AGAT Laboratories

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
14 ALERT BLVD, 8 WING TRENTON
ASTRA, ON K0K3W0
(613) 392-2811

ATTENTION TO: Chris McRae

PROJECT NO: Alert

AGAT WORK ORDER: 13T752798

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

DATE REPORTED: Sep 06, 2013

PAGES (INCLUDING COVER): 4

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

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O. Reg. 153 - Petroleum Hydrocarbons F1 - F4 (C6 - C50) in Soil

DATE RECEIVED: 2013-08-29

DATE REPORTED: 2013-09-06

		SAMPLE DESCRIPTION:		NBP-1-13	NBP-2-13	NBP-3-13	NBP-4-13	NBP-5-13
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		8/26/2013	8/26/2013	8/26/2013	8/26/2013	8/26/2013
Parameter	Unit	G / S	RDL	4696162	4696165	4696169	4696173	4696176
Benzene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	µg/g		0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Ethylbenzene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylene Mixture (Total)	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
C6 - C10 (F1)	µg/g		5	12	17	6	8	14
C6 - C10 (F1 minus BTEX)	µg/g		5	12	17	6	8	14
C>10 - C16 (F2)	µg/g		10	790	610	590	600	780
C>16 - C34 (F3)	µg/g		50	120	91	130	130	140
C>34 - C50 (F4)	µg/g		50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50	NA	NA	NA	NA	NA
Moisture Content	%		0.1	9.3	7.9	6.4	6.5	9.2

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

4696162-4696176 Results are based on sample dry weight.
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 n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
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, results are considered valid without determining the PAH contribution if not requested by the client.
Quality Control Data is available upon request.

Certified By:

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Quality Assurance

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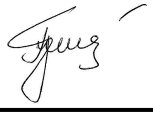
Trace Organics Analysis

RPT Date: Sep 06, 2013			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
O. Reg. 153 - Petroleum Hydrocarbons F1 - F4 (C6 - C50) in Soil															
Benzene	1		< 0.02	< 0.02	0.0%	< 0.02	125%	60%	130%	98%	60%	130%	77%	60%	130%
Toluene	1		< 0.08	< 0.08	0.0%	< 0.08	120%	60%	130%	98%	60%	130%	81%	60%	130%
Ethylbenzene	1		< 0.05	< 0.05	0.0%	< 0.05	117%	60%	130%	99%	60%	130%	78%	60%	130%
Xylene Mixture (Total)	1		< 0.05	< 0.05	0.0%	< 0.05	116%	60%	130%	98%	60%	130%	78%	60%	130%
C6 - C10 (F1)	1		< 5	< 5	0.0%	< 5	100%	60%	130%	98%	60%	130%	93%	60%	130%
C>10 - C16 (F2)	1		< 10	< 10	0.0%	< 10	84%	70%	130%	85%	70%	130%	103%	70%	130%
C>16 - C34 (F3)	1		< 50	< 50	0.0%	< 50	99%	70%	130%	91%	70%	130%	102%	70%	130%
C>34 - C50 (F4)	1		< 50	< 50	0.0%	< 50	82%	70%	130%	110%	70%	130%	105%	70%	130%

Certified By:



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Method Summary

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Toluene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Ethylbenzene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Xylene Mixture (Total)	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
C6 - C10 (F1)	VOL-91-5009	CCME Tier 1 Method	P & T GC/FID
C6 - C10 (F1 minus BTEX)	VOL-91-5009	CCME Tier 1 Method	P & T GC/FID
C>10 - C16 (F2)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
C>16 - C34 (F3)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
C>34 - C50 (F4)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
Gravimetric Heavy Hydrocarbons	VOL - 5012	CCME Tier 1 Method	GRAVIMETRIC ANALYSIS
Moisture Content	VOL-91-5009	CCME Tier 1 Method	Balance

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Chain of Custody Record

Laboratory Use Only
Arrival Temperature: 13T752798
AGAT WO #:
Lab Temperature: 8.4 | 7.9 | 9.6
Notes:

Client Information
Company: DCC
Contact: Chris McKee
Address: 14 Alert Blvd
Ajax ON L0K 5J4
Phone: 012-849-9681 Fax:
Project: Alert PO:
AGAT Quotation #:
Please note, if quotation number is not provided, client will be billed full price for analysis.

Regulatory Requirements
☐ Regulation 153/04 (reg. 511 Amend.) — Table ____ (Indicate one) ☐ Ind/Com ☐ Res/Park ☐ Agriculture
Soil Texture (check one) ☐ Coarse ☐ Fine
☐ Sewer Use — Region ____ (Indicate one) ☐ Sanitary ☐ Storm
☐ Regulation 558 ☒ CCME ☐ Other (specify) ____ ☐ Prov. Water Quality Objectives (PWQO) ☐ None

Turnaround Time Required (TAT) Required*
Regular TAT
☒ 5 to 7 Working Days
Rush TAT (please provide prior notification)
Rush Surcharges Apply
☐ 3 Working Days ☐ 2 Working Days ☐ 1 Working Day
OR
Date Required (Rush surcharges may apply): ____
*TAT is exclusive of weekends and statutory holidays

Invoice To
Same: Yes ☒ No ☐
Company:
Contact:
Address:

Is this a drinking water sample? (potable water intended for human consumption) ☐ Yes ☐ No
If "Yes", please use the *Drinking Water Chain of Custody Form*

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

Legend Matrix
GW Ground Water · O Oil · SW Surface Water · P Paint · SD Sediment · S Soil

Report Information – reports to be sent to:
1. Name: Chris McKee
Email: Chris.mckee@dcc-ddc.gc.ca
2. Name:
Email:

Sample Identification	Date Sampled	Time Sampled	Sample Matrix	# of Containers	Comments Site/Sample Information	Metals and Inorganics	Metal Scan	Hydride Forming Metals	Client Custom Metals	ORPs: ☐ B-HWS ☐ Cl- ☐ CN- ☐ EC ☐ FOC ☐ Cr+6 ☐ SAR ☐ N- Total ☐ Hg ☐ pH ☐ NO_3/NO_2	Nutrients: ☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_3/NO_2	VOC: ☐ VOC ☐ THM ☒ BTEX	CCME Fractions 1 to 4	ABNs	PAHs	Chlorophenols	PCBs	Organochlorine Pesticides	TCLP Metals/Inorganics	Sewer Use
NBP-1-13	20/08/13		S	2								X	X						
NBP-2-13	↓		↓	↓								X	X						
NBP-3-13												X	X						
NBP-4-13												X	X						
NBP-5-13	↓		↓	↓								X	X						

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time
C. McKee		Shazmin A. Aug 29/13	12:30
Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time

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

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