

# **Soil Characterization Report ESA**

210 Mohawk Road E **Hamilton, Ontario** 

Job No.

F199507029

**Client:** 

**Melrose Paving Co. Ltd.** 

**Report Date:** 

August 7, 2024



Fortis Environmental Inc. 942 Yonge Street Suite 324 Toronto / ON M4W 3S8 T: 416-452-6965 F: 647-417-7192 E: info@fortisenv.ca



Soil Characterization Report – Environmental Site Assessment (ESA) 210 Mohawk Road E Hamilton / ON

To Whom It May Concern,

Please find enclosed the results for the above-mentioned investigation conducted on your behalf. Please feel free to contact us at info@fortisenv.ca if you require any further information.



Andrew Topp, President P.Geo. Q.P.<sub>ESA</sub>. Master of Environmental Science Bachelor of Science – Biology, Geology

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## 1 Introduction & Objective

#### 1.1 General

Fortis Environmental Inc. (Fortis) was retained by Melrose Paving Co. Ltd. (the Client) to conduct a Soil Characterization Report – Environmental Site Assessment (ESA) for the property located at 210 Mohawk Road E in Hamilton, Ontario (hereby referred to as "The Project Area").

Please refer to Figure 1 for an outline of the location of the Project Area.

## 1.2 Objective

The objective of the current investigation was to provide a summary of the environmental (chemical) quality of the soils on-site, prior to the excavation and off-site beneficial re-use of excess soils generated as part of a commercial paving / asphalt rehabilitation project.

The ESA was carried out in accordance with the Canadian Standards Association (CSA) Z769-00 (R2013), under general guidelines of Ontario Regulation 153/04 (including amendments of O. Reg. 406/19).

#### 1.3 Site Description

At the time of the investigation, the site was developed as a commercial property which operates as a pharmaceutical retail store ("Shoppers Drug Mart") which is undergoing an asphalt rehabilitation project. Part of the upgrades include stripping and removal of the current asphalt surface and sub-grade granular materials, followed by the excavation of 0.5 m of excess soils for the replacement of compacted granular prior to the construction of a new paved asphalt surface.

- The surface area of where the excess soil is to be removed is: 3,850 m²
- Depth of the proposed excavation is a maximum of 0.5 mbgl.
- The project is scheduled to generate: 1,925 m³ of excess soils.

Please refer to Figure 1 for an outline of the areas to be excavated on-site.

### 1.4 Assessment of Past Uses

The Project Area is and always has been developed as commercial property under the operating name of "Shoppers Drug Mart". A review of aerial photographs from the McMaster University collection identified that the site and study area have been developed for at least 100 years. Neighbouring properties were identified to the south, east and west as well as commercial to the north.

Based on the depth of excavation (0.5 mbgl) the following PCA (and therefor APEC) was identified during the historical review of the site.

APEC 1 (PCA #30 - Importation of Fill Material of Unknown Quality).

Based on such, Fortis implemented a sampling approach where parameters were analyzed to randomly screen surficial excess soils which are to be generated by including the following general parameters: VOCs, BTEX, PHCs, PAHs, Metals, Inorganics, PCBs. This was done to ensure that all materials were sufficient for beneficial reuse off-site.

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## 2 Scope of Work

Fortis staff conducted the SCR-ESA field investigations in July of 2024. In order to obtain in-situ representative samples as per the guidelines under O.Reg 406/19.

The Investigation consisted of the following:

- Inspection of the Subject Property.
- Obtaining five (5) soil samples, via borehole drilling, in order to provide the overall chemical quality of the on-site excess soils (located in-situ) in the location of the materials in question.
- Preparation of an engineering report summarizing the findings of the investigation.

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## 3 Site Investigation

#### 3.1 General

Fortis Conducted the Subsurface investigation on July 24, 2024. The weather was sunny, and the average ambient temperature was recorded to be 35 degrees Celsius. Fortis personnel were on-site between the hours of 8:00 am -10:00 am.

## 3.2 Impediments

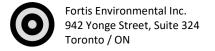
No significant impediments were encountered during field investigations on the Subject Property, and full access to the Subject Property was permitted by the Client to allow for proper site investigation.

#### 3.3 Methodology – Soil Sampling

On July 24, 2024; five (5) soil samples were machine excavated from boreholes within the area to be excavated (Project Area). The sampling program is outlined in the table below:

Soil Sample ID	Retrieval Method	Analyses	Depth	Material Description	Vapour Reading LNAPL/DNAPL
FBH101- SS1	Machine Excavation - Borehole	VOCs BTEX PHCs PAHs Metals Inorganics PCBs	0.0 – 0.75 mbgl	Brown, Grey Silty Clay (native directly below the surficial granular materials underlying the asphalt surface).	0 ppm / 0.0
FBH102- SS1	Machine Excavation - Borehole	VOCs BTEX PHCs PAHs Metals Inorganics PCBs	0.0 – 0.75 mbgl	Brown, Grey Silty Clay (native directly below the surficial granular materials underlying the asphalt surface).	0 ppm / 0.0
FBH103- SS1	Machine Excavation - Borehole	VOCs BTEX PHCs PAHs Metals Inorganics PCBs	0.0 – 0.75 mbgl	Brown, Grey Silty Clay (native directly below the surficial granular materials underlying the asphalt surface).	0 ppm / 0.0
FBH104- SS1	Machine Excavation - Borehole	VOCs BTEX PHCs PAHs Metals Inorganics PCBs	0.0 – 0.75 mbgl	Brown, Grey Silty Clay (native directly below the surficial granular materials underlying the asphalt surface).	0 ppm / 0.0
FBH105- SS1	Machine Excavation - Borehole	VOCs BTEX PHCs PAHs Metals Inorganics PCBs	0.0 – 0.75 mbgl	Brown, Grey Silty Clay (native directly below the surficial granular materials underlying the asphalt surface).	0 ppm / 0.0

Please refer to Figure 1 for an outline of the Soil Sampling Location on-site.



## 4 Results of the Investigation

## 4.1 Vapour Investigation

Regulations 153/04 (as amended) do not require soil or headspace vapour concentrations as part of the PHC or solvent-derived soil analysis, the Regulations require the Headspace Vapour as field screening tool to identify the PHC or VOC impacted soils or headspace vapours. Elevated soil vapour concentrations, typically in the LEL range, are generally indicative of the presence of volatile combustible products i.e. gasoline, methane, solvents, and to a lesser extent diesel and fuel oil. It should be noted that elevated vapour concentrations may also be associated with the presence of moisture, microbial activity, or decaying organic matter, especially in the absence of visual or olfactory evidence of impact.

Headspace vapour concentrations (HSVCs) measured in the soil samples obtained during the investigation did not exceed 0 parts per million (ppm) in hexane and 0.0 ppm in Isobutylene.

## 4.2 Soil Chemical Analyses

A review of the soil chemical analyses; indicates that the measured concentrations in the submitted soil samples met the following MECP Regulatory Standards:

Sample ID	Regulatory Standard		
	Table 2.1: Agri	Table 2.1: RPI	Table 2.1: ICC
FBH101-SS1	Meets	Meets	Meets
FBH102-SS1	Meets	Meets	Meets
FBH103-SS1	Meets	Meets	Meets
FBH104-SS1	Meets	Meets	Meets
FBH105-SS1	Meets	Meets	Meets

Based on a review of the total sample results, the bulk quantity of material was found to meet the following criteria:

Table 2.1: Full Depth Excess Soil Quality Standards in a Potable Ground Water Condition for Agricultural Property Use.

It should be noted that surficial materials contain concentrations which exceed the Table 2.1 applicable ESQS for EC & SAR, however due to the exemptions listed in Section 49.1 of O.Reg 153/04; these elevated concentrations do not impact the overall quality of the tested materials as this is due to the periodic de-icing of the roadway for pedestrian safety purposes. The materials are therefore suitable for beneficial re-use if managed in accordance with the Soil Rules.

Certificates of Analyses are presented in Appendix A.

#### 5 Conclusions & Recommendations

Fortis Environmental Inc. was retained by Melrose Paving Co. Ltd. to conduct a Soil Characterization Report – Environmental Site Assessment for the property located at 210 Mohawk Road E in Hamilton, Ontario.

At the time of the investigation, the site was developed as a commercial property which operates as a pharmaceutical retail store ("Shoppers Drug Mart") which is undergoing an asphalt rehabilitation project. Part of the upgrades include stripping and removal of the current asphalt surface and sub-grade granular materials, followed by the excavation of 0.5 m of excess soils for the replacement of compacted granular prior to the construction of a new paved asphalt surface.

Total Surface Area: 3,850 m<sup>2</sup> Max Depth: 0.50 mbgl

Total Excavation Box: 1,925 m<sup>3</sup> (200 loads)

A review of the bulk soil chemical analyses of all samples; indicates that the measured concentrations in the submitted soil samples met the following MECP Regulatory Standards:

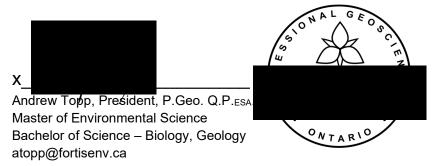
Table 2.1: Full Depth Excess Soil Quality Standards in a Potable Ground Water Condition for Agricultural Property Use.

It should be noted that surficial materials contain concentrations which exceed the Table 2.1 applicable ESQS for EC & SAR, however due to the exemptions listed in Section 49.1 of O.Reg 153/04; these elevated concentrations do not impact the overall quality of the tested materials as this is due to the periodic de-icing of the roadway for pedestrian safety purposes. The materials are therefore suitable for beneficial re-use if managed in accordance with the Soil Rules.

Based on the results of the investigation, the material is therefore suitable for beneficial re-use at an appropriate facility that meets the MECP Table 2.1 ESQS (Agri.) Criteria with EC/SAR exceptions.

#### **Respectfully Submitted**

Fortis Environmental Inc.



#### 6 Limitations

- 1. This assessment was conducted in accordance with generally accepted engineering standards. It is possible that materials other than those described in this report are present at the site. The client acknowledges that no assessment can necessarily identify the existence of all contaminants, potential contaminants or environmental conditions;
- 2. This report was prepared for the sole and exclusive use of Melrose Paving Co. Ltd. (the Client). Fortis Environmental Inc. accepts no responsibility or liability for any loss, damage, expense, fine or any other claim of any nature or type, including any liability or potential liability arising from its own negligence, for any use of this report or reliance on it, in whole or in part, by anyone other than The Client:
- There is no representation, warranty, or condition, express or implied, by Fortis Environmental Inc. or its officers, directors, employees or agents that this assessment has identified all contaminants, potential contaminants or environmental conditions at the site or that the site is free from contamination, potential contaminants or environmental conditions other than those noted in this report;
- 4. This assessment has been completed from information and documentation described in this report as well as the results of limited chemical analysis of soil samples collected from accessible locations on the date(s) specified. We have assumed that any such information and documentation is accurate and complete. We can accept no responsibility or liability for any errors, deficiencies or inaccuracies in this report arising from errors or omissions in the information and documentation provided by others;
- 5. This assessment was based on information and the results of investigation(s) obtained on the date(s) specified. Fortis Environmental Inc. accepts no responsibility or liability for any changes or potential changes in the condition of the site subsequent to the date of our investigation(s);
- The conditions between sampling locations have been inferred, to the best of our ability, based on the
  conditions observed at sampling locations. Conditions between and beyond sampling locations may
  vary. This assessment pertains, only, to the site specifically described in this report and not to any
  adjacent or other property;
- 7. This assessment does not include, nor is it intended to include, any opinion regarding the suitability of any structure on the site for any particular function, the integrity of the on-site buildings or the geotechnical conditions on the site, with the exception of how they may identify with environmental concerns. Inspections of buildings do not include compliance with building, gas, electrical or boiler codes, or any other federal, provincial or municipal codes not associated with environmental concerns. Should concerns regarding any parameters other than environmental concerns arise as a result of our investigation(s), they should be addressed by appropriately qualified professionals; and,
- 8. This report is not to be reproduced or released to any other party, in whole or in part, without the express written consent of Fortis Environmental Inc.

#### 7 Qualifications of the Assessor

Andrew Topp, H.B.Sc., M.Env.Sc, P.Geo, Q.Pesa President and Principal Geoscientist

#### Professional Geoscientist Membership #3185

Practicing Member as of January 2020

#### **EDUCATION**

Bachelor of Science - Geology University of Toronto Scarborough, ON, Canada

Masters Degree in Environmental Science, University of Toronto Scarborough, ON,

Bachelor of Science - Biology, Western University, London, ON, Canada

#### PROJECT EXPERIENCE

#### Record of Site condition

Have conducted planning, pricing, field work, reporting and correspondence with the MECP for 30+ RSC projects.

#### **UST/AST Removal**

Have completed 150+ UST/AST removal projects for gas stations, residential and commercial sites including correspondence with the applicable regulatory bodies (TSSA, MECP).

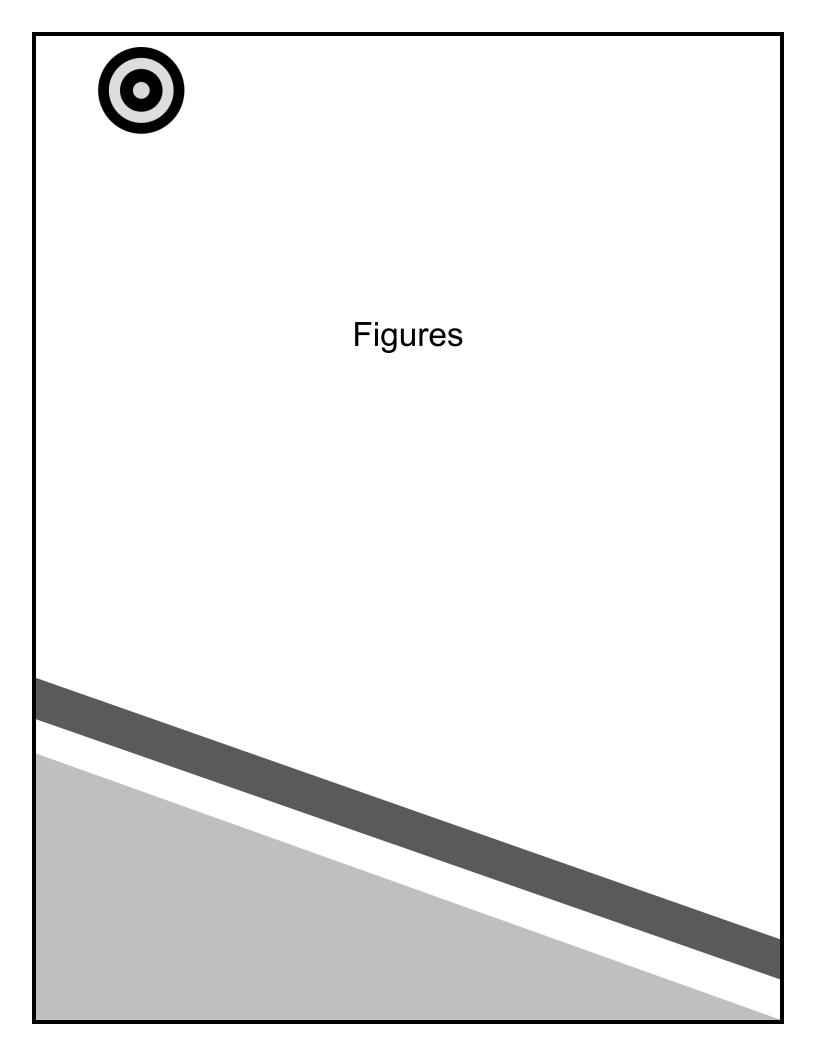
#### Phase I ESA

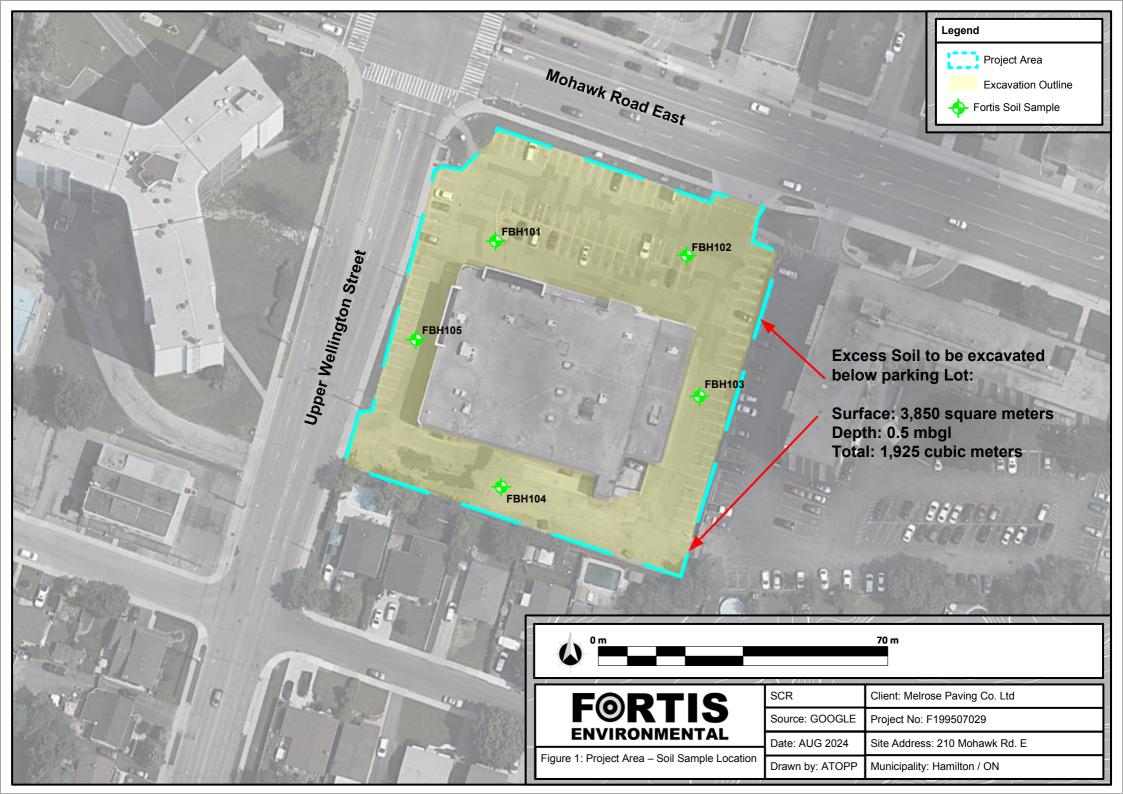
Have conducted over 350+ Phase I ESAs over the entirety of southern and northern Ontario in commercial, industrial and residential properties for the purposes of financing, real-estate due-diligence and Record of Site Condition.

#### Phase II ESA

Have conducted over 250+ Phase II ESAs over almost the entirety of southern and northern Ontario on various commercial, industrial and residential properties for the purposes of financing, real-estate due diligence and Record of Site Condition.

References may be made available upon request.







# Appendix A Laboratory Certificates of Analyses



CLIENT NAME: LAFARGE CANADA INC 6509 Airport Road Mississauga, ON L4V 1S7

416-526-8772 ATTENTION TO: Jerome Ng

PROJECT: F199507029

**AGAT WORK ORDER: 24T178760** 

SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganic Team Lead

TRACE ORGANICS REVIEWED BY: Radhika Chakraberty, Trace Organics Lab Manager

DATE REPORTED: Aug 02, 2024

PAGES (INCLUDING COVER): 18 VERSION\*: 1

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

*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.

AGAT Laboratories (V1)

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Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Western Enviro-Agricultural Laboratory Association (WEALA) Environmental Services Association of Alberta (ESAA) 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. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.



**SAMPLING SITE: MOHAWK** 

# **Certificate of Analysis**

**AGAT WORK ORDER: 24T178760** 

PROJECT: F199507029

**ATTENTION TO: Jerome Ng** 

**SAMPLED BY:AT** 

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

## O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2024-07-26								[	DATE REPORTI	ED: 2024-08-02	
				SA	ESCRIPTION: AMPLE TYPE: E SAMPLED:	FBH101-SS1 Soil 2024-07-24 10:00	FBH102-SS1 Soil 2024-07-24 10:30	FBH103-SS1 Soil 2024-07-24 11:00	FBH104-SS1 Soil 2024-07-24 11:30	FBH105-SS1 Soil 2024-07-24 12:00	
Parameter	Unit	G / S: A	G / S: B	G / S: C	RDL	6033343	6033356	6033357	6033358	6033359	
Antimony	μg/g	7.5	40	7.5	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	
Arsenic	μg/g	11	18	18	1	5[ <a]< td=""><td>6[<a]< td=""><td>5[<a]< td=""><td>5[<a]< td=""><td>5[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<></td></a]<>	6[ <a]< td=""><td>5[<a]< td=""><td>5[<a]< td=""><td>5[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<>	5[ <a]< td=""><td>5[<a]< td=""><td>5[<a]< td=""><td></td></a]<></td></a]<></td></a]<>	5[ <a]< td=""><td>5[<a]< td=""><td></td></a]<></td></a]<>	5[ <a]< td=""><td></td></a]<>	
Barium	μg/g	390	670	390	2.0	109[ <a]< td=""><td>117[<a]< td=""><td>108[<a]< td=""><td>108[<a]< td=""><td>115[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<></td></a]<>	117[ <a]< td=""><td>108[<a]< td=""><td>108[<a]< td=""><td>115[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<>	108[ <a]< td=""><td>108[<a]< td=""><td>115[<a]< td=""><td></td></a]<></td></a]<></td></a]<>	108[ <a]< td=""><td>115[<a]< td=""><td></td></a]<></td></a]<>	115[ <a]< td=""><td></td></a]<>	
Beryllium	μg/g	4	8	4	0.5	1.0[ <a]< td=""><td>1.0[<a]< td=""><td>0.9[<a]< td=""><td>0.9[<a]< td=""><td>0.9[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<></td></a]<>	1.0[ <a]< td=""><td>0.9[<a]< td=""><td>0.9[<a]< td=""><td>0.9[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<>	0.9[ <a]< td=""><td>0.9[<a]< td=""><td>0.9[<a]< td=""><td></td></a]<></td></a]<></td></a]<>	0.9[ <a]< td=""><td>0.9[<a]< td=""><td></td></a]<></td></a]<>	0.9[ <a]< td=""><td></td></a]<>	
Boron	μg/g	120	120	120	5	14[ <a]< td=""><td>14[<a]< td=""><td>14[<a]< td=""><td>14[<a]< td=""><td>10[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<></td></a]<>	14[ <a]< td=""><td>14[<a]< td=""><td>14[<a]< td=""><td>10[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<>	14[ <a]< td=""><td>14[<a]< td=""><td>10[<a]< td=""><td></td></a]<></td></a]<></td></a]<>	14[ <a]< td=""><td>10[<a]< td=""><td></td></a]<></td></a]<>	10[ <a]< td=""><td></td></a]<>	
Boron (Hot Water Soluble)	μg/g	1.5	2	1.5	0.10	0.28[ <a]< td=""><td>0.28[<a]< td=""><td>0.18[<a]< td=""><td>0.26[<a]< td=""><td>0.26[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<></td></a]<>	0.28[ <a]< td=""><td>0.18[<a]< td=""><td>0.26[<a]< td=""><td>0.26[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<>	0.18[ <a]< td=""><td>0.26[<a]< td=""><td>0.26[<a]< td=""><td></td></a]<></td></a]<></td></a]<>	0.26[ <a]< td=""><td>0.26[<a]< td=""><td></td></a]<></td></a]<>	0.26[ <a]< td=""><td></td></a]<>	
Cadmium	μg/g	1	1.9	1.2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chromium	μg/g	160	160	160	5	28[ <a]< td=""><td>29[<a]< td=""><td>27[<a]< td=""><td>26[<a]< td=""><td>27[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<></td></a]<>	29[ <a]< td=""><td>27[<a]< td=""><td>26[<a]< td=""><td>27[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<>	27[ <a]< td=""><td>26[<a]< td=""><td>27[<a]< td=""><td></td></a]<></td></a]<></td></a]<>	26[ <a]< td=""><td>27[<a]< td=""><td></td></a]<></td></a]<>	27[ <a]< td=""><td></td></a]<>	
Cobalt	μg/g	22	80	22	0.8	13.1[ <a]< td=""><td>13.8[<a]< td=""><td>12.7[<a]< td=""><td>13.4[<a]< td=""><td>12.7[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<></td></a]<>	13.8[ <a]< td=""><td>12.7[<a]< td=""><td>13.4[<a]< td=""><td>12.7[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<>	12.7[ <a]< td=""><td>13.4[<a]< td=""><td>12.7[<a]< td=""><td></td></a]<></td></a]<></td></a]<>	13.4[ <a]< td=""><td>12.7[<a]< td=""><td></td></a]<></td></a]<>	12.7[ <a]< td=""><td></td></a]<>	
Copper	μg/g	140	230	140	1.0	24.5[ <a]< td=""><td>26.4[<a]< td=""><td>25.5[<a]< td=""><td>25.4[<a]< td=""><td>24.8[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<></td></a]<>	26.4[ <a]< td=""><td>25.5[<a]< td=""><td>25.4[<a]< td=""><td>24.8[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<>	25.5[ <a]< td=""><td>25.4[<a]< td=""><td>24.8[<a]< td=""><td></td></a]<></td></a]<></td></a]<>	25.4[ <a]< td=""><td>24.8[<a]< td=""><td></td></a]<></td></a]<>	24.8[ <a]< td=""><td></td></a]<>	
Lead	μg/g	45	120	120	1	15[ <a]< td=""><td>17[<a]< td=""><td>12[<a]< td=""><td>12[<a]< td=""><td>15[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<></td></a]<>	17[ <a]< td=""><td>12[<a]< td=""><td>12[<a]< td=""><td>15[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<>	12[ <a]< td=""><td>12[<a]< td=""><td>15[<a]< td=""><td></td></a]<></td></a]<></td></a]<>	12[ <a]< td=""><td>15[<a]< td=""><td></td></a]<></td></a]<>	15[ <a]< td=""><td></td></a]<>	
Molybdenum	μg/g	6.9	40	6.9	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Nickel	μg/g	100	270	100	1	25[ <a]< td=""><td>26[<a]< td=""><td>25[<a]< td=""><td>26[<a]< td=""><td>25[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<></td></a]<>	26[ <a]< td=""><td>25[<a]< td=""><td>26[<a]< td=""><td>25[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<>	25[ <a]< td=""><td>26[<a]< td=""><td>25[<a]< td=""><td></td></a]<></td></a]<></td></a]<>	26[ <a]< td=""><td>25[<a]< td=""><td></td></a]<></td></a]<>	25[ <a]< td=""><td></td></a]<>	
Selenium	μg/g	2.4	5.5	2.4	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	
Silver	μg/g	20	40	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Thallium	μg/g	1	3.3	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Uranium	μg/g	23	33	23	0.50	0.82[ <a]< td=""><td>0.87[<a]< td=""><td>0.74[<a]< td=""><td>0.72[<a]< td=""><td>0.81[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<></td></a]<>	0.87[ <a]< td=""><td>0.74[<a]< td=""><td>0.72[<a]< td=""><td>0.81[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<>	0.74[ <a]< td=""><td>0.72[<a]< td=""><td>0.81[<a]< td=""><td></td></a]<></td></a]<></td></a]<>	0.72[ <a]< td=""><td>0.81[<a]< td=""><td></td></a]<></td></a]<>	0.81[ <a]< td=""><td></td></a]<>	
Vanadium	μg/g	86	86	86	2.0	37.3[ <a]< td=""><td>37.8[<a]< td=""><td>35.3[<a]< td=""><td>33.5[<a]< td=""><td>33.7[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<></td></a]<>	37.8[ <a]< td=""><td>35.3[<a]< td=""><td>33.5[<a]< td=""><td>33.7[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<>	35.3[ <a]< td=""><td>33.5[<a]< td=""><td>33.7[<a]< td=""><td></td></a]<></td></a]<></td></a]<>	33.5[ <a]< td=""><td>33.7[<a]< td=""><td></td></a]<></td></a]<>	33.7[ <a]< td=""><td></td></a]<>	
Zinc	μg/g	340	340	340	5	69[ <a]< td=""><td>118[<a]< td=""><td>58[<a]< td=""><td>58[<a]< td=""><td>62[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<></td></a]<>	118[ <a]< td=""><td>58[<a]< td=""><td>58[<a]< td=""><td>62[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<>	58[ <a]< td=""><td>58[<a]< td=""><td>62[<a]< td=""><td></td></a]<></td></a]<></td></a]<>	58[ <a]< td=""><td>62[<a]< td=""><td></td></a]<></td></a]<>	62[ <a]< td=""><td></td></a]<>	
Chromium, Hexavalent	μg/g	8	8	8	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
Cyanide, WAD	μg/g	0.051	0.051	0.051	0.040	<0.040	<0.040	<0.040	<0.040	<0.040	
Mercury	μg/g	0.24	0.27	0.27	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Electrical Conductivity (2:1)	mS/cm	0.7	1.4	0.7	0.005	3.20[>B]	2.96[>B]	1.23[C-B]	1.38[C-B]	3.13[>B]	
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	12	5	N/A	0.910[ <a]< td=""><td>0.996[<a]< td=""><td>4.60[<a]< td=""><td>5.33[C-B]</td><td>1.27[<a]< td=""><td></td></a]<></td></a]<></td></a]<></td></a]<>	0.996[ <a]< td=""><td>4.60[<a]< td=""><td>5.33[C-B]</td><td>1.27[<a]< td=""><td></td></a]<></td></a]<></td></a]<>	4.60[ <a]< td=""><td>5.33[C-B]</td><td>1.27[<a]< td=""><td></td></a]<></td></a]<>	5.33[C-B]	1.27[ <a]< td=""><td></td></a]<>	
pH, 2:1 CaCl2 Extraction	pH Units				NA	6.81	6.80	6.36	6.53	6.57	





## **Certificate of Analysis**

**AGAT WORK ORDER: 24T178760** 

PROJECT: F199507029

**SAMPLED BY:AT** 

**ATTENTION TO: Jerome Ng** 

O. Reg. 153(511) - Metals & Inorganics (Soil)

**DATE REPORTED: 2024-08-02 DATE RECEIVED: 2024-07-26** 

Comments:

RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to O. Reg. 406/19 TABLE 2.1: Full Depth Potable Ground Water Condition Volume Independent - Ag, B Refers to O. Reg. 406/19 TABLE 2.1: Full Depth Potable Ground Water Condition Volume Independent - Com/Ind, C Refers to O. Reg. 406/19 TABLE 2.1: Full Depth Potable Ground Water Condition Volume Independent - RP 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.

6033343-6033359 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil), pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated

**CLIENT NAME: LAFARGE CANADA INC** 

SAMPLING SITE: MOHAWK

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:

**5835 COOPERS AVENUE** 

MISSISSAUGA, ONTARIO CANADA L4Z 1Y2

http://www.agatlabs.com

TEL (905)712-5100 FAX (905)712-5122



**SAMPLING SITE: MOHAWK** 

## **Certificate of Analysis**

**AGAT WORK ORDER: 24T178760** 

PROJECT: F199507029

**ATTENTION TO: Jerome Ng** 

**SAMPLED BY:AT** 

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

O. Reg. 153(511) - PAHs (Soil)

DATE SAMPLED:         2024-07-24 10:00 10: 10: 10: 10: 10: 10: 10: 10: 1	oil Soil -07-24 2024-07-24 :30 11:00 3356 6033357 .05 <0.05 .05 <0.05	DATE REPORTE  FBH104-SS1  Soil  2024-07-24  11:30  6033358  <0.05	FBH105-SS1 Soil 2024-07-24 12:00 6033359
SAMPLE TYPE: Soil Schape         Soil DATE SAMPLED: 2024-07-24 10:00	oil Soil -07-24 2024-07-24 :30 11:00 3356 6033357 .05 <0.05 .05 <0.05	Soil 2024-07-24 11:30 6033358	Soil 2024-07-24 12:00 6033359
Parameter         Unit         G / S: A         G / S: B         G / S: C         RDL         6033343         6033           Naphthalene         μg/g         0.2         0.2         0.2         0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05         <0.05	-07-24 2024-07-24 :30 11:00 3356 6033357 .05 <0.05	2024-07-24 11:30 6033358	2024-07-24 12:00 6033359
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	11:00 3356 6033357 0.05 <0.05 0.05 <0.05	11:30 6033358	12:00 6033359
Naphthalene         μg/g         0.2         0.2         0.2         0.05         <0.05         <0.           Acenaphthylene         μg/g         0.093         0.093         0.093         0.05         <0.05	0.05 <0.05 0.05 <0.05		
Acenaphthylene $\mu g/g$ 0.093 0.093 0.093 0.05 <0.05 <0. Acenaphthene $\mu g/g$ 2.5 2.5 2.5 0.05 <0.05 <0.	0.05 <0.05	<0.05	
Acenaphthene μg/g 2.5 2.5 2.5 0.05 <0.05 <0.05			<0.05
, , , , , , , , , , , , , , , , , , , ,	AAA 40 AA	<0.05	<0.05
Eluorano uala 60 60 60 0.05 -0.05 -0.05	0.05 <0.05	<0.05	<0.05
Fluorene μg/g 6.8 6.8 0.05 <0.05 <0.	0.05 < 0.05	<0.05	<0.05
Phenanthrene $\mu g/g$ 6.2 12 6.2 0.05 <0.05 <0.05	.05 <0.05	<0.05	<0.05
Anthracene μg/g 0.058 0.16 0.16 0.05 <0.05 <0.	0.05 < 0.05	<0.05	<0.05
Fluoranthene $\mu g/g$ 0.69 2.8 0.69 0.05 <0.05 <0.05	.05 <0.05	<0.05	<0.05
Pyrene μg/g 28 28 28 0.05 <0.05 <0.	0.05 < 0.05	<0.05	<0.05
Benzo(a)anthracene μg/g 0.5 0.92 0.5 0.05 <0.05 <0.05	.05 <0.05	<0.05	<0.05
Chrysene $\mu g/g$ 7 9.4 7 0.05 <0.05 <0.	0.05 < 0.05	<0.05	<0.05
Benzo(b)fluoranthene $\mu g/g$ 3.2 3.2 3.2 0.05 <0.05 <0.05	.05 <0.05	<0.05	<0.05
Benzo(k)fluoranthene μg/g 3.1 3.1 3.1 0.05 <0.05 <0.	0.05 < 0.05	<0.05	<0.05
Benzo(a)pyrene μg/g 0.31 0.31 0.31 0.05 <0.05 <0.05	.05 <0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene $\mu g/g$ 0.38 0.76 0.38 0.05 <0.05 <0.05	0.05 < 0.05	<0.05	<0.05
Dibenz(a,h)anthracene $\mu g/g$ 0.57 0.7 0.57 0.05 <0.05 <0.05	0.05 < 0.05	<0.05	<0.05
Benzo(g,h,i)perylene μg/g 6.6 13 6.6 0.05 <0.05 <0.05	0.05 < 0.05	<0.05	<0.05
2-and 1-methyl Naphthalene μg/g 0.096 0.59 0.59 0.05 <0.05 <0.	0.05 <0.05	<0.05	<0.05
	5.9 15.7	15.9	16.0
Surrogate Unit Acceptable Limits			
Naphthalene-d8 % 50-140 65 79	75 65	81	96
Acridine-d9 % 50-140 90 70	70 130	74	81
Terphenyl-d14 % 50-140 105 11	15 110	77	88

Comments:

RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to O. Reg. 406/19 TABLE 2.1: Full Depth Potable Ground Water Condition Volume Independent - Ag, B Refers to O. Reg. 406/19 TABLE 2.1: Full Depth Potable Ground Water Condition Volume Independent - RP 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.

6033343-6033359 Results are based on the dry weight of the soil.

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.

2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by \*)



**Certificate of Analysis** 

**AGAT WORK ORDER: 24T178760** 

PROJECT: F199507029

ATTENTION TO: Jerome Ng

**SAMPLED BY:AT** 

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

**CLIENT NAME: LAFARGE CANADA INC** 

**SAMPLING SITE: MOHAWK** 

O. Reg. 153(511) - PCBs (Soil)

			O. Reg	j. 133(311 <i>)</i> ·	- FCD3 (30	·· <i>i</i>						
DATE RECEIVED: 2024-07-26							[	DATE REPORTI	ED: 2024-08-02	2024-08-02		
			SAMPLE	DESCRIPTION:	FBH101-SS1	FBH102-SS1	FBH103-SS1	FBH104-SS1	FBH105-SS1			
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil			
			D	ATE SAMPLED:	2024-07-24 10:00	2024-07-24 10:30	2024-07-24 11:00	2024-07-24 11:30	2024-07-24 12:00			
Unit	G / S: A	G / S: B	G / S: C	RDL	6033343	6033356	6033357	6033358	6033359			
μg/g	0.35	0.78	0.35	0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
%				0.1	17.0	15.9	15.7	15.9	16.0			
Unit		Acceptal	ole Limits									
%		50-	140		76	76	76	80	100			
	μg/g % Unit	μg/g 0.35 % Unit	μg/g 0.35 0.78 % Unit Acceptal	SAMPLE  D.  Unit G / S: A G / S: B G / S: C  μg/g 0.35 0.78 0.35  %  Unit Acceptable Limits	SAMPLE DESCRIPTION:	SAMPLE DESCRIPTION: FBH101-SS1 SAMPLE TYPE: Soil DATE SAMPLED: 2024-07-24 10:00 Unit G / S: A G / S: B G / S: C RDL 6033343 μg/g 0.35 0.78 0.35 0.1 <0.1 % 0.1 17.0 Unit Acceptable Limits	SAMPLE TYPE: Soil Soil  DATE SAMPLED: 2024-07-24 2024-07-24 10:00 10:30  Unit G / S: A G / S: B G / S: C RDL 6033343 6033356  μg/g 0.35 0.78 0.35 0.1 <0.1 <0.1  % 0.1 17.0 15.9  Unit Acceptable Limits	SAMPLE DESCRIPTION: FBH101-SS1 FBH102-SS1 FBH103-SS1 SAMPLE TYPE: Soil Soil Soil Soil  DATE SAMPLED: 2024-07-24 2024-07-24 2024-07-24 10:00 10:30 11:00  Unit G/S: A G/S: B G/S: C RDL 6033343 6033356 6033357  μg/g 0.35 0.78 0.35 0.1 <0.1 <0.1 <0.1  % 0.1 17.0 15.9 15.7  Unit Acceptable Limits	DATE REPORTION: FBH101-SS1 FBH102-SS1 FBH103-SS1 FBH104-SS1 SAMPLE TYPE: Soil Soil Soil Soil Soil Soil Soil Soil	DATE REPORTED: 2024-08-02  SAMPLE DESCRIPTION: FBH101-SS1 FBH102-SS1 FBH103-SS1 FBH104-SS1 FBH105-SS1 SAMPLE TYPE: Soil Soil Soil Soil Soil Soil Soil Soil		

Comments:

RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to O. Reg. 406/19 TABLE 2.1: Full Depth Potable Ground Water Condition Volume Independent - Ag, B Refers to O. Reg. 406/19 TABLE 2.1: Full Depth Potable Ground Water Condition Volume Independent - RP 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.

6033343-6033359 Results are based on the dry weight of soil extracted.

PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.

The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)



SAMPLING SITE: MOHAWK

## **Certificate of Analysis**

**AGAT WORK ORDER: 24T178760** 

PROJECT: F199507029

**ATTENTION TO: Jerome Ng** 

SAMPLED BY:AT

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

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

DATE DECENTED 0004 07 00						_	ATE DEDODE	ED 0004 00 00			
DATE RECEIVED: 2024-07-26								L	DATE REPORTI	ED: 2024-08-02	
				SAMPLE D	ESCRIPTION:	FBH101-SS1	FBH102-SS1	FBH103-SS1	FBH104-SS1	FBH105-SS1	
				S	AMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	
				DA	TE SAMPLED:	2024-07-24 10:00	2024-07-24 10:30	2024-07-24 11:00	2024-07-24 11:30	2024-07-24 12:00	
Parameter	Unit	G / S: A	G / S: B	G / S: C	RDL	6033343	6033356	6033357	6033358	6033359	
F1 (C6 to C10)	μg/g				5	<5	<5	<5	<5	<5	
F1 (C6 to C10) minus BTEX	μg/g	17	25	25	5	<5	<5	<5	<5	<5	
F2 (C10 to C16)	μg/g	10	26	10	10	<10	<10	<10	<10	<10	
F2 (C10 to C16) minus Naphthalene	μg/g				10	<10	<10	<10	<10	<10	
F3 (C16 to C34)	μg/g	240	240	240	50	<50	<50	<50	<50	<50	
F3 (C16 to C34) minus PAHs	μg/g	240	240	240	50	<50	<50	<50	<50	<50	
F4 (C34 to C50)	μg/g	2800	3300	2800	50	<50	<50	<50	<50	<50	
Gravimetric Heavy Hydrocarbons	μg/g				50	NA	NA	NA	NA	NA	
Moisture Content	%				0.1	17.0	15.9	15.7	15.9	16.0	
Surrogate	Unit		Acceptal	ole Limits							
Toluene-d8	%		50-	140		94	99	90	96	90	
Terphenyl	%		60-	140		79	69	70	82	78	

Comments:

RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to O. Reg. 406/19 TABLE 2.1: Full Depth Potable Ground Water Condition Volume Independent - Ag, B Refers to O. Reg. 406/19 TABLE 2.1: Full Depth Potable Ground Water Condition Volume Independent - RP 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.

#### 6033343-6033359 Results are based on sample dry weight.

The C6-C10 fraction is calculated using toluene response factor.

C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited

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. The chromatogram has returned to baseline by the retention time of nC50.

Total C6 - C50 results are corrected for BTEX and PAH contributions.

C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.

C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

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.

Analysis performed at AGAT Toronto (unless marked by \*)



**SAMPLING SITE: MOHAWK** 

# **Certificate of Analysis**

AGAT WORK ORDER: 24T178760

PROJECT: F199507029

**ATTENTION TO: Jerome Ng** 

**SAMPLED BY:AT** 

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

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-07-26								ı	DATE REPORTI	ED: 2024-08-02	
				SAMPLE D	ESCRIPTION:	FBH101-SS1	FBH102-SS1	FBH103-SS1	FBH104-SS1	FBH105-SS1	
				S	AMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	
				DA <sup>*</sup>	TE SAMPLED:	2024-07-24 10:00	2024-07-24 10:30	2024-07-24 11:00	2024-07-24 11:30	2024-07-24 12:00	
Parameter	Unit	G / S: A	G / S: B	G / S: C	RDL	6033343	6033356	6033357	6033358	6033359	
Dichlorodifluoromethane	μg/g	1.5	1.5	1.5	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Vinyl Chloride	ug/g	0.02	0.02	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
Bromomethane	ug/g	0.05	0.05	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Trichlorofluoromethane	ug/g	0.17	0.25	0.25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Acetone	ug/g	0.5	0.5	0.5	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
1,1-Dichloroethylene	ug/g	0.05	0.05	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Methylene Chloride	ug/g	0.05	0.05	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Trans- 1,2-Dichloroethylene	ug/g	0.05	0.05	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Methyl tert-butyl Ether	ug/g	0.05	0.05	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
1,1-Dichloroethane	ug/g	0.05	0.05	0.05	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
Methyl Ethyl Ketone	ug/g	0.5	0.5	0.5	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Cis- 1,2-Dichloroethylene	ug/g	0.05	0.05	0.05	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
Chloroform	ug/g	0.05	0.05	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
1,2-Dichloroethane	ug/g	0.05	0.05	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	
1,1,1-Trichloroethane	ug/g	0.11	0.12	0.11	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Carbon Tetrachloride	ug/g	0.05	0.05	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Benzene	ug/g	0.02	0.02	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
1,2-Dichloropropane	ug/g	0.05	0.05	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	
Trichloroethylene	ug/g	0.05	0.05	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	
Bromodichloromethane	ug/g	0.05	0.05	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Methyl Isobutyl Ketone	ug/g	0.5	0.5	0.5	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
1,1,2-Trichloroethane	ug/g	0.05	0.05	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
Toluene	ug/g	0.2	0.2	0.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Dibromochloromethane	ug/g	0.05	0.05	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Ethylene Dibromide	ug/g	0.05	0.05	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
Tetrachloroethylene	ug/g	0.05	0.05	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.05	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
Chlorobenzene	ug/g	0.083	0.083	0.083	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Ethylbenzene	ug/g	0.05	0.05	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	





SAMPLING SITE: MOHAWK

## **Certificate of Analysis**

**AGAT WORK ORDER: 24T178760** 

PROJECT: F199507029

**ATTENTION TO: Jerome Ng** 

SAMPLED BY:AT

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

#### O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-07-26				109. 100(0	,	5 (WILLI FIIC	-, (,				
DATE RECEIVED: 2024-07-26								I	DATE REPORTE	ED: 2024-08-02	
				SAMPLE D	ESCRIPTION:	FBH101-SS1	FBH102-SS1	FBH103-SS1	FBH104-SS1	FBH105-SS1	
				S	AMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	
				DA	TE SAMPLED:	2024-07-24 10:00	2024-07-24 10:30	2024-07-24 11:00	2024-07-24 11:30	2024-07-24 12:00	
Parameter	Unit	G / S: A	G / S: B	G / S: C	RDL	6033343	6033356	6033357	6033358	6033359	
m & p-Xylene	ug/g				0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Bromoform	ug/g	0.05	0.05	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Styrene	ug/g	0.05	0.05	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
o-Xylene	ug/g				0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
1,3-Dichlorobenzene	ug/g	0.26	0.26	0.26	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
1,4-Dichlorobenzene	ug/g	0.05	0.05	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
1,2-Dichlorobenzene	ug/g	3.4	6.8	3.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Xylenes (Total)	ug/g	0.091	0.091	0.091	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
1,3-Dichloropropene (Cis + Trans)	μg/g	0.05	0.05	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
n-Hexane	μg/g	2.5	2.5	2.5	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Moisture Content	%				0.1	17.0	15.9	15.7	15.9	16.0	
Surrogate	Unit		Acceptal	ole Limits							
Toluene-d8	% Recovery		50-	140	•	94	99	90	96	90	•
4-Bromofluorobenzene	% Recovery		50-	140		86	87	87	86	85	

Comments:

RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to O. Reg. 406/19 TABLE 2.1: Full Depth Potable Ground Water Condition Volume Independent - Ag, B Refers to O. Reg. 406/19 TABLE 2.1: Full Depth Potable Ground Water Condition Volume Independent - Com/Ind, C Refers to O. Reg. 406/19 TABLE 2.1: Full Depth Potable Ground Water Condition Volume Independent - RP 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.

6033343-6033359 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.

Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.

1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.

The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)



## **Exceedance Summary**

**AGAT WORK ORDER: 24T178760** 

PROJECT: F199507029

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

CLIENT NAME: LAFARGE CANADA INC ATTENTION TO: Jerome Ng

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
6033343	FBH101-SS1	ON 406/19 T2.1 AG	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	3.20
6033343	FBH101-SS1	ON 406/19 T2.1 IC	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	1.4	3.20
6033343	FBH101-SS1	ON 406/19 T2.1 RP	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	3.20
6033356	FBH102-SS1	ON 406/19 T2.1 AG	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	2.96
6033356	FBH102-SS1	ON 406/19 T2.1 IC	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	1.4	2.96
6033356	FBH102-SS1	ON 406/19 T2.1 RP	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	2.96
6033357	FBH103-SS1	ON 406/19 T2.1 AG	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	1.23
6033357	FBH103-SS1	ON 406/19 T2.1 RP	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	1.23
6033358	FBH104-SS1	ON 406/19 T2.1 AG	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	1.38
6033358	FBH104-SS1	ON 406/19 T2.1 AG	O. Reg. 153(511) - Metals & Inorganics (Soil)	Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	5.33
6033358	FBH104-SS1	ON 406/19 T2.1 RP	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	1.38
6033358	FBH104-SS1	ON 406/19 T2.1 RP	O. Reg. 153(511) - Metals & Inorganics (Soil)	Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	5.33
6033359	FBH105-SS1	ON 406/19 T2.1 AG	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	3.13
6033359	FBH105-SS1	ON 406/19 T2.1 IC	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	1.4	3.13
6033359	FBH105-SS1	ON 406/19 T2.1 RP	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	3.13



## **Quality Assurance**

**CLIENT NAME: LAFARGE CANADA INC** 

PROJECT: F199507029

SAMPLING SITE:MOHAWK

AGAT WORK ORDER: 24T178760 ATTENTION TO: Jerome Ng

SAMPLED BY:AT

						`								
			Soi	l Ana	alysis	3								
RPT Date: Aug 02, 2024			DUPLICATI	E		REFERE	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SP	IKE
PARAMETER	Batch Sample	Dup #1	Dup #2	RPD	Method Blank	Measured		eptable mits	Recovery	Lie	ptable nits	Recovery	1 1 1	eptable mits
	ld ld					Value	Lower	Upper	,	Lower	Upper	,	Lower	Upper
O. Reg. 153(511) - Metals & Inor	ganics (Soil)													
Antimony	6036230	<0.8	<0.8	NA	< 0.8	110%	70%	130%	108%	80%	120%	112%	70%	130%
Arsenic	6036230	3	3	NA	< 1	127%	70%	130%	106%	80%	120%	110%	70%	130%
Barium	6036230	59.9	58.3	2.7%	< 2.0	103%	70%	130%	101%	80%	120%	103%	70%	130%
Beryllium	6036230	0.6	0.6	NA	< 0.5	118%	70%	130%	101%	80%	120%	132%	70%	130%
Boron	6036230	<5	<5	NA	< 5	96%	70%	130%	105%	80%	120%	107%	70%	130%
Boron (Hot Water Soluble)	6036230	0.26	0.25	NA	< 0.10	107%	60%	140%	109%	70%	130%	103%	60%	140%
Cadmium	6036230	<0.5	<0.5	NA	< 0.5	100%	70%	130%	103%	80%	120%	113%	70%	130%
Chromium	6036230	18	18	NA	< 5	110%	70%	130%	101%	80%	120%	101%	70%	130%
Cobalt	6036230	6.6	6.5	1.5%	< 0.8	102%	70%	130%	107%	80%	120%	99%	70%	130%
Copper	6036230	10.3	10.3	0.0%	< 1.0	95%	70%	130%	99%	80%	120%	98%	70%	130%
Lead	6036230	10	10	0.0%	< 1	105%	70%	130%	104%	80%	120%	106%	70%	130%
Molybdenum	6036230	<0.5	<0.5	NA	< 0.5	99%	70%	130%	98%	80%	120%	96%	70%	130%
Nickel	6036230	12	13	8.0%	< 1	99%	70%	130%	102%	80%	120%	99%	70%	130%
Selenium	6036230	<0.8	<0.8	NA	< 0.8	90%	70%	130%	104%	80%	120%	118%	70%	130%
Silver	6036230	<0.5	<0.5	NA	< 0.5	110%	70%	130%	108%	80%	120%	113%	70%	130%
Thallium	6036230	<0.5	<0.5	NA	< 0.5	106%	70%	130%	104%	80%	120%	108%	70%	130%
Uranium	6036230	0.53	0.52	NA	< 0.50	112%	70%	130%	103%	80%	120%	109%	70%	130%
Vanadium	6036230	28.1	28.3	0.7%	< 2.0	127%	70%	130%	106%	80%	120%	101%	70%	130%
Zinc	6036230	44	44	0.0%	< 5	106%	70%	130%	103%	80%	120%	111%	70%	130%
Chromium, Hexavalent	6033357 6033357	<0.2	<0.2	NA	< 0.2	92%	70%	130%	88%	80%	120%	77%	70%	130%
Cyanide, WAD	6033357 6033357	<0.040	<0.040	NA	< 0.040	105%	70%	130%	107%	80%	120%	107%	70%	130%
Mercury	6036230	<0.10	<0.10	NA	< 0.10	102%	70%	130%	102%	80%	120%	110%	70%	130%
Electrical Conductivity (2:1)	6033343 6033343	3.20	3.07	4.1%	< 0.005	104%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	6033343 6033343	0.910	0.949	4.2%	NA									
pH, 2:1 CaCl2 Extraction	6033112	6.28	6.49	3.3%	NA	103%	80%	120%						

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

O. Reg. 153(511) - Metals & Inorganics (Soil)

pH, 2:1 CaCl2 Extraction 6033357 6033357 6.36 6.50 2.3% NA 101% 80% 120%

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.





AGAT QUALITY ASSURANCE REPORT (V1)

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## **Quality Assurance**

**CLIENT NAME: LAFARGE CANADA INC** 

PROJECT: F199507029

AGAT WORK ORDER: 24T178760 **ATTENTION TO: Jerome Ng** 

SAMPLING SITE:MOHAWK	<u> </u>							SAMP	LED B	Y:AT					
			Trac	e Or	gani	cs Ar	nalys	is							
RPT Date: Aug 02, 2024			Г	UPLICAT	E		REFERE	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured		ptable nits	Recovery		ptable nits	Recovery	Lin	ptable nits
		ld					Value	Lower	Upper	,	Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F	4 (with PAHs	and VOC)	(Soil)									•			
F1 (C6 to C10)	6033237		<5	<5	NA	< 5	94%	60%	140%	93%	60%	140%	82%	60%	140%
F2 (C10 to C16)	6033357	6033357	<10	<10	NA	< 10	91%	60%	140%	108%	60%	140%	111%	60%	140%
F3 (C16 to C34)	6033357	6033357	<50	<50	NA	< 50	86%	60%	140%	103%	60%	140%	112%	60%	140%
F4 (C34 to C50)	6033357	6033357	<50	<50	NA	< 50	71%	60%	140%	84%	60%	140%	99%	60%	140%
O. Reg. 153(511) - VOCs (with	PHC) (Soil)														
Dichlorodifluoromethane	6033237		<0.05	<0.05	NA	< 0.05	112%	50%	140%	127%	50%	140%	138%	50%	140%
Vinyl Chloride	6033237		<0.02	<0.02	NA	< 0.02	105%	50%	140%	106%	50%	140%	113%	50%	140%
Bromomethane	6033237		<0.05	<0.05	NA	< 0.05	111%	50%	140%	117%	50%	140%	98%	50%	140%
Trichlorofluoromethane	6033237		<0.05	<0.05	NA	< 0.05	118%	50%	140%	113%	50%	140%	113%	50%	140%
Acetone	6033237		<0.50	<0.50	NA	< 0.50	104%	50%	140%	95%	50%	140%	115%	50%	140%
1,1-Dichloroethylene	6033237		<0.05	<0.05	NA	< 0.05	113%	50%	140%	100%	60%	130%	100%	50%	140%
Methylene Chloride	6033237		<0.05	<0.05	NA	< 0.05	103%	50%	140%	90%	60%	130%	97%	50%	140%
Trans- 1,2-Dichloroethylene	6033237		<0.05	<0.05	NA	< 0.05	106%	50%	140%	99%	60%	130%	97%	50%	140%
Methyl tert-butyl Ether	6033237		<0.05	<0.05	NA	< 0.05	99%	50%	140%	95%	60%	130%	102%	50%	140%
1,1-Dichloroethane	6033237		<0.02	<0.02	NA	< 0.02	101%	50%	140%	99%	60%	130%	107%	50%	140%
Methyl Ethyl Ketone	6033237		<0.50	<0.50	NA	< 0.50	101%	50%	140%	96%	50%	140%	113%	50%	140%
Cis- 1,2-Dichloroethylene	6033237		<0.02	<0.02	NA	< 0.02	106%	50%	140%	100%	60%	130%	94%	50%	140%
Chloroform	6033237		<0.04	<0.04	NA	< 0.04	97%	50%	140%	92%	60%	130%	107%	50%	140%
1,2-Dichloroethane	6033237		<0.03	<0.03	NA	< 0.03	92%	50%	140%	96%	60%	130%	97%	50%	140%
1,1,1-Trichloroethane	6033237		<0.05	<0.05	NA	< 0.05	104%	50%	140%	99%	60%	130%	100%	50%	140%
Carbon Tetrachloride	6033237		<0.05	<0.05	NA	< 0.05	108%	50%	140%	104%	60%	130%	100%	50%	140%
Benzene	6033237		<0.02	<0.02	NA	< 0.02	107%	50%	140%	102%	60%	130%	117%	50%	140%
1,2-Dichloropropane	6033237		<0.03	<0.03	NA	< 0.03	105%	50%	140%	97%	60%	130%	91%	50%	140%
Trichloroethylene	6033237		<0.03	<0.03	NA	< 0.03	96%	50%	140%	104%	60%	130%	102%	50%	140%
Bromodichloromethane	6033237		<0.05	<0.05	NA	< 0.05	92%	50%	140%	100%	60%	130%	92%	50%	140%
Methyl Isobutyl Ketone	6033237		<0.50	<0.50	NA	< 0.50	115%	50%	140%	102%	50%	140%	79%	50%	140%
1,1,2-Trichloroethane	6033237		<0.04	<0.04	NA	< 0.04	93%	50%	140%	108%	60%	130%	100%	50%	140%
Toluene	6033237		<0.05	<0.05	NA	< 0.05	99%	50%	140%	108%	60%	130%	95%	50%	140%
Dibromochloromethane	6033237		<0.05	<0.05	NA	< 0.05	85%	50%	140%	104%	60%	130%	75%	50%	140%
Ethylene Dibromide	6033237		<0.04	<0.04	NA	< 0.04	95%	50%	140%	97%	60%	130%	89%	50%	140%
Tetrachloroethylene	6033237		<0.05	<0.05	NA	< 0.05	89%	50%	140%	90%	60%	130%	97%	50%	140%
1,1,1,2-Tetrachloroethane	6033237		<0.04	<0.04	NA	< 0.04	87%	50%	140%	102%	60%	130%	83%	50%	140%
Chlorobenzene	6033237		<0.05	<0.05	NA	< 0.05	96%		140%	102%	60%	130%	97%	50%	140%
Ethylbenzene	6033237		<0.05	<0.05	NA	< 0.05	90%		140%	102%		130%	94%	50%	140%
m & p-Xylene	6033237		<0.05	<0.05	NA	< 0.05	92%	50%	140%	104%	60%	130%	101%	50%	140%
Bromoform	6033237		<0.05	<0.05	NA	< 0.05	89%	50%	140%	106%	60%	130%	80%	50%	140%
Styrene	6033237		<0.05	<0.05	NA	< 0.05	80%	50%	140%	92%	60%	130%	84%	50%	140%
1,1,2,2-Tetrachloroethane	6033237		<0.05	<0.05	NA	< 0.05	96%	50%	140%	104%	60%	130%	102%	50%	140%
o-Xylene	6033237		<0.05	<0.05	NA	< 0.05	93%	50%	140%	101%	60%	130%	100%	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.caca.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

## **Quality Assurance**

**CLIENT NAME: LAFARGE CANADA INC** 

AGAT WORK ORDER: 24T178760 PROJECT: F199507029 **ATTENTION TO: Jerome Ng** 

**SAMPLING SITE: MOHAWK SAMPLED BY:AT** 

	7	Ггасе	Org	anics	Ana	llysis	(Co	ntin	ued	l)					
RPT Date: Aug 02, 2024				UPLICAT	E		REFERE	NCE MA	TERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured		ptable nits	Recovery	Lie	ptable nits	Recovery		ptable nits
		ld		·			Value	Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	6033237		<0.05	<0.05	NA	< 0.05	82%	50%	140%	93%	60%	130%	105%	50%	140%
1,4-Dichlorobenzene	6033237		<0.05	<0.05	NA	< 0.05	84%	50%	140%	94%	60%	130%	106%	50%	140%
1,2-Dichlorobenzene	6033237		<0.05	<0.05	NA	< 0.05	83%	50%	140%	88%	60%	130%	98%	50%	140%
n-Hexane	6033237		<0.05	<0.05	NA	< 0.05	77%	50%	140%	96%	60%	130%	80%	50%	140%
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	6026427		<0.05	<0.05	NA	< 0.05	74%	50%	140%	93%	50%	140%	83%	50%	140%
Acenaphthylene	6026427		<0.05	<0.05	NA	< 0.05	80%	50%	140%	78%	50%	140%	93%	50%	140%
Acenaphthene	6026427		<0.05	<0.05	NA	< 0.05	81%	50%	140%	75%	50%	140%	103%	50%	140%
Fluorene	6026427		<0.05	<0.05	NA	< 0.05	85%	50%	140%	75%	50%	140%	95%	50%	140%
Phenanthrene	6026427		<0.05	<0.05	NA	< 0.05	87%	50%	140%	88%	50%	140%	98%	50%	140%
Anthracene	6026427		<0.05	<0.05	NA	< 0.05	71%	50%	140%	80%	50%	140%	75%	50%	140%
Fluoranthene	6026427		<0.05	<0.05	NA	< 0.05	94%	50%	140%	98%	50%	140%	83%	50%	140%
Pyrene	6026427		<0.05	<0.05	NA	< 0.05	92%	50%	140%	85%	50%	140%	80%	50%	140%
Benzo(a)anthracene	6026427		<0.05	<0.05	NA	< 0.05	92%	50%	140%	85%	50%	140%	85%	50%	140%
Chrysene	6026427		<0.05	<0.05	NA	< 0.05	102%	50%	140%	103%	50%	140%	83%	50%	140%
Benzo(b)fluoranthene	6026427		<0.05	<0.05	NA	< 0.05	97%	50%	140%	83%	50%	140%	83%	50%	140%
Benzo(k)fluoranthene	6026427		<0.05	<0.05	NA	< 0.05	83%	50%	140%	73%	50%	140%	75%	50%	140%
Benzo(a)pyrene	6026427		<0.05	<0.05	NA	< 0.05	71%	50%	140%	75%	50%	140%	90%	50%	140%
Indeno(1,2,3-cd)pyrene	6026427		<0.05	<0.05	NA	< 0.05	73%	50%	140%	98%	50%	140%	78%	50%	140%
Dibenz(a,h)anthracene	6026427		<0.05	<0.05	NA	< 0.05	84%	50%	140%	75%	50%	140%	93%	50%	140%
Benzo(g,h,i)perylene	6026427		<0.05	<0.05	NA	< 0.05	85%	50%	140%	80%	50%	140%	85%	50%	140%
O. Reg. 153(511) - PCBs (Soil)															
Polychlorinated Biphenyls	6031007		< 0.1	< 0.1	NA	< 0.1	104%	50%	140%	97%	50%	140%	94%	50%	140%

Comments: 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).





## QC Exceedance

CLIENT NAME: LAFARGE CANADA INC

PROJECT: F199507029

AGAT WORK ORDER: 24T178760

ATTENTION TO: Jerome Ng

RPT Date: Aug 02, 2024		REFERENC	E MATERIAL	METHOD	BLANK	SPIKE	MAT	RIX SPI	KE
PARAMETER	Sample Id	Measured	Acceptable Limits	Recovery	Lim	ptable nits	Recovery	Lin	ptable nits
		Value	Lower Upper	,	Lower				Upper

O. Reg. 153(511) - Metals & Inorganics (Soil)

Beryllium 118% 70% 130% 101% 80% 120% 132% 70% 130%

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

# **Method Summary**

**CLIENT NAME: LAFARGE CANADA INC** 

PROJECT: F199507029

AGAT WORK ORDER: 24T178760
ATTENTION TO: Jerome Ng
SAMPLED BY:AT

SAMPLING SITE:MOHAWK		SAMPLED BY:AT	
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis	·	·	
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl2 Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE

# **Method Summary**

**CLIENT NAME: LAFARGE CANADA INC** 

PROJECT: F199507029

SAMPLING SITE:MOHAWK

AGAT WORK ORDER: 24T178760
ATTENTION TO: Jerome Ng
SAMPLED BY:AT

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Polychlorinated Biphenyls	ORG-91-5113	modified from EPA SW-846 3570 & 8082A	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541 & 8082A	GC/ECD
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID

## **Method Summary**

**CLIENT NAME: LAFARGE CANADA INC** 

AGAT WORK ORDER: 24T178760 PROJECT: F199507029 ATTENTION TO: Jerome Ng SAMPLED BY:AT

**SAMPLING SITE: MOHAWK PARAMETER** AGAT S.O.P LITERATURE REFERENCE **ANALYTICAL TECHNIQUE Gravimetric Heavy Hydrocarbons** VOL-91-5009 modified from CCME Tier 1 Method BALANCE VOL-91-5009 modified from CCME Tier 1 Method GC/FID Terphenyl modified from EPA 5035A and EPA VOL-91-5002 Dichlorodifluoromethane (P&T)GC/MS 8260D modified from EPA 5035A and EPA Vinyl Chloride VOL-91-5002 (P&T)GC/MS 8260D modified from EPA 5035A and EPA **Bromomethane** VOL-91-5002 (P&T)GC/MS 8260D modified from EPA 5035A and EPA Trichlorofluoromethane VOL-91-5002 (P&T)GC/MS 8260D modified from EPA 5035A and EPA VOL-91-5002 Acetone (P&T)GC/MS 8260D modified from EPA 5035A and EPA VOL-91-5002 (P&T)GC/MS 1,1-Dichloroethylene 8260D modified from EPA 5035A and EPA Methylene Chloride VOL-91-5002 (P&T)GC/MS 8260D modified from EPA 5035A and EPA Trans- 1,2-Dichloroethylene VOL-91-5002 (P&T)GC/MS 8260D modified from EPA 5035A and EPA Methyl tert-butyl Ether VOL-91-5002 (P&T)GC/MS 8260D modified from EPA 5035A and EPA 1,1-Dichloroethane VOL-91-5002 (P&T)GC/MS 8260D modified from EPA 5035A and EPA Methyl Ethyl Ketone VOL-91-5002 (P&T)GC/MS 8260D modified from EPA 5035A and EPA Cis- 1,2-Dichloroethylene VOL-91-5002 (P&T)GC/MS 8260D modified from EPA 5035A and EPA Chloroform VOL-91-5002 (P&T)GC/MS 8260D modified from EPA 5035A and EPA 1,2-Dichloroethane VOL-91-5002 (P&T)GC/MS 8260D modified from EPA 5035A and EPA 1,1,1-Trichloroethane VOL-91-5002 (P&T)GC/MS 8260D modified from EPA 5035A and EPA Carbon Tetrachloride VOL-91-5002 (P&T)GC/MS 8260D modified from EPA 5035A and EPA Benzene VOL-91-5002 (P&T)GC/MS 8260D modified from EPA 5035A and EPA 1,2-Dichloropropane VOL-91-5002 (P&T)GC/MS 8260D modified from EPA 5035A and EPA Trichloroethylene VOL-91-5002 (P&T)GC/MS 8260D modified from EPA 5035A and EPA Bromodichloromethane VOL-91-5002 (P&T)GC/MS 8260D modified from EPA 5035A and EPA Methyl Isobutyl Ketone VOL-91-5002 (P&T)GC/MS 8260D modified from EPA 5035A and EPA 1,1,2-Trichloroethane VOL-91-5002 (P&T)GC/MS 8260D modified from EPA 5035A and EPA (P&T)GC/MS Toluene VOL-91-5002 8260D modified from EPA 5035A and EPA Dibromochloromethane VOL-91-5002 (P&T)GC/MS modified from EPA 5035A and EPA Ethylene Dibromide VOL-91-5002 (P&T)GC/MS 8260D modified from EPA 5035A and EPA VOL-91-5002 (P&T)GC/MS Tetrachloroethylene 8260D modified from EPA 5035A and EPA VOL-91-5002 (P&T)GC/MS 1,1,1,2-Tetrachloroethane

8260D

# **Method Summary**

**CLIENT NAME: LAFARGE CANADA INC** 

AGAT WORK ORDER: 24T178760 PROJECT: F199507029 **ATTENTION TO: Jerome Ng SAMPLED BY:AT** 

**SAMPLING SITE: MOHAWK** 

SAMI LING SITE. MOTAVIN		SAMI LLD DT.AT	
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS



F199507029

AOHAWK

Please note: If quotation number is not provided, client will be billed full price for analys

450 1839

Bill To Same: Yes □ No □

**Chain of Custody Record** 

**Report Information:** 

**Project Information:** 

**Invoice Information:** 

Samples Relinquished By (Print Name and Sign):

Company:

Contact:

Address:

Phone:

1. Email:

2. Email:

Project

Site Location: Sampled By:

AGAT Quote #:

Company

Contact:

Address:

Reports to be sent to

#### Have feedback?

Scan here for a quick survey!



**Regulatory Requirements:** 

Is this submission for a Record

of Site Condition (RSC)?

□ No

Regulation 406

Ind/Com

Res/Park

Agriculture

CCME

Sediment

Surface Water

Rock/Shale

Regulation 558

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

(Please check all applicable boxes)

Regulation 153/04

Table Indicate One

□Ind/Com

Res/Park

Coarse

☐ Yes

Paint

Legal Sample

**Sample Matrix Legend** 

Ground Water SD

Fine

Agriculture

Soil Texture (Check One)

5835 Coopers Avenue Mississauga, Ontario L4Z 1Y2 Ph: 905 712 5100 Fax: 905 712 5122 webearth,agatlabs.com

Sewer Use

Other

☐ Yes

CrVI, DOC

Metals,

Sanitary

Region

Prov. Water Quality

Objectives (PWQO)

Indicate One

Report Guideline on

**Certificate of Analysis** 

O. Reg 153

HWSB

Нġ

☐ Storm

☐ No

**Laboratory Use Only** 

ork Order #:	247178760	
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#### Field Filtered -Metals & Inorganics CrvI, C BTEX, F1-F4 PHCs S Soil Regulation 406 mSPLP: ☐ Meta Email: PCBs: Aroclors □ M&I Comments/ Date Time Sample V0C Sample Identification Sampled Sampled Containers Matrix Special Instructions 10:00= 1. FOMIDI- 551 FAHIOR SSI 2. 10:30. AM PM FOH103-551 3. 11:00c AM PM FBH104-551 4. 1:30-AM PM 5. FBH105-551 17,000 AM 6. 7. AM PM 8.

9. 10. 11.

Client Copy

Samples Received By (Print Name and Sign)