AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
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http://www.agatlabs.com

CLIENT NAME: DEFENCE CONSTRUCTION CANADA
14 ALERT BLVD, 8 WING TRENTON
ASTRA, ON K0K3W0
(613) 392-2811

ATTENTION TO: Cameron Chadwick

PROJECT: Eureka Water License

AGAT WORK ORDER: 18T358833

MICROBIOLOGY ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

TRACE ORGANICS REVIEWED BY: Oksana Gushyla, Trace Organics Lab Supervisor

WATER ANALYSIS REVIEWED BY: Parvathi Malemath, Data Reviewer

DATE REPORTED: Jul 17, 2018

PAGES (INCLUDING COVER): 15

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

NOTES

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

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Certificate of Analysis

AGAT WORK ORDER: 18T358833

PROJECT: Eureka Water License

CLIENT NAME: DEFENCE CONSTRUCTION CANADA

ATTENTION TO: Cameron Chadwick

SAMPLING SITE:

SAMPLED BY:

Microbiological Analysis (water)

DATE RECEIVED: 2018-07-06

DATE REPORTED: 2018-07-17

		SAMPLE DESCRIPTION:		ERK-4	ERK-5		ERK-1
		SAMPLE TYPE:		Water	Water		Water
		DATE SAMPLED:		2018-07-01	2018-07-01		2018-07-01
Parameter	Unit	G / S	RDL	9381766	9381776	RDL	9381778
Fecal Coliform	CFU/100mL		2	ND	ND	100	ND

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

9381766-9381778 RDL >1 indicates dilutions of the sample.
ND - Not Detected.
HOLDING TIME-the time from sample collection to initiation of analysis exceeded 48 hours

Certified By: Vivine Basily

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CLIENT NAME: DEFENCE CONSTRUCTION CANADA

ATTENTION TO: Cameron Chadwick

SAMPLING SITE:

SAMPLED BY:

Oil and Grease (+Total) - water

DATE RECEIVED: 2018-07-06

DATE REPORTED: 2018-07-17

		SAMPLE DESCRIPTION:		ERK-4	ERK-5	ERK-1
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2018-07-01	2018-07-01	2018-07-01
Parameter	Unit	G / S	RDL	9381766	9381776	9381778
Oil and Grease (animal/vegetable)	mg/L		0.5	0.8	0.8	1.2
Oil and Grease (mineral) in water	mg/L		0.5	<0.5	<0.5	<0.5
Oil and Grease (Total) in water	mg/L		0.5	1.1	1.3	1.4

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

Certified By:

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ATTENTION TO: Cameron Chadwick

SAMPLING SITE:

SAMPLED BY:

PHCs F1 - F4 (Water)

DATE RECEIVED: 2018-07-06

DATE REPORTED: 2018-07-17

		SAMPLE DESCRIPTION:		ERK-4	ERK-5
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2018-07-01	2018-07-01
Parameter	**Unit**	**G / S**	**RDL**	**9381766**	**9381776**
Benzene	µg/L	370	0.20	<0.20	<0.20
Toluene	µg/L	2	0.20	<0.20	<0.20
Ethylbenzene	µg/L	90	0.10	<0.10	<0.10
Xylene Mixture	µg/L		0.20	<0.20	<0.20
F1 (C6 - C10)	µg/L		25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L		25	<25	<25
F2 (C10 to C16)	µg/L		100	<100	<100
F3 (C16 to C34)	µg/L		100	<100	<100
F4 (C34 to C50)	µg/L		100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA
Surrogate	**Unit**	**Acceptable Limits**			
Terphenyl	%	60-140		83	101

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to CCME FWAL-DCC
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

9381766-9381776 The C6-C10 fraction is calculated using Toluene response factor.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contributions.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

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ATTENTION TO: Cameron Chadwick

SAMPLING SITE:

SAMPLED BY:

Polycyclic Aromatic Hydrocarbons in Water - (PAH)

DATE RECEIVED: 2018-07-06

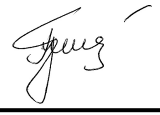
DATE REPORTED: 2018-07-17

		SAMPLE DESCRIPTION:		ERK-4	ERK-5
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2018-07-01	2018-07-01
Parameter	Unit	G / S	RDL	9381766	9381776
1-Methylnaphthalene	ug/L		0.01	0.15	0.59
2-Methylnaphthalene	ug/L		0.01	0.20	0.80
Acenaphthene	ug/L		0.01	<0.01	<0.01
Acenaphthylene	ug/L		0.01	<0.01	<0.01
Acridine	ug/L		0.01	<0.01	<0.01
Anthracene	ug/L		0.012	<0.012	<0.012
Benzo(a)anthracene	ug/L		0.018	<0.018	<0.018
Benzo(a)pyrene	ug/L		0.010	<0.010	<0.010
Benzo(b)fluoranthene	ug/L		0.01	<0.01	<0.01
Benzo(e)pyrene	ug/L		0.01	<0.01	<0.01
Benzo(ghi)perylene	ug/L		0.01	<0.01	<0.01
Benzo(k)fluoranthene	ug/L		0.01	<0.01	<0.01
Chrysene	ug/L		0.01	<0.01	<0.01
Dibenzo(a,h)anthracene	ug/L		0.01	<0.01	<0.01
Fluoranthene	ug/L		0.01	<0.01	<0.01
Fluorene	ug/L		0.01	0.05	0.09
Indeno(1,2,3-cd)pyrene	ug/L		0.01	<0.01	<0.01
Naphthalene	ug/L		0.01	<0.01	<0.01
Perylene	ug/L		0.01	<0.01	<0.01
Phenanthrene	ug/L		0.01	<0.01	<0.01
Pyrene	ug/L		0.01	<0.01	<0.01
Quinoline	ug/L		0.01	<0.01	<0.01
Surrogate	**Unit**	**Acceptable Limits**			
Nitrobenzene-d5	%	50-140		93	91
2-Fluorobiphenyl	%	50-140		76	82
Terphenyl-d14	%	50-140		88	52

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to CCME FWAL-DCC
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

9381766-9381776 Benzo(b)fluoranthene may include contributions from benzo(j)fluoranthene, if also present in the sample.

Certified By:



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CLIENT NAME: DEFENCE CONSTRUCTION CANADA

ATTENTION TO: Cameron Chadwick

SAMPLING SITE:

SAMPLED BY:

Inorganic Chemistry (Water)

DATE RECEIVED: 2018-07-06

DATE REPORTED: 2018-07-17

		SAMPLE DESCRIPTION:		ERK-1
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2018-07-01
Parameter	Unit	G / S	RDL	9381778
BOD (5)	mg/L		5	70
pH	pH Units		NA	9.44
Total Suspended Solids	mg/L		10	221
Chemical Oxygen Demand	mg/L		50	456

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

9381778 The RDL was raised for COD to reflect dilution of the sample in order to keep the analytes within a valid calibration range of the instruments.

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ATTENTION TO: Cameron Chadwick

SAMPLING SITE:

SAMPLED BY:

Inorganic Chemistry (Water)

DATE RECEIVED: 2018-07-06

DATE REPORTED: 2018-07-17

		SAMPLE DESCRIPTION:		ERK-4		ERK-5
		SAMPLE TYPE:		Water		Water
		DATE SAMPLED:		2018-07-01		2018-07-01
Parameter	Unit	G / S	RDL	9381766	RDL	9381776
BOD (5)	mg/L		5	<5	5	<5
Electrical Conductivity	µS/cm		2	1040	2	557
pH	pH Units		NA	7.77	NA	7.77
Total Suspended Solids	mg/L		10	<10	10	51
Total Hardness (as CaCO3)	mg/L		0.5	229	0.5	124
Alkalinity (as CaCO3)	mg/L		5	87	5	73
Chloride	mg/L		0.50	158	0.20	77.7
Nitrate as N	mg/L		0.25	<0.25	0.10	<0.10
Nitrite as N	mg/L		0.25	<0.25	0.10	<0.10
Sulphate	mg/L		0.50	159	0.20	67.7
Ammonia as N	mg/L		0.02	<0.02	0.02	<0.02
Chemical Oxygen Demand	mg/L		5	24	5	12
Phenols	µg/L		1	<1	1	2
Calcium	mg/L		0.10	58.1	0.05	25.4
Magnesium	mg/L		0.10	20.3	0.05	14.6
Sodium	mg/L		0.10	114	0.05	46.7
Potassium	mg/L		0.10	10.0	0.05	3.13
Total Arsenic	mg/L		0.015	<0.015	0.015	<0.015
Total Cadmium	mg/L		0.010	<0.010	0.010	<0.010
Total Chromium	mg/L		0.015	<0.015	0.015	<0.015
Total Copper	mg/L		0.015	<0.015	0.015	<0.015
Total Iron	mg/L		0.05	0.28	0.05	1.46
Total Lead	µg/L		0.5	<0.5	0.5	1.0
Total Mercury	mg/L		0.0002	<0.0002	0.0002	<0.0002
Total Nickel	mg/L		0.015	<0.015	0.015	<0.015

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

9381766-9381776 Elevated RDLs indicate the degree of sample dilutions prior to analyses to keep analytes within the calibration range, reduce matrix interference and to avoid contaminating the instruments.

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Quality Assurance

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AGAT WORK ORDER: 18T358833

PROJECT: Eureka Water License

ATTENTION TO: Cameron Chadwick

SAMPLING SITE:

SAMPLED BY:

Microbiology Analysis

RPT Date: Jul 17, 2018			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
Microbiological Analysis (water)															
Fecal Coliform	9382031		ND	ND	NA	< 1									

Comments: ND – Not detected; NA - % RPD Not Applicable

Certified By: Nivine Basily

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SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Jul 17, 2018

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
PHCs F1 - F4 (Water)															
Benzene	9384209		< 0.20	< 0.20	NA	< 0.20	85%	50%	140%	89%	60%	130%	80%	50%	140%
Toluene	9384209		< 0.20	< 0.20	NA	< 0.20	85%	50%	140%	82%	60%	130%	84%	50%	140%
Ethylbenzene	9384209		< 0.10	< 0.10	NA	< 0.10	83%	50%	140%	82%	60%	130%	82%	50%	140%
Xylene Mixture	9384209		< 0.20	< 0.20	NA	< 0.20	86%	50%	140%	84%	60%	130%	84%	50%	140%
F1 (C6 - C10)	9384209		< 25	< 25	NA	< 25	90%	60%	140%	94%	60%	140%	82%	60%	140%
F2 (C10 to C16)		TW	< 100	< 100	NA	< 100	103%	60%	140%	78%	60%	140%	75%	60%	140%
F3 (C16 to C34)		TW	< 100	< 100	NA	< 100	102%	60%	140%	100%	60%	140%	106%	60%	140%
F4 (C34 to C50)		TW	< 100	< 100	NA	< 100	86%	60%	140%	100%	60%	140%	101%	60%	140%
Oil and Grease (+Total) - water															
Oil and Grease (animal/vegetable)		TW	< 0.5	< 0.5	NA	< 0.5	NA	70%	130%	101%	70%	130%	104%	70%	130%
Oil and Grease (mineral) in water		TW	< 0.5	< 0.5	NA	< 0.5	NA	70%	130%	83%	70%	130%	84%	70%	130%
Oil and Grease (Total) in water		TW	< 0.5	< 0.5	NA	< 0.5	NA	70%	130%	92%	70%	130%	94%	70%	130%
Polycyclic Aromatic Hydrocarbons in Water - (PAH)															
1-Methylnaphthalene	1	9385494	< 0.01	< 0.01	NA	< 0.01	101%	50%	140%	96%	50%	140%	84%	50%	140%
2-Methylnaphthalene	1	9385494	< 0.01	< 0.01	NA	< 0.01	99%	50%	140%	95%	50%	140%	83%	50%	140%
Acenaphthene	1	9385494	< 0.01	< 0.01	NA	< 0.01	99%	50%	140%	95%	50%	140%	83%	50%	140%
Acenaphthylene	1	9385494	< 0.01	< 0.01	NA	< 0.01	91%	50%	140%	94%	50%	140%	81%	50%	140%
Acridine	1	9385494	< 0.01	< 0.01	NA	< 0.01	77%	50%	140%	98%	50%	140%	85%	50%	140%
Anthracene	1	9385494	< 0.012	< 0.012	NA	< 0.012	89%	50%	140%	90%	50%	140%	79%	50%	140%
Benzo(a)anthracene	1	9385494	< 0.018	< 0.018	NA	< 0.018	92%	50%	140%	91%	50%	140%	80%	50%	140%
Benzo(a)pyrene	1	9385494	< 0.010	< 0.010	NA	< 0.010	81%	50%	140%	81%	50%	140%	71%	50%	140%
Benzo(b)fluoranthene	1	9385494	< 0.01	< 0.01	NA	< 0.01	99%	50%	140%	88%	50%	140%	78%	50%	140%
Benzo(e)pyrene	1	9385494	< 0.01	< 0.01	NA	< 0.01	92%	50%	140%	81%	50%	140%	72%	50%	140%
Benzo(ghi)perylene	1	9385494	< 0.01	< 0.01	NA	< 0.01	76%	50%	140%	72%	50%	140%	62%	50%	140%
Benzo(k)fluoranthene	1	9385494	< 0.01	< 0.01	NA	< 0.01	78%	50%	140%	76%	50%	140%	63%	50%	140%
Chrysene	1	9385494	< 0.01	< 0.01	NA	< 0.01	94%	50%	140%	86%	50%	140%	78%	50%	140%
Dibenzo(a,h)anthracene	1	9385494	< 0.01	< 0.01	NA	< 0.01	72%	50%	140%	78%	50%	140%	66%	50%	140%
Fluoranthene	1	9385494	< 0.01	< 0.01	NA	< 0.01	92%	50%	140%	96%	50%	140%	83%	50%	140%
Fluorene	1	9385494	< 0.01	< 0.01	NA	< 0.01	94%	50%	140%	96%	50%	140%	84%	50%	140%
Indeno(1,2,3-cd)pyrene	1	9385494	< 0.01	< 0.01	NA	< 0.01	66%	50%	140%	82%	50%	140%	68%	50%	140%
Naphthalene	1	9385494	< 0.01	< 0.01	NA	< 0.01	100%	50%	140%	92%	50%	140%	81%	50%	140%
Perylene	1	9385494	< 0.01	< 0.01	NA	< 0.01	89%	50%	140%	81%	50%	140%	72%	50%	140%
Phenanthrene	1	9385494	< 0.01	< 0.01	NA	< 0.01	96%	50%	140%	91%	50%	140%	79%	50%	140%
Pyrene	1	9385494	< 0.01	< 0.01	NA	< 0.01	91%	50%	140%	96%	50%	140%	84%	50%	140%
Quinoline	1	9385494	< 0.01	< 0.01	NA	< 0.01	96%	50%	140%	91%	50%	140%	80%	50%	140%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

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Quality Assurance

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AGAT WORK ORDER: 18T358833

PROJECT: Eureka Water License

ATTENTION TO: Cameron Chadwick

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Jul 17, 2018			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

Certified By:

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SAMPLING SITE:

SAMPLED BY:

Water Analysis

RPT Date: Jul 17, 2018			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
Inorganic Chemistry (Water)															
BOD (5)	9381766	9381766	<5	<5	NA	< 5	100%	75%	125%						
Electrical Conductivity	9376913		166	170	2.4%	< 2	102%	80%	120%						
pH	9376913		7.80	7.77	0.4%	NA	100%	90%	110%						
Total Suspended Solids	9378610		1230	1260	2.4%	< 10	102%	80%	120%						
Alkalinity (as CaCO3)	9376913		71	71	0.0%	< 5	106%	80%	120%						
Chloride	9381766	9381766	158	161	1.9%	< 0.10	97%	90%	110%	102%	90%	110%	95%	80%	120%
Nitrate as N	9381766	9381766	<0.25	<0.25	NA	< 0.05	101%	90%	110%	110%	90%	110%	111%	80%	120%
Nitrite as N	9381766	9381766	<0.25	<0.25	NA	< 0.05	NA	90%	110%	95%	90%	110%	115%	80%	120%
Sulphate	9381766	9381766	159	163	2.5%	< 0.10	104%	90%	110%	102%	90%	110%	96%	80%	120%
Ammonia as N	9381766	9381766	<0.02	<0.02	NA	< 0.02	104%	90%	110%	103%	90%	110%	103%	80%	120%
Chemical Oxygen Demand	9383252		26	28	7.4%	< 5	92%	80%	120%	95%	90%	110%	106%	70%	130%
Phenols	9381766	9381766	<1	<1	NA	< 1	102%	90%	110%	99%	90%	110%	98%	80%	120%
Calcium	9383573		67.6	67.1	0.7%	< 0.05	101%	90%	110%	101%	90%	110%	103%	70%	130%
Magnesium	9383573		22.1	22.2	0.5%	< 0.05	99%	90%	110%	99%	90%	110%	102%	70%	130%
Sodium	9383573		4.10	4.12	0.5%	< 0.05	92%	90%	110%	92%	90%	110%	93%	70%	130%
Potassium	9383573		1.83	1.88	2.7%	< 0.05	96%	90%	110%	96%	90%	110%	95%	70%	130%
Total Arsenic	9387771		<0.015	<0.015	NA	< 0.015	103%	90%	110%	97%	80%	120%	101%	70%	130%
Total Cadmium	9387771		<0.010	<0.010	NA	< 0.010	97%	90%	110%	99%	80%	120%	114%	70%	130%
Total Chromium	9387771		<0.015	<0.015	NA	< 0.015	106%	90%	110%	104%	80%	120%	103%	70%	130%
Total Copper	9387771		0.206	0.217	5.2%	< 0.015	105%	90%	110%	105%	80%	120%	100%	70%	130%
Total Iron	9387771		0.16	0.18	NA	< 0.05	110%	90%	110%	112%	80%	120%	110%	70%	130%
Total Lead	9387771		1.8	1.7	NA	< 0.5	105%	90%	110%	103%	80%	120%	100%	70%	130%
Total Mercury	9382031		<0.0002	<0.0002	NA	< 0.0002	105%	90%	110%	104%	90%	110%	97%	80%	120%
Total Nickel	9387771		0.025	0.026	NA	< 0.015	106%	90%	110%	103%	80%	120%	101%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate Qualifier: As the measured result approaches the Reporting Limit (RL), the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

Certified By:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Method Summary

CLIENT NAME: DEFENCE CONSTRUCTION CANADA

AGAT WORK ORDER: 18T358833

PROJECT: Eureka Water License

ATTENTION TO: Cameron Chadwick

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Fecal Coliform	MIC-93-7000	SM 9222 D	Membrane Filtration
Trace Organics Analysis			
Oil and Grease (animal/vegetable)	VOL-91- 5011	SM 5520 & EPA SW846 3510C & EPA 1664	GRAVIMETRIC
Oil and Grease (mineral) in water	VOL-91- 5011	SM 5520 & EPA SW846 3510C & EPA 1664	GRAVIMETRIC
Oil and Grease (Total) in water	VOL-91- 5011	SM 5520 & EPA SW846 3510C & EPA 1664	GRAVIMETRIC
Benzene	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
Toluene	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
Ethylbenzene	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
Xylene Mixture	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
F1 (C6 - C10)	VOL-91- 5010	MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
F2 (C10 to C16)	VOL-91-5010	MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010		GC/FID
1-Methylnaphthalene	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
2-Methylnaphthalene	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
Acenaphthene	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
Acenaphthylene	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
Acridine	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
Anthracene	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
Benzo(a)anthracene	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
Benzo(a)pyrene	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
Benzo(b)fluoranthene	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
Benzo(e)pyrene	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
Benzo(ghi)perylene	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
Benzo(k)fluoranthene	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
Chrysene	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
Dibenzo(a,h)anthracene	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
Fluoranthene	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
Fluorene	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
Naphthalene	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
Perylene	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
Phenanthrene	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
Pyrene	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
Quinoline	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
Nitrobenzene-d5	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
2-Fluorobiphenyl	ORG-120-5104	EPA SW846/3510/8270C	GC/MS
Terphenyl-d14	ORG-120-5104	EPA SW846/3510/8270C	GC/MS

AGAT Laboratories

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Method Summary

CLIENT NAME: DEFENCE CONSTRUCTION CANADA

AGAT WORK ORDER: 18T358833

PROJECT: Eureka Water License

ATTENTION TO: Cameron Chadwick

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
BOD (5)	INOR-93-6006	SM 5210 B	DO METER
pH	INOR-93-6000	SM 4500-H+ B	PC TITRATE
Total Suspended Solids	INOR-93-6028	SM 2540 D	BALANCE
Chemical Oxygen Demand	INOR-93-6042	SM 5220 D	SPECTROPHOTOMETER
Electrical Conductivity	INOR-93-6000	SM 2510 B	PC TITRATE
Total Hardness (as CaCO3)	MET-93-6105	EPA SW-846 6010C & 200.7	CALCULATION
Alkalinity (as CaCO3)	INOR-93-6000	SM 2320 B	PC TITRATE
Chloride	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Nitrate as N	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-93-6059	QuikChem 10-107-06-1-J & SM 4500 NH3-F	LACHAT FIA
Phenols	INOR-93-6050	MOE ROPHEN-E 3179 & SM 5530 D	TECHNICON AUTO ANALYZER
Calcium	MET-93-6105	EPA SW-846 6010C & 200.7	ICP/OES
Magnesium	MET-93-6105	EPA SW-846 6010C & 200.7	ICP/OES
Sodium	MET-93-6105	EPA SW-846 6010C & 200.7	ICP/OES
Potassium	MET-93-6105	EPA SW-846 6010C & 200.7	ICP/OES
Total Arsenic	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Cadmium	MET -93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Chromium	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Copper	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Iron	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Lead	MET-93-6003	EPA SW-846 3010A & 6020A	ICP/MS
Total Mercury	MET-93-6100	EPA SW-846 7470 & 245.1	CVAAS
Total Nickel	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS

AGAT Laboratories

6 large + 1 med blue Mibi

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Laboratory Use Only

Work Order #: 18T358833

Cooler Quantity:

Arrival Temperatures: * See attached temp log *

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: ON ICE

Report Information:

Company: DND
Contact: Cameron Chadwick
Address: 29 ALERT BLVD ASTRA ON (KOK3W0)
Phone: 613-392-2811 Fax:
Reports to be sent to:
1. Email: cameron.chadwick@dcc-cdc.gc.ca
2. Email:

Regulatory Requirements:

☐ No Regulatory Requirement

(Please check all applicable boxes)

☐ Regulation 153/04
Table (Indicate One) ☐ Ind/Com ☐ Res/Park ☐ Agriculture
Soil Texture (Check One) ☐ Coarse ☐ Fine

☐ Sewer Use ☐ Sanitary ☐ Storm
Region (Indicate One) ☐ MISA

☐ Regulation 558 ☒ CCME ☐ Prov. Water Quality Objectives (PWQO) ☐ Other (Indicate One)

Is this submission for a **Record of Site Condition?** ☐ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply) ☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CPM

Project Information:

Project: EUREKA WATER LICENCE
Site Location: EUREKA NU.
Sampled By: N. CONTRONDIDES
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:
Contact:
Address:
Email:

Sample Matrix Legend

B	Biota
GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI (Y/N)	O. Reg 153: Metals and Inorganics	☒ All Metals ☐ 153 Metals (excl. Hydrides) ☐ Hydride Metals ☐ 153 Metals (Incl. Hydrides)	ORPs: ☐ B-HWS ☐ Cl ☐ CN ☐ Cr^{6+} ☐ EC ☐ FOC ☒ Hg ☐ pH ☐ SAR	Full Metals Scan	Regulation/Custom Metals	Nutrients: ☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_3+NO_2	Volatiles: ☐ VOC ☒ BTEX ☐ THM	PHCs F1 - F4 CCME	ABNs	PAHs	PCBs: ☐ Total ☐ Aroclors	Organochlorine Pesticides	TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Sewer Use	Phenols	Microbiology	COD/AMMONIA	BOD	TSS	Oil / Grease
ERK-4	July 1	9:42	14	SW		N	X	X	X	X			X	X	X					X	X	X	X	X	X
ERK-5	July 1	10:30	14	SW		N	X	X	X	X			X	X	X					X	X	X	X	X	X
ERK-1	July 1	11:20	6	SW		N	X														X	X	X	X	X

Samples Relinquished By (Print Name and Sign): C Hayward	Date: July 5/18	Time: 3:20	Samples Received By (Print Name and Sign): Karly Jones	Date: 7/5/18	Time: 3:20		
Samples Relinquished By (Print Name and Sign):	Date: 7/5/18	Time: 4pm	Samples Received By (Print Name and Sign): Avinell Minhas AM	Date: 7/6/18	Time: 9:48	Page 1 of 1	
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:	N°: T071662	

AGAT Laboratories

Sample Temperature Log

Client: DND

COC# or Work Order #: _____

# of Coolers: 6 large + 1 med blue

# of Submissions: _____

Arrival Temperatures - Branch/Driver

Cooler #1:	4.7	4.9	4.8
Cooler #2:	8.8	9.0	9.1
Cooler #3:	7.4	7.5	7.6
Cooler #4:	6.9	7.0	6.8
Cooler #5:	7.8	7.6	8.0
Cooler #6:	5.8	6.0	6.2
Cooler #7:	8.1	8.4	8.5
Cooler #8			
Cooler #9:			
Cooler #10:			

IR Gun ID: _____

Taken By: Avineet Minhas

Date (yyyy/mm/dd): 2018/07/06 **Time:** 9 : 48 **AM / PM**

Arrival Temperatures - Laboratory

Cooler #1:			
Cooler #2:			
Cooler #3:			
Cooler #4:			
Cooler #5:			
Cooler #6:			
Cooler #7:			
Cooler #8			
Cooler #9:			
Cooler #10:			

IR Gun ID: _____

Taken By: _____

Date (yyyy/mm/dd): _____ **Time:** ____ : ____ **AM / PM**

Instructions for use of this form: 1) complete all fields of info including total # of coolers and # of submissions rec'd, 2) photocopy and place in each submission prior to giving a WO#, 3) Proceed as normal, write the WO# and scan (please make sure to scan along with the COC)