546		<2	<2	NA	< 2	92%	80%	120%	92%	80%	120%	89%	70%	130%	
Total Titanium	6106546		<2	<2	NA	< 2	100%	80%	120%	98%	80%	120%	95%	70%	130%	
Total Uranium	6106546		<0.2	<0.2	NA	< 0.2	94%	80%	120%	93%	80%	120%	92%	70%	130%	
Total Vanadium	6106546		<2	<2	NA	< 2	97%	80%	120%	93%	80%	120%	93%	70%	130%	
Total Zinc	6106546		117	117	0.0%	< 5	104%	80%	120%	107%	80%	120%	98%	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.

Standard Water Analysis + Total Metals

Chloride	6106546		7	8	4.2%	< 1	102%	80%	120%	NA	80%	120%	98%	70%	130%
Fluoride	6106546		<0.12	<0.12	NA	< 0.12	113%	80%	120%	NA	80%	120%	116%	70%	130%
Sulphate	6106546		13	13	2.7%	< 2	107%	80%	120%	NA	80%	120%	NA	70%	130%
Nitrate as N	6106546		<0.05	<0.05	NA	< 0.05	110%	80%	120%	NA	80%	120%	115%	70%	130%
Nitrite as N	6106546		<0.05	<0.05	NA	< 0.05	98%	80%	120%	NA	80%	120%	96%	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.

Standard Water Analysis + Total Metals

Reactive Silica as SiO2	6105312		13.3	13.7	2.4%	< 0.5	NA	80%	120%	NA	80%	120%	105%	80%	120%
True Color	6105312		<5	<5	NA	< 5	86%	80%	120%	100%	80%	120%	NA		
Ortho-Phosphate as P	6105312		<0.01	<0.01	NA	< 0.01	NA	80%	120%	NA	80%	120%	87%	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.

Low Level Total Phosphorous - 0.002 mg/L, TKN

Total Phosphorus	6106177		1.61	1.60	0.6%	< 0.002	106%	70%	130%	105%	80%	120%	NA	70%	130%
Total Kjeldahl Nitrogen	6106177		29.4	29.2	0.7%	< 0.10	99%	70%	130%	104%	80%	120%	105%	70%	130%

Comments: NA signifies Not Applicable.

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

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

Low Level Total Phosphorous - 0.002 mg/L, TKN

Total Phosphorus	6105199	6105199	0.014	0.013	NA	< 0.002	106%	70%	130%	105%	80%	120%	109%	70%	130%
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Comments: NA signifies Not Applicable.

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

Certified By: 

Method Summary

CLIENT NAME: WSP E&I CANADA LIMITED

AGAT WORK ORDER: 24X190536

PROJECT: CA0033982.0870

ATTENTION TO: Jihan Selim-Omar

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			

Method Summary

CLIENT NAME: WSP E&I CANADA LIMITED

AGAT WORK ORDER: 24X190536

PROJECT: CA0033982.0870

ATTENTION TO: Jihan Selim-Omar

SAMPLING SITE:

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
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

Method Summary

CLIENT NAME: WSP E&I CANADA LIMITED
AGAT WORK ORDER: 24X190536
PROJECT: CA0033982.0870
ATTENTION TO: Jihan Selim-Omar
SAMPLING SITE:
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
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



AGAT Laboratories

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

webearth.agatlabs.com • www.agatlabs.com

Laboratory Use Only

Arrival Condition: Good Poor (see notes)
Arrival Temperature: 17-17-16-3
Hold Time: _____
AGAT Job Number: 24x190536

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.: _____

Chain of Custody Record

P: 902.468.8718 • F: 902.468.8924

Report Information

Company: WSP E&I
Contact: Jihan Selim-Omar
Address: 1 Spectacle Lake Drive
Dartmouth, NS B3B 1X7
Phone: _____ Fax: _____
Client Project #: CA0033982.0870

AGAT Quotation:

Please Note: If quotation number is not provided client will be billed full price for analysis.

Report Information (Please print):

1. Name: Jihan Selim-Omar
Email: jihan.selim-omar@wsp.com
2. Name: Nick Leblanc
Email: nicholas.leblanc2@wsp.com

Report Format

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

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
 Industrial NSEQS-Cont Sites
 Commercial HRM 101
 Res/Park Storm Water
 Agricultural Waste Water
 FWAL
 Sediment Other _____

Invoice To

Same Yes / No

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

24 AUG 28 3:59 PM

Sample Identification	Date/Time Sampled	Sample Matrix	# Containers	Comments - Site/Sample Info. Sample Containment	SWA + TMS	TKN	Low Level TP (0.002 mg/L)	Total Coliforms + E.Coli (CFU)	Chlorophyll A
KL-1	24/09/28 3:15pm	Water	6		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
KL-2	24/09/28 9:40am	Water	6		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
KL-3	24/09/28 10:05	Water	6		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
KL-4	24/09/28 10:30	Water	6		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
KL-5	24/08/28 3:00pm	Water	6		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
HWY-102-1	24/08/28 1:30pm	Water	6		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
HWY-102-2	24/08/28 1:50pm	Water	6		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
LSD	24/08/28 12:00pm	Water	6		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
LU	24/09/28 2:20pm	Water	6		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PLM-1		Water	6		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PLM-2		Water	6		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Samples Relinquished By (Print Name):

Naomi Giles

Date/Time

24/08/28

Samples Received By (Print Name):

[Redacted]

Date/Time

[Redacted]

Pink Copy - Client

Yellow Copy - AGAT

White Copy - AGAT

Page 1 of 1

Nº:

Date/Time

4:00pm

Samples Received By (Sign):

[Redacted]

Date/Time

[Redacted]

CLIENT NAME: WSP E&I CANADA LIMITED
1 SPECTACLE LAKE DRIVE
DARTMOUTH, NS B3B 1X7
(902) 468-2848

ATTENTION TO: Jihan Selim-Omar

PROJECT: CA0033982.0870

AGAT WORK ORDER: 24X190875

MICROBIOLOGY ANALYSIS REVIEWED BY: Kaliegh Cullen, Report Writer

MISCELLANEOUS ANALYSIS REVIEWED BY: Kaliegh Cullen, Report Writer

WATER ANALYSIS REVIEWED BY: Kaliegh Cullen, Report Writer

DATE REPORTED: Sep 11, 2024

PAGES (INCLUDING COVER): 13

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.



Certificate of Analysis

AGAT WORK ORDER: 24X190875

PROJECT: CA0033982.0870

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: WSP E&I CANADA LIMITED

ATTENTION TO: Jihan Selim-Omar

SAMPLING SITE:

SAMPLED BY:

Total Coliforms and E.coli Membrane Filtration

DATE RECEIVED: 2024-08-29

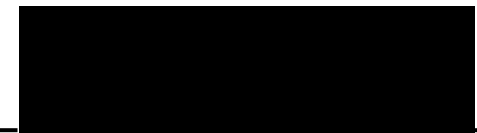
DATE REPORTED: 2024-09-11

Parameter	Unit	G / S	RDL	SAMPLE DESCRIPTION:	
				PLM-1	PLM-2
				SAMPLE TYPE: Water	
				DATE SAMPLED: 2024-08-29 10:30	
				2024-08-29 11:10	
				6107115	6107119
Total Coliforms (MF)	CFU/100 mL	1	>200	>200	>200
E. Coli (MF)	CFU/100 mL	1	6	2	2

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

Analysis performed at AGAT Halifax (unless marked by *)

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 24X190875

PROJECT: CA0033982.0870

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: WSP E&I CANADA LIMITED

ATTENTION TO: Jihan Selim-Omar

SAMPLING SITE:

SAMPLED BY:

Subcontracted Data Received

DATE RECEIVED: 2024-08-29

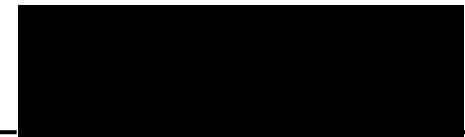
DATE REPORTED: 2024-09-11

		SAMPLE DESCRIPTION:		PLM-1	PLM-2
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2024-08-29 10:30	2024-08-29 11:10
Parameter	Unit	G / S	RDL	6107115	6107119
Subcontracted Data				Y	Y

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

Analysis performed at AGAT Halifax (unless marked by *)

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 24X190875

PROJECT: CA0033982.0870

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: WSP E&I CANADA LIMITED

ATTENTION TO: Jihan Selim-Omar

SAMPLING SITE:

SAMPLED BY:

Low Level Total Phosphorous - 0.002 mg/L, TKN

DATE RECEIVED: 2024-08-29

DATE REPORTED: 2024-09-11

Parameter	Unit	G / S	RDL	SAMPLE DESCRIPTION:	
				PLM-1	PLM-2
				Water	Water
				2024-08-29 10:30	2024-08-29 11:10
				6107115	6107119
Total Phosphorus	mg/L		0.003	0.015	0.011
Total Kjeldahl Nitrogen	mg/L		0.10	<0.10	<0.10

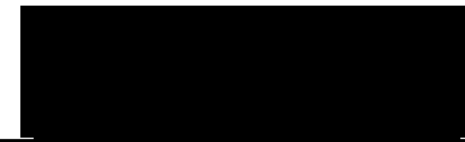
Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6107115-6107119 Total Phosphorous RDL is the calculated MDL.

Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Certificate of Analysis

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PROJECT: CA0033982.0870

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CLIENT NAME: WSP E&I CANADA LIMITED
ATTENTION TO: Jihan Selim-Omar
SAMPLING SITE:
SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2024-08-29
DATE REPORTED: 2024-09-11

Parameter	Unit	SAMPLE DESCRIPTION:		PLM-1	PLM-2
		G / S	RDL	Water	Water
		DATE SAMPLED:		2024-08-29	2024-08-29
				10:30	11:10
				6107115	6107119
pH				7.34	7.02
Reactive Silica as SiO ₂	mg/L		0.5	1.6	1.5
Chloride	mg/L		1	67	75
Fluoride	mg/L		0.12	<0.12	<0.12
Sulphate	mg/L		2	9	9
Alkalinity	mg/L		5	17	18
True Color	TCU		5	<5	<5
Turbidity	NTU		0.50	1.19	0.67
Electrical Conductivity	umho/cm		1	269	276
Nitrate + Nitrite as N	mg/L		0.05	0.15	0.11
Nitrate as N	mg/L		0.05	0.15	0.11
Nitrite as N	mg/L		0.05	<0.05	<0.05
Ammonia as N	mg/L		0.03	<0.03	<0.03
Total Organic Carbon	mg/L		0.50	3.3	3.6
Ortho-Phosphate as P	mg/L		0.01	0.01	<0.01
Total Sodium	mg/L		0.1	38.9	39.3
Total Potassium	mg/L		0.1	1.4	1.3
Total Calcium	mg/L		0.1	9.8	9.6
Total Magnesium	mg/L		0.1	1.6	1.5
Bicarb. Alkalinity (as CaCO ₃)	mg/L		5	17	18
Carb. Alkalinity (as CaCO ₃)	mg/L		10	<10	<10
Hydroxide	mg/L		5	<5	<5
Calculated TDS	mg/L		1	139	147
Hardness	mg/L			31.1	30.1
Langelier Index (@20C)	NA			-2.04	-2.35
Langelier Index (@ 4C)	NA			-2.36	-2.67
Saturation pH (@ 20C)	NA			9.38	9.37
Saturation pH (@ 4C)	NA			9.70	9.69
Anion Sum	me/L			2.43	2.67

Certified By:




Certificate of Analysis

AGAT WORK ORDER: 24X190875

PROJECT: CA0033982.0870

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CLIENT NAME: WSP E&I CANADA LIMITED

ATTENTION TO: Jihan Selim-Omar

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2024-08-29

DATE REPORTED: 2024-09-11

Parameter	Unit	SAMPLE DESCRIPTION:		PLM-1	PLM-2
		G / S	RDL	Water	Water
		DATE SAMPLED:		2024-08-29	2024-08-29
				10:30	11:10
				6107115	6107119
Cation sum	me/L			2.36	2.35
% Difference/ Ion Balance	%			1.5	6.3
Total Aluminum	ug/L		5	28	27
Total Antimony	ug/L		2	<2	<2
Total Arsenic	ug/L		2	<2	<2
Total Barium	ug/L		5	23	20
Total Beryllium	ug/L		2	<2	<2
Total Bismuth	ug/L		2	<2	<2
Total Boron	ug/L		5	7	8
Total Cadmium	ug/L		0.09	<0.09	<0.09
Total Chromium	ug/L		1	<1	<1
Total Cobalt	ug/L		1	<1	<1
Total Copper	ug/L		1	<1	<1
Total Iron	ug/L		50	112	85
Total Lead	ug/L		0.5	<0.5	<0.5
Total Manganese	ug/L		2	82	47
Total Molybdenum	ug/L		2	<2	<2
Total Nickel	ug/L		2	<2	<2
Total Phosphorous	mg/L		0.02	0.43	0.42
Total Selenium	ug/L		1	<1	<1
Total Silver	ug/L		0.1	<0.1	<0.1
Total Strontium	ug/L		5	45	43
Total Thallium	ug/L		0.1	<0.1	<0.1
Total Tin	ug/L		2	<2	<2
Total Titanium	ug/L		2	<2	<2
Total Uranium	ug/L		0.2	<0.2	<0.2
Total Vanadium	ug/L		2	<2	<2
Total Zinc	ug/L		5	<5	<5

Certified By:





AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 24X190875

PROJECT: CA0033982.0870

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CLIENT NAME: WSP E&I CANADA LIMITED

ATTENTION TO: Jihan Selim-Omar

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2024-08-29

DATE REPORTED: 2024-09-11

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

6107115-6107119 % 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:



Quality Assurance

CLIENT NAME: WSP E&I CANADA LIMITED
 PROJECT: CA0033982.0870
 SAMPLING SITE:

AGAT WORK ORDER: 24X190875
 ATTENTION TO: Jihan Selim-Omar
 SAMPLED BY:

Water Analysis															
RPT Date: Sep 11, 2024			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	6106546		7.35	7.38	0.4%	<	101%	80%	120%	NA			NA		
Reactive Silica as SiO2	6107255		<0.5	<0.5	NA	< 0.5	97%	80%	120%	103%	80%	120%	105%	80%	120%
Chloride	6113873		4	4	NA	< 1	109%	80%	120%	NA	80%	120%	94%	70%	130%
Fluoride	6113873		0.13	0.14	NA	< 0.12	102%	80%	120%	NA	80%	120%	101%	70%	130%
Sulphate	6113873		2	2	NA	< 2	114%	80%	120%	NA	80%	120%	101%	70%	130%
Alkalinity	6106546		25	23	NA	< 5	86%	80%	120%	NA			NA		
True Color	6107255		<5	<5	NA	< 5	85%	80%	120%	102%	80%	120%	NA		
Turbidity	6105312	6105312	<0.5	<0.5	NA	< 0.5	87%	80%	120%	NA			NA		
Electrical Conductivity	6106546		106	104	2.8%	< 1	97%	90%	110%	NA			NA		
Nitrate as N	6113873		0.15	0.14	NA	< 0.05	116%	80%	120%	NA	80%	120%	96%	70%	130%
Nitrite as N	6113873		<0.05	<0.05	NA	< 0.05	104%	80%	120%	NA	80%	120%	96%	70%	130%
Ammonia as N	6107261		<0.03	<0.03	NA	< 0.03	98%	80%	120%	99%	80%	120%	99%	70%	130%
Total Organic Carbon	6107255		<0.50	<0.50	NA	< 0.5	102%	80%	120%	NA	80%	120%	103%	80%	120%
Ortho-Phosphate as P	6107255		<0.01	<0.01	NA	< 0.01	96%	80%	120%	95%	80%	120%	94%	80%	120%
Total Sodium	6107232		9.0	9.5	5.6%	< 0.1	101%	80%	120%	102%	80%	120%	100%	70%	130%
Total Potassium	6107232		4.0	4.2	5.6%	< 0.1	99%	80%	120%	102%	80%	120%	100%	70%	130%
Total Calcium	6107232		12.5	12.5	0.2%	< 0.1	96%	80%	120%	101%	80%	120%	98%	70%	130%
Total Magnesium	6107232		2.0	2.2	6.0%	< 0.1	102%	80%	120%	103%	80%	120%	101%	70%	130%
Bicarb. Alkalinity (as CaCO3)	6106546		25	23	NA	< 5	NA	80%	120%	NA			NA		
Carb. Alkalinity (as CaCO3)	6106546		<10	<10	NA	< 10	NA	80%	120%	NA			NA		
Hydroxide	6106546		<5	<5	NA	< 5	NA	80%	120%	NA			NA		
Total Aluminum	6107232		707	740	4.5%	< 5	95%	80%	120%	97%	80%	120%	NA	70%	130%
Total Antimony	6107232		<2	<2	NA	< 2	93%	80%	120%	93%	80%	120%	90%	70%	130%
Total Arsenic	6107232		<2	<2	NA	< 2	95%	80%	120%	96%	80%	120%	93%	70%	130%
Total Barium	6107232		32	32	0.5%	< 5	91%	80%	120%	91%	80%	120%	90%	70%	130%
Total Beryllium	6107232		<2	<2	NA	< 2	108%	80%	120%	102%	80%	120%	113%	70%	130%
Total Bismuth	6107232		<2	<2	NA	< 2	96%	80%	120%	97%	80%	120%	94%	70%	130%
Total Boron	6107232		20	23	NA	< 5	101%	80%	120%	104%	80%	120%	113%	70%	130%
Total Cadmium	6107232		0.12	0.11	NA	< 0.09	92%	80%	120%	92%	80%	120%	88%	70%	130%
Total Chromium	6107232		<1	<1	NA	< 1	96%	80%	120%	97%	80%	120%	93%	70%	130%
Total Cobalt	6107232		3	3	NA	< 1	96%	80%	120%	97%	80%	120%	93%	70%	130%
Total Copper	6107232		2	2	NA	< 1	96%	80%	120%	98%	80%	120%	89%	70%	130%
Total Iron	6107232		55	57	NA	< 50	98%	80%	120%	99%	80%	120%	96%	70%	130%
Total Lead	6107232		<0.5	<0.5	NA	< 0.5	96%	80%	120%	97%	80%	120%	93%	70%	130%
Total Manganese	6107232		53	56	5.7%	< 2	97%	80%	120%	98%	80%	120%	97%	70%	130%
Total Molybdenum	6107232		3	3	NA	< 2	90%	80%	120%	90%	80%	120%	85%	70%	130%
Total Nickel	6107232		5	5	NA	< 2	97%	80%	120%	96%	80%	120%	93%	70%	130%
Total Phosphorous	6107232		2.11	2.07	1.6%	< 0.02	92%	80%	120%	85%	80%	120%	NA	70%	130%
Total Selenium	6107232		<1	<1	NA	< 1	96%	80%	120%	97%	80%	120%	93%	70%	130%

Quality Assurance

CLIENT NAME: WSP E&I CANADA LIMITED
 PROJECT: CA0033982.0870
 SAMPLING SITE:

AGAT WORK ORDER: 24X190875
 ATTENTION TO: Jihan Selim-Omar
 SAMPLED BY:

Water Analysis (Continued)

RPT Date: Sep 11, 2024		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	6107232		<0.1	<0.1	NA	< 0.1	92%	80%	120%	93%	80%	120%	87%	70%	130%
Total Strontium	6107232		73	77	4.8%	< 5	97%	80%	120%	98%	80%	120%	98%	70%	130%
Total Thallium	6107232		<0.1	<0.1	NA	< 0.1	97%	80%	120%	96%	80%	120%	93%	70%	130%
Total Tin	6107232		<2	<2	NA	< 2	93%	80%	120%	92%	80%	120%	90%	70%	130%
Total Titanium	6107232		<2	<2	NA	< 2	97%	80%	120%	98%	80%	120%	94%	70%	130%
Total Uranium	6107232		<0.2	<0.2	NA	< 0.2	95%	80%	120%	94%	80%	120%	92%	70%	130%
Total Vanadium	6107232		<2	<2	NA	< 2	95%	80%	120%	92%	80%	120%	92%	70%	130%
Total Zinc	6107232		11	13	NA	< 5	96%	80%	120%	101%	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.

Standard Water Analysis + Total Metals

Chloride	6110051		1	1	NA	< 1	107%	80%	120%	NA	80%	120%	97%	70%	130%
Fluoride	6110051		0.14	0.14	NA	< 0.12	113%	80%	120%	NA	80%	120%	120%	70%	130%
Sulphate	6110051		22	25	10%	< 2	114%	80%	120%	NA	80%	120%	NA	70%	130%
Nitrate as N	6110051		<0.05	<0.05	NA	< 0.05	113%	80%	120%	NA	80%	120%	104%	70%	130%
Nitrite as N	6110051		<0.05	<0.05	NA	< 0.05	102%	80%	120%	NA	80%	120%	96%	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.

Low Level Total Phosphorous - 0.002 mg/L, TKN

Total Phosphorus	6105199		0.014	0.013	7.4%	< 0.002	106%	70%	130%	105%	80%	120%	109%	70%	130%
Total Kjeldahl Nitrogen	6109176		<0.10	<0.10	NA	< 0.10	98%	70%	130%	102%	80%	120%	103%	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: WSP E&I CANADA LIMITED

AGAT WORK ORDER: 24X190875

PROJECT: CA0033982.0870

ATTENTION TO: Jihan Selim-Omar

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			

Method Summary

CLIENT NAME: WSP E&I CANADA LIMITED

AGAT WORK ORDER: 24X190875

PROJECT: CA0033982.0870

ATTENTION TO: Jihan Selim-Omar

SAMPLING SITE:

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
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

Method Summary

CLIENT NAME: WSP E&I CANADA LIMITED

AGAT WORK ORDER: 24X190875

PROJECT: CA0033982.0870

ATTENTION TO: Jihan Selim-Omar

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
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

Have feedback?
Scan here for a quick survey!



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

Laboratory Use Only

Arrival Condition: Good Poor (see notes)
Arrival Temperature: 6.5, 6.4, 6.9
Hold Time: _____
AGAT Job Number: _____

Notes: 24x190875

Chain of Custody Record

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Report Information

Company: WSP E+I
Contact: Jihan Selim-Omer
Address: 1 Spectacle Lake
Dartmouth, NS
Phone: _____ Fax: _____
Client Project #: CA0033982-0876
AGAT Quotation: _____
Please Note: If quotation number is not provided client will be billed full price for analysis.

Report Information (Please print):

1. Name: Jihan Selim-omer
Email: Jihan.selim-omer@wsp.com
2. Name: Nick Leblanc
Email: nicholas-leblanc2@wsp.com

Report Format

- Single Sample per page
 Multiple Samples per page
 Excel Format Included
 Export

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
 Industrial NSEQS-Cont Sites
 Commercial HRM 101
 Res/Park Storm Water
 Agricultural Waste Water
 FWAL
 Sediment Other _____

Turnaround Time Required (TAT)

- Regular TAT 5 to 7 working days
Rush TAT Same day 1 day
 2 days 3 days

Date Required: _____

Invoice To

Same Yes / No

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

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

24 AUG 29 12:40 PM

Sample Identification	Date/Time Sampled	Sample Matrix	# Containers	Comments - Site/Sample Info. Sample Containment	Field Filtered/Preserved	Standard Water Analysis	Metals: <input type="checkbox"/> Total <input type="checkbox"/> Diss <input type="checkbox"/> Available	Mercury	<input type="checkbox"/> BOD <input type="checkbox"/> CBOD	pH	<input type="checkbox"/> TSS <input type="checkbox"/> TDS <input type="checkbox"/> VSS	TKN	Total Phosphorus	Phenols	Tier 1: TPH/BTEX (PIR) <input type="checkbox"/> low level	Tier 2: TPH/BTEX Fractionation	CCME-CWS TPH/BTEX	Total Coliforms fecal (CFU)	Chlorophyll A	HAA	PAH	PCB	TC + EC <input type="checkbox"/> P/A <input type="checkbox"/> MPN <input type="checkbox"/> MF	HPC <input type="checkbox"/> Pseudomonas	Fecal Coliform <input type="checkbox"/> MPN <input type="checkbox"/> MF	Other: Low level TP (0.002mg/L)	Other: SWA + TMS	Hazardous (Y/N)
PLM-1	24/08/29 10:30	SW	6															X	X						X	X		
PLM-2	24/08/29 11:10	SW	6															X	X						X	X		

Samples Retinquished By (Print Name): <u>Naomi Giles</u>	Date/Time: <u>24/08/29</u>	Samples Received By (Print Name): [Redacted]	Date/Time: [Redacted]	Pink Copy - Client	Page <input type="text"/> of <input type="text"/>
Samples Received By (Print Name): [Redacted]	Date/Time: <u>24/08/29</u>	Samples Received By (Signature): [Redacted]	Date/Time: [Redacted]	Yellow Copy - AGAT	No: 78693
Samples Received By (Signature): [Redacted]	Date/Time: [Redacted]	Samples Received By (Print Name): [Redacted]	Date/Time: [Redacted]	White Copy - AGAT	

CLIENT NAME: WSP E&I CANADA LIMITED
1 SPECTACLE LAKE DRIVE
DARTMOUTH, NS B3B 1X7
(902) 468-2848

ATTENTION TO: Jihan Selim-Omar
PROJECT: HRM Bedford West

AGAT WORK ORDER: 24X200188

MICROBIOLOGY ANALYSIS REVIEWED BY: Kaliegh Cullen, Report Writer

WATER ANALYSIS REVIEWED BY: Kaliegh Cullen, Report Writer

DATE REPORTED: Oct 03, 2024

PAGES (INCLUDING COVER): 6

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.



Certificate of Analysis

AGAT WORK ORDER: 24X200188

PROJECT: HRM Bedford West

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: WSP E&I CANADA LIMITED

ATTENTION TO: Jihan Selim-Omar

SAMPLING SITE:

SAMPLED BY:

Total Coliforms and E.coli Membrane Filtration *DILUTION REQ

DATE RECEIVED: 2024-09-23

DATE REPORTED: 2024-10-03

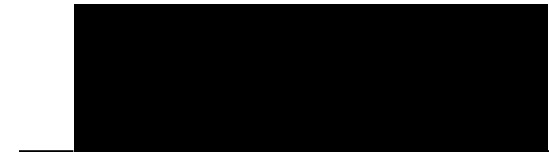
Parameter	Unit	G / S	RDL	SAMPLE DESCRIPTION:		
				HWY-102-1	HWY-102-2	LSD
				Water	Water	Water
				2024-09-23 11:52	2024-09-23 11:30	2024-09-23 13:11
				6165649	6165650	6165652
Total Coliforms (MF)	CFU/100 mL	5	625	380	>1000	
E. Coli (MF)	CFU/100 mL	5	140	60	190	

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

6165649-6165652 Dilution required, RDL raised accordingly.

Analysis performed at AGAT Halifax (unless marked by *)

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 24X200188

PROJECT: HRM Bedford West

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: WSP E&I CANADA LIMITED

ATTENTION TO: Jihan Selim-Omar

SAMPLING SITE:

SAMPLED BY:

Low Level Total Phosphorous - 0.002 mg/L

DATE RECEIVED: 2024-09-23

DATE REPORTED: 2024-10-03

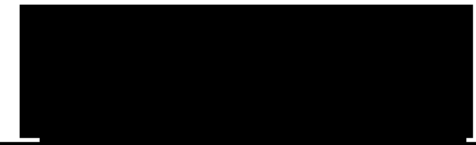
		SAMPLE DESCRIPTION:		KL-1	KL-2	KL-3	KL-4	KL-5	PML-1	PML-2	HWY-102-1
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2024-09-23	2024-09-23	2024-09-23	2024-09-23	2024-09-23	2024-09-23	2024-09-23	2024-09-23
Parameter	Unit	G / S	RDL	6165641	6165643	6165644	6165645	6165646	6165647	6165648	6165649
Total Phosphorus	mg/L		0.002	0.018	0.023	0.028	0.028	0.021	0.023	0.014	0.013
		SAMPLE DESCRIPTION:		HWY-102-2	LU	LSD					
		SAMPLE TYPE:		Water	Water	Water					
		DATE SAMPLED:		2024-09-23 11:30	2024-09-23	2024-09-23 13:11					
Parameter	Unit	G / S	RDL	6165650	6165651	6165652					
Total Phosphorus	mg/L		0.002	0.022	0.022	0.020					

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

6165641-6165652 Total Phosphorous RDL is the calculated MDL.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Quality Assurance

CLIENT NAME: WSP E&I CANADA LIMITED
PROJECT: HRM Bedford West
SAMPLING SITE:

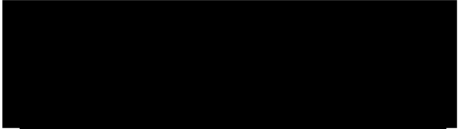
AGAT WORK ORDER: 24X200188
ATTENTION TO: Jihan Selim-Omar
SAMPLED BY:

Water Analysis															
RPT Date: Oct 03, 2024			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

Low Level Total Phosphorous - 0.002 mg/L

Total Phosphorus	6165641	6165641	0.018	0.018	0.0%	< 0.002	95%	70%	130%	105%	80%	120%	97%	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: WSP E&I CANADA LIMITED

AGAT WORK ORDER: 24X200188

PROJECT: HRM Bedford West

ATTENTION TO: Jihan Selim-Omar

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
Water Analysis			
Total Phosphorus	INOR-93-6022	modified from SM 4500-P B and SM 4500-P E	SPECTROPHOTOMETER



Laboratory Use Only

Arrival Condition: Good Poor (see notes)
Arrival Temperature: 7.9, 1.6, 8.3
Hold Time: _____
AGAT Job Number: 24X200188

Notes: '24SEP23 3:36 PM

Chain of Custody Record

webearth.agatlabs.com • www.agatlabs.com

Report Information

Company: WSP E&I CANADA
Contact: JIHAN SELIM-OMAR
Address: 2 SPECTACLE LAKE
DARTMOUTH, NS
Phone: 902-468-2448
Client Project #: HRM BEDFORD WEST
AGAT Quotation: _____
Please Note: If quotation number is not provided client will be billed full price for analysis.

Report Information (Please print):

1. Name: JIHAN SELIM-OMAR
Email: JIHAN.SELIM-OMAR@WSP.COM
2. Name: NAOMI GILES
Email: NAOMI.GILES@WSP.COM

Report Format

- Single Sample per page
 Multiple Samples per page
 Excel Format Included
 Export

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
 Industrial NSEQS-Cont Sites
 Commercial HRM 101
 Res/Park Storm Water
 Agricultural Waste Water
 FWAL
 Sediment Other _____

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.: _____

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: <input type="checkbox"/> Total <input type="checkbox"/> Diss <input type="checkbox"/> Available	Mercury	<input type="checkbox"/> BOD <input type="checkbox"/> CBOD	pH	<input type="checkbox"/> TSS <input type="checkbox"/> TDS <input type="checkbox"/> VSS	TKN	Total Phosphorus	Phenols	Tier 1: TPH/BTEX (PIRI) <input type="checkbox"/> low level	Tier 2: TPH/BTEX Fractionation	CCME-CWS TPH/BTEX	VOC	THM	HAA	PAH	PCB	TC + EC <input type="checkbox"/> P/A <input type="checkbox"/> MPN <input checked="" type="checkbox"/> MF	HPC <input type="checkbox"/> Pseudomonas	Fecal Coliform <input type="checkbox"/> MPN <input type="checkbox"/> MF	Other: Low Level Phosphorus	Other:	Hazardous (Y/N)	
KL-1	2024/09/23	SW	1																										
KL-2			1																										
KL-3			1																										
KL-4			1																										
KL-5			1																										
PML-1			1																										
PML-2			1																										
HWY-102-1	11:52		2	dilution required																									
HWY-102-2	11:30		2	for micro /																									
LU			1																										
LSD	1:11		2	Count E-coli/TC 235 CFU/100ML																									

Samples Relinquished By (Print Name):

Jihan Omar

Date/Time

2024/09/23

Date/Time

3:30

Date/Time

Date/Time

Pink Copy - Client

Yellow Copy - AGAT

White Copy - AGAT

Page 7 of 7

Nº: 78765