

**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: 13T752797

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.



Certificate of Analysis

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5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
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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:		NPL27-13-1	NPL27-13-2
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		8/27/2013	8/27/2013
Parameter	Unit	G / S	RDL	4696466	4696467
Benzene	µg/g		0.02	<0.02	<0.02
Toluene	µg/g		0.08	<0.08	<0.08
Ethylbenzene	µg/g		0.05	<0.05	<0.05
Xylene Mixture (Total)	µg/g		0.05	<0.05	<0.05
C6 - C10 (F1)	µg/g		5	22	56
C6 - C10 (F1 minus BTEX)	µg/g		5	22	56
C>10 - C16 (F2)	µg/g		10	2300	2400
C>16 - C34 (F3)	µg/g		50	480	400
C>34 - C50 (F4)	µg/g		50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50	NA	NA
Moisture Content	%		0.1	10.4	10.4

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard**4696466-4696467** 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:

Quality Assurance

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Trace Organics Analysis

RPT Date: Sep 06, 2013			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

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:



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

