

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

ATTENTION TO: Cameron Chadwick

PROJECT: CFS ALERT

AGAT WORK ORDER: 16P108383

MICROBIOLOGY ANALYSIS REVIEWED BY: Inesa Alizarchyk, Inorganic Lab Supervisor

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

WATER ANALYSIS REVIEWED BY: Mike Muneswar, BSc (Chem), Senior Inorganic Analyst

DATE REPORTED: Jul 11, 2016

PAGES (INCLUDING COVER): 17

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.



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 16P108383

PROJECT: CFS ALERT

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

CLIENT NAME: DEFENCE CONSTRUCTION CANADA

ATTENTION TO: Cameron Chadwick

SAMPLING SITE:

SAMPLED BY:

Microbiological Analysis (water)

DATE RECEIVED: 2016-06-23

DATE REPORTED: 2016-07-11

		SAMPLE DESCRIPTION:		ALT 4	ALT 5	ALT 6
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		6/20/2016	6/20/2016	6/20/2016
Parameter	Unit	G / S	RDL	7662238	7662263	RDL 7662277
Fecal Coliform	CFU/100mL	2	ND	ND	100	ND

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

7662238-7662277 RDL >1 indicates dilutions of the sample.

ND - Not Detected.

The time from sample collection to initiation of analysis exceeded 48 hours. Review data with discretion.

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SAMPLING SITE:

SAMPLED BY:

BTEX - Water (P & T - GC/MS)

DATE RECEIVED: 2016-06-23

DATE REPORTED: 2016-07-11

		SAMPLE DESCRIPTION:		ALT 8	ALT 8.1	ALT 9	ALT 10
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		6/20/2016	6/20/2016	6/20/2016	6/20/2016
Parameter	Unit	G / S	RDL	7662291	7662302	7662310	7662360
Benzene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
o-Xylene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Xylene Mixture (Total)	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	60-130	114	111	113	114	
4-Bromofluorobenzene	% Recovery	70-130	102	100	98	96	

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

7662291-7662360 Results relate only to the items tested.

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SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (Water)

DATE RECEIVED: 2016-06-23

DATE REPORTED: 2016-07-11

		SAMPLE DESCRIPTION:		ALT 4	ALT 5	ALT 6
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		6/20/2016	6/20/2016	6/20/2016
Parameter	Unit	G / S	RDL	7662238	7662263	7662277
Benzene	µg/L		0.20	<0.20	<0.20	<0.20
Toluene	µg/L		0.20	<0.20	<0.20	<0.20
Ethylbenzene	µg/L		0.10	<0.10	<0.10	<0.10
Xylene Mixture	µg/L		0.20	<0.20	<0.20	<0.20
F1 (C6 to C10)	µg/L		25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L		25	<25	<25	<25
F2 (C10 to C16)	µg/L		100	<100	<100	<100
F3 (C16 to C34)	µg/L		100	<100	<100	<100
F4 (C34 to C50)	µg/L		100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA	NA
Surrogate	Unit	Acceptable Limits				
Terphenyl	%		60-140	88	101	74

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

7662238-7662277 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:

Oil and Grease (+Total) - water

DATE RECEIVED: 2016-06-23

DATE REPORTED: 2016-07-11

		SAMPLE DESCRIPTION:		ALT 4	ALT 5	ALT 6	ALT 8	ALT 8.1	ALT 9	ALT 10
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		6/20/2016	6/20/2016	6/20/2016	6/20/2016	6/20/2016	6/20/2016	6/20/2016
Parameter	Unit	G / S	RDL	7662238	7662263	7662277	7662291	7662302	7662310	7662360
Oil and Grease (animal/vegetable)	mg/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Oil and Grease (mineral) in water	mg/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Oil and Grease (Total) in water	mg/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

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

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SAMPLING SITE:

SAMPLED BY:

Polycyclic Aromatic Hydrocarbons in Water - (PAH)

DATE RECEIVED: 2016-06-23

DATE REPORTED: 2016-07-11

		SAMPLE DESCRIPTION:		ALT 4	ALT 5	ALT 6
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		6/20/2016	6/20/2016	6/20/2016
Parameter	Unit	G / S	RDL	7662238	7662263	7662277
1-Methylnaphthalene	ug/L		0.01	0.02	0.01	0.02
2-Methylnaphthalene	ug/L		0.01	0.05	0.04	0.07
Acenaphthene	ug/L		0.01	<0.01	<0.01	<0.01
Acenaphthylene	ug/L		0.01	<0.01	<0.01	<0.01
Acridine	ug/L		0.01	<0.01	<0.01	<0.01
Anthracene	ug/L		0.012	<0.012	<0.012	<0.012
Benzo(a)anthracene	ug/L		0.018	<0.018	<0.018	<0.018
Benzo(a)pyrene	ug/L		0.010	<0.010	<0.010	<0.010
Benzo(b)fluoranthene	ug/L		0.01	<0.01	<0.01	<0.01
Benzo(e)pyrene	ug/L		0.01	<0.01	<0.01	<0.01
Benzo(ghi)perylene	ug/L		0.01	<0.01	<0.01	<0.01
Benzo(k)fluoranthene	ug/L		0.01	<0.01	<0.01	<0.01
Chrysene	ug/L		0.01	<0.01	<0.01	<0.01
Dibenzo(a,h)anthracene	ug/L		0.01	<0.01	<0.01	<0.01
Fluoranthene	ug/L		0.01	<0.01	<0.01	<0.01
Fluorene	ug/L		0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	ug/L		0.01	<0.01	<0.01	<0.01
Naphthalene	ug/L		0.01	0.06	0.05	0.07
Perylene	ug/L		0.01	<0.01	<0.01	<0.01
Phenanthrene	ug/L		0.01	<0.01	<0.01	<0.01
Pyrene	ug/L		0.01	<0.01	<0.01	<0.01
Quinoline	ug/L		0.01	<0.01	<0.01	<0.01
Surrogate	Unit	Acceptable Limits				
Nitrobenzene-d5	%	50-140	99	90	88	
2-Fluorobiphenyl	%	50-140	112	102	96	
Terphenyl-d14	%	50-140	91	79	74	

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

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ATTENTION TO: Cameron Chadwick

SAMPLING SITE:

SAMPLED BY:

Inorganic Chemistry (Water)

DATE RECEIVED: 2016-06-23

DATE REPORTED: 2016-07-11

		SAMPLE DESCRIPTION:		ALT 4	ALT 5	ALT 6
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		6/20/2016	6/20/2016	6/20/2016
Parameter	Unit	G / S	RDL	7662238	7662263	7662277
BOD (5)	mg/L		5	<5	<5	<5
Electrical Conductivity	uS/cm		2	230	216	334
pH	pH Units		NA	7.86	7.80	7.83
Total Suspended Solids	mg/L		10	21	16	3110
Total Hardness (as CaCO ₃)	mg/L		0.5	89.8	82.2	98.2
Alkalinity (as CaCO ₃)	mg/L		5	72	59	57
Chloride	mg/L		0.10	13.9	5.48	27.4
Nitrate as N	mg/L		0.05	0.17	<0.05	0.38
Nitrite as N	mg/L		0.05	<0.05	<0.05	<0.05
Sulphate	mg/L		0.10	20.2	38.6	66.8
Ammonia as N	mg/L		0.02	<0.02	<0.02	<0.02
Chemical Oxygen Demand	mg/L		5	8	8	8
Phenols	mg/L		0.001	<0.001	<0.001	<0.001
Calcium	mg/L		0.05	29.6	27.1	29.1
Magnesium	mg/L		0.05	3.87	3.52	6.21
Sodium	mg/L		0.05	7.93	7.84	19.3
Potassium	mg/L		0.05	1.59	2.83	10.3
Total Arsenic	mg/L		0.001	0.001	0.001	0.033
Total Cadmium	mg/L		0.00002	<0.00002	0.00010	0.00069
Total Chromium	mg/L		0.002	0.004	<0.002	0.094
Total Copper	mg/L		0.002	0.003	0.004	0.080
Total Iron	mg/L		0.010	0.662	0.865	75.1
Total Lead	mg/L		0.001	0.001	0.001	0.045
Total Mercury	mg/L		0.00002	<0.00002	<0.00002	0.00008
Total Nickel	mg/L		0.003	<0.003	0.003	0.128
Digestion					Y	Y

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

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AGAT WORK ORDER: 16P108383

PROJECT: CFS ALERT

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CLIENT NAME: DEFENCE CONSTRUCTION CANADA

ATTENTION TO: Cameron Chadwick

SAMPLING SITE:

SAMPLED BY:

Lead (Water)

DATE RECEIVED: 2016-06-23

DATE REPORTED: 2016-07-11

		SAMPLE DESCRIPTION:		ALT 8	ALT 8.1	ALT 9	ALT 10
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		6/20/2016	6/20/2016	6/20/2016	6/20/2016
Parameter	Unit	G / S	RDL	7662291	7662302	7662310	7662360
Lead	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

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

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 16P108383

PROJECT: CFS ALERT

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CLIENT NAME: DEFENCE CONSTRUCTION CANADA

ATTENTION TO: Cameron Chadwick

SAMPLING SITE:

SAMPLED BY:

Phenols (Water)

DATE RECEIVED: 2016-06-23

DATE REPORTED: 2016-07-11

		SAMPLE DESCRIPTION:		ALT 8	ALT 8.1	ALT 9	ALT 10
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		6/20/2016	6/20/2016	6/20/2016	6/20/2016
Parameter	Unit	G / S	RDL	7662291	7662302	7662310	7662360
Phenols	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001

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

Certified By:

Quality Assurance

CLIENT NAME: DEFENCE CONSTRUCTION CANADA

AGAT WORK ORDER: 16P108383

PROJECT: CFS ALERT

ATTENTION TO: Cameron Chadwick

SAMPLING SITE:

SAMPLED BY:

Microbiology Analysis

RPT Date: Jul 11, 2016			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

Microbiological Analysis (water)

Fecal Coliform	7662238	7662238	ND	ND	NA	< 1
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Comments: ND - Not Detected, NA - % RPD Not Applicable

Certified By:


Quality Assurance

CLIENT NAME: DEFENCE CONSTRUCTION CANADA

AGAT WORK ORDER: 16P108383

PROJECT: CFS ALERT

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SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Jul 11, 2016			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

BTEX - Water (P & T - GC/MS)

Benzene	7658536		< 0.20	< 0.20	NA	< 0.20	107%	60%	130%	111%	60%	130%	80%	60%	130%
Toluene	7658536		< 0.20	< 0.20	NA	< 0.20	95%	60%	130%	86%	60%	130%	90%	60%	130%
Ethylbenzene	7658536		< 0.10	< 0.10	NA	< 0.10	80%	60%	130%	92%	60%	130%	80%	60%	130%
m & p-Xylene	7658536		< 0.20	< 0.20	NA	< 0.20	92%	60%	130%	102%	60%	130%	82%	60%	130%
o-Xylene	7658536		< 0.10	< 0.10	NA	< 0.10	86%	60%	130%	96%	60%	130%	81%	60%	130%

O. Reg. 153(511) - PHCs F1 - F4 (Water)

Benzene	7660762		< 0.20	< 0.20	NA	< 0.20	104%	50%	140%	100%	60%	130%	95%	50%	140%
Toluene	7660762		< 0.20	< 0.20	NA	< 0.20	105%	50%	140%	104%	60%	130%	98%	50%	140%
Ethylbenzene	7660762		< 0.10	< 0.10	NA	< 0.10	99%	50%	140%	97%	60%	130%	92%	50%	140%
Xylene Mixture	7660762		< 0.20	< 0.20	NA	< 0.20	96%	50%	140%	99%	60%	130%	95%	50%	140%
F1 (C6 to C10)	7660762		< 25	< 25	NA	< 25	72%	60%	140%	77%	60%	140%	85%	60%	140%
F2 (C10 to C16)	7646357		< 100	< 100	NA	< 100	98%	60%	140%	65%	60%	140%	72%	60%	140%
F3 (C16 to C34)	7646357		< 100	< 100	NA	< 100	102%	60%	140%	92%	60%	140%	93%	60%	140%
F4 (C34 to C50)	7646357		< 100	< 100	NA	< 100	86%	60%	140%	71%	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%	106%	70%	130%	107%	70%	130%
Oil and Grease (mineral) in water	TW		< 0.5	< 0.5	NA	< 0.5	NA	70%	130%	81%	70%	130%	83%	70%	130%
Oil and Grease (Total) in water	TW		< 0.5	< 0.5	NA	< 0.5	NA	70%	130%	94%	70%	130%	95%	70%	130%

Polycyclic Aromatic Hydrocarbons in Water - (PAH)

1-Methylnaphthalene	1	7648333	0.01	0.02	NA	< 0.01	64%	50%	140%	71%	50%	140%	NA	50%	140%
2-Methylnaphthalene	1	7648333	0.04	0.05	NA	< 0.01	127%	50%	140%	70%	50%	140%	NA	50%	140%
Acenaphthene	1	7648333	< 0.01	< 0.01	0.0%	< 0.01	124%	50%	140%	72%	50%	140%	NA	50%	140%
Acenaphthylene	1	7648333	< 0.01	< 0.01	0.0%	< 0.01	119%	50%	140%	69%	50%	140%	NA	50%	140%
Acridine	1	7648333	< 0.01	< 0.01	0.0%	< 0.01	53%	50%	140%	68%	50%	140%	NA	50%	140%
Anthracene	1	7648333	< 0.012	< 0.012	0.0%	< 0.012	116%	50%	140%	73%	50%	140%	NA	50%	140%
Benzo(a)anthracene	1	7648333	< 0.018	< 0.018	0.0%	< 0.018	121%	50%	140%	71%	50%	140%	NA	50%	140%
Benzo(a)pyrene	1	7648333	< 0.010	< 0.010	0.0%	< 0.010	76%	50%	140%	72%	50%	140%	NA	50%	140%
Benzo(b)fluoranthene	1	7648333	< 0.01	< 0.01	0.0%	< 0.01	89%	50%	140%	72%	50%	140%	NA	50%	140%
Benzo(e)pyrene	1	7648333	< 0.01	< 0.01	0.0%	< 0.01	89%	50%	140%	74%	50%	140%	NA	50%	140%
Benzo(ghi)perylene	1	7648333	< 0.01	< 0.01	0.0%	< 0.01	94%	50%	140%	68%	50%	140%	NA	50%	140%
Benzo(k)fluoranthene	1	7648333	< 0.01	< 0.01	0.0%	< 0.01	63%	50%	140%	63%	50%	140%	NA	50%	140%
Chrysene	1	7648333	< 0.01	< 0.01	0.0%	< 0.01	118%	50%	140%	70%	50%	140%	NA	50%	140%
Dibenzo(a,h)anthracene	1	7648333	< 0.01	< 0.01	0.0%	< 0.01	85%	50%	140%	68%	50%	140%	NA	50%	140%
Fluoranthene	1	7648333	< 0.01	< 0.01	0.0%	< 0.01	127%	50%	140%	66%	50%	140%	NA	50%	140%
Fluorene	1	7648333	< 0.01	< 0.01	0.0%	< 0.01	120%	50%	140%	72%	50%	140%	NA	50%	140%
Indeno(1,2,3-cd)pyrene	1	7648333	< 0.01	< 0.01	0.0%	< 0.01	80%	50%	140%	88%	50%	140%	NA	50%	140%
Naphthalene	1	7648333	0.05	0.05	0.0%	< 0.01	124%	50%	140%	65%	50%	140%	NA	50%	140%
Perylene	1	7648333	< 0.01	< 0.01	0.0%	< 0.01	90%	50%	140%	77%	50%	140%	NA	50%	140%

AGAT QUALITY ASSURANCE REPORT (V1)

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AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation.

Results relate only to the items tested and to all the items tested

Quality Assurance

CLIENT NAME: DEFENCE CONSTRUCTION CANADA

AGAT WORK ORDER: 16P108383

PROJECT: CFS ALERT

ATTENTION TO: Cameron Chadwick

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Jul 11, 2016			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
Phenanthrene	1	7648333	< 0.01	< 0.01	0.0%	< 0.01	122%	50%	140%	65%	50%	140%	NA	50%	140%
Pyrene	1	7648333	< 0.01	< 0.01	0.0%	< 0.01	127%	50%	140%	67%	50%	140%	NA	50%	140%
Quinoline	1	7648333	< 0.01	< 0.01	0.0%	< 0.01	106%	50%	140%	64%	50%	140%	NA	50%	140%

Comments: Tap water analysis has been performed as QC sample testing for duplicate and matrix spike due to insufficient sample volume.
When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).
Matrix spike not available (NA), results based on blank spike recoveries.
RPD value not available (NA); results of the duplicates are under 5X the RDL and will not be calculated.

Certified By:





SAMPLED BY:

Comments: NA signifies Not Applicable.
Duplicate Qualifier: As the measured result approaches the 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.

Mike Munson

Method Summary

CLIENT NAME: DEFENCE CONSTRUCTION CANADA

AGAT WORK ORDER: 16P108383

PROJECT: CFS ALERT

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	MF/INCUBATOR

Method Summary

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SAMPLING SITE:
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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	VOL-91-5001	EPA SW-846 5230B & 8260	(P&T)GC/MS
Toluene	VOL-91-5001	EPA SW-846 5230B & 8260	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	EPA SW-846 5230B & 8260	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	EPA SW-846 5230B & 8260	(P&T)GC/MS
o-Xylene	VOL-91-5001	EPA SW-846 5230B & 8260	(P&T)GC/MS
Xylene Mixture (Total)	VOL-91-5001	EPA SW-846 5230B & 8260	(P&T)GC/MS
Toluene-d8	VOL-91-5001	EPA SW-846 5230B & 8260	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	EPA SW-846 5230B & 8260	(P&T)GC/MS
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 to 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
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
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

Method Summary

CLIENT NAME: DEFENCE CONSTRUCTION CANADA
AGAT WORK ORDER: 16P108383
PROJECT: CFS ALERT
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
Electrical Conductivity	INOR-93-6000	SM 2510 B	PC TITRATE
pH	INOR-93-6000	SM 4500-H+ B	PC TITRATE
Total Suspended Solids	INOR-93-6028	SM 2540 D	BALANCE
Total Hardness (as CaCO ₃)	MET-93-6105	EPA SW-846 6010C & 200.7	ICP/OES
Alkalinity (as CaCO ₃)	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 NH ₃ -F	LACHAT FIA
Chemical Oxygen Demand	INOR-93-6042	SM 5220 D	SPECTROPHOTOMETER
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-93-6103	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
Digestion	MET-93-6103	EPA SW-846 3010A	SPECTROPHOTOMETER
Lead	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS



Laboratories

M1131

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

Laboratory Use Only

Work Order #:

160108383

Cooler Quantity:

Arrival Temperatures:

Custody Seal Intact:

Notes:

Yes

No

N/A

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water intended for human consumption)

Report Information:

Company: Defence Const CAWAC

Contact: Cameron Chudwick

Address: 28 Alster Ave Kot 3rd

Phone: 413-243-4807 Fax:

Reports to be sent to: Cameron Chudwick @ dca-cdc.gc.ca

1. Email:

2. Email:

Project Information:

Project: CFS ALSTER

Site Location: C. Chudwick A. T Am

Sampled By:

AGAT Quote #:

Please note: if quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Company:

Contact:

Address:

Email:

Bill to Same: Yes ☒ No ☐

Regulatory Requirements:

(Please check all applicable boxes)

☐ Regulation 153/04

☐ Sewer Use

☐ Regulation 558

Table ☐ Indicate One

☐ Ind/Corn

☐ Res/Park

☐ Agriculture

Soil Texture (Check One)

☐ Coarse

☐ Fine

Is this submission for a Record of Site Condition?

☐ Yes ☒ No

Report Guideline on Certificate of Analysis

☐ Yes ☒ No

Sample Matrix Legend

B Biota

GW Ground Water

O Oil

P Paint

S Soil

SW Sediment

SW Surface Water

Field Filtered - Metals, Hg, CrVI (Please Circle)

Comments/ Special Instructions

Y / N

Metals and Inorganics

Metal Scan

Hydride Forming Metals

Client Custom Metals

ORPs: ☐ B-HWS ☐ Cl ☐ CN ☐ Cr⁶⁺ ☐ EC ☐ FOC ☐ NO₃/NO₂ ☐ Total N ☒ pH ☐ SAR

Nutrients: ☐ TP ☐ NH₃ ☐ TKN ☐ NO₃ ☐ NO₂ ☒ NO₃/NO₂

Volatiles: ☐ VOC ☒ BTEX ☐ THM

CCME Fractions 1 to 4

ABNs

PAHs

Chlorophenols

PCBs

Organochlorine Pesticides

TCLP Metals/Inorganics

Sewer Use

Bad COP TSS oil + grease F.C.

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Metals	Metal Scan	Hydride	Client Custom	ORPs: ☐ Cr ⁶⁺ ☐ Total	Nutrient: ☐ NO ₃	Volatiles	CCME	ABNs	PAHs	Chloro	PCBs	Organic	TCLP Metals	Sewer
ALT 4	20/06/16	21:30	12	SW				X			X	X	X	X		X					
ALT 5		20:15	12	SW				X			X	X	X	X		X					
ALT 6		20:00	12	SW				X			X	X	X	X		X					
ALT 8		21:15	6	SW							X		X	X							
ALT 8.1		21:15	6	SW									X	X							
ALT 9		21:00	6	SW									X	X							
ALT 10		20:30	6	SW									X	X							

Samples Relinquished By (Print Name and Sign):

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