



# **2015 TOXICS SUBSTANCE REPORT**

**CRH Canada Group Inc. – Mississauga Cement Plant**

**2391 Lakeshore Road West  
Mississauga, ON  
L5J 1K1**

**[crhcanada.com](http://crhcanada.com)**

# Table of Contents

<b>1.</b>	<b>INTRODUCTION</b>	<b>3</b>
<b>2.</b>	<b>REPORTING CRITERIA</b>	<b>4</b>
<b>3.</b>	<b>COMPANY INFORMATION</b>	<b>5</b>
<b>4.</b>	<b>SUBSTANCE REPORTING</b>	<b>6</b>

# 1. Introduction

Commissioned in 1956, the CRH Canada Mississauga Plant is one of the largest and most environmentally responsible suppliers of cement in Canada. The Plant employs approximately 185 people and has an annual capacity of 1.5 million tonnes of cement, plus 0.5 million tons of CRH Slag Cement. Over the course of the last 60 years, the Mississauga Plant has witnessed ongoing technological advancements designed to meet the increasing needs of the marketplace, to improve environmental performance, to enhance employee safety and to mitigate impacts on the local community.

CRH Canada Group Inc. is one of the country's largest vertically integrated building materials and construction companies. With 3,000 employees, CRH Canada manufactures cement, aggregates and ready-mix concrete and provides construction services to many of Canada's largest infrastructure projects.

CRH Canada Group Inc. is a member of the CRH Group of companies, a leading diversified international building materials group, employing 91,000 people at 4,000 operating locations in 37 countries worldwide. CRH is the largest building materials company in North America and the third largest worldwide and is committed to improving the built environment through the delivery of superior materials and products for the construction and maintenance of infrastructure, housing and commercial projects. A Fortune 500 company, CRH is a constituent member of the FTSE 100 index and the ISEQ 20 with American Depositary Shares listed on the NYSE.

## 2. Reporting Criteria

Section 3(1) of the Toxics Reduction Act (TRA) specifies the criteria requiring the preparation of a toxic substance plan.

These criteria are as follows:

*3. (1) The owner and the operator of a facility shall ensure that a toxic substance reduction plan is prepared for a toxic substance in accordance with this Act and the regulations if all of the following criteria are met:*

*1. The facility belongs to a class of facilities prescribed by the regulations.*

*2. The number of persons employed at the facility exceeds the number of persons prescribed by the regulations.*

*3. The toxic substance is used or created at the facility and the amounts of the substance that are used or created meet the criteria prescribed by the regulations.*

*4. Such other criteria as are prescribed by the regulations. 2009, c. 19, s. 3 (1).*

Section 4(1) of O. Reg. 455/09 specifies the types of facilities subject to toxic substance reduction planning and includes facilities that begin in North American Industry Classification System (NAICS) code “31”, “32” or “33” and “212”. The CRH Canada Mississauga plant operates under the category of “cement manufacturing”, and therefore has a NAICS code beginning with “32”.

In addition to the plan, toxics substance reporting must be conducted annually and a summary of this report must be made available for public viewing. This document summarizes the toxic substances reported as part of the TRA for the year ending 2015 by the CRH Canada Mississauga Cement Plant.

- Acenaphthylene
- Acetone
- Ammonia
- Benzene
- Carbon Monoxide
- Dioxins and Furans
- Fluorene
- Hexachlorobenzene
- Hydrochloric Acid
- Mercury
- Methyl Ethyl Ketone
- Nitrogen Oxides (expressed as NO<sub>2</sub>)
- Particulate Matter
- Particulate Matter ≤ 10 microns
- Particulate Matter ≤ 2.5 microns
- Phenanthrene
- Sulphur Dioxide
- Toluene
- Total Volatile Organic Compounds (VOCs)
- Xylene

### 3. Company Information

<b>Parent Company Name</b>	CRH Canada Group Inc.
<b>Parent Company Address</b>	2300 Steeles Ave. West, 4 <sup>th</sup> Floor Concord, Ontario L4K 5X6
<b>Facility Name</b>	CRH Canada Mississauga Plant
<b>Facility Address</b>	2391 Lakeshore Road West Mississauga, Ontario L5J 1K1
<b>Geographic Coordinates of Facility</b>	43.49720N, -79.62770W
<b>National Pollutant Release Inventory Identification Number</b>	2182
<b>Ontario Regulation 127/01 Identification Number</b>	5112
<b>Two Digit North American Industry Classification System (NAICS) Code</b>	32 – Manufacturing
<b>Four Digit North American Industry Classification System (NAICS) Code</b>	3273 - Cement and Concrete Product Manufacturing
<b>Six Digit North American Industry Classification System (NAICS) Code</b>	327310 - Cement Manufacturing
<b>Number of Full-time Employee Equivalents at the Facility</b>	185
<b>Facility Public Contact</b>	Richard Lalonde Environment Manager 2391 Lakeshore Road West Mississauga, ON L5J 1K1 905 822-1653 ext. 44371 richard.lalonde@ca.crh.com

## 4. Substance Reporting

Acenaphthylene, CAS # 208-96-8				
	2015	2014	Diff (kg)	Diff %
<b>Used</b>	3166 kilograms	9672 kilograms	-6506 kilograms	-67.27 %
<b>Created</b>	8.0 kilograms	8.2 kilograms	-0.2 kilograms	-2.44 %
<b>Contained in Product</b>	0.0 kilograms	0.0 kilograms	0 kilograms	0 %
<b>Released</b>	8.0 kilograms	8.2 kilograms	-0.2 kilograms	-2.44 %
<b>Destroyed</b>	3166 kilograms	9672 kilograms	-6506 kilograms	-67.27 %
The changes in the quantities of substance used and released are due to: <b>Used:</b> fluctuations in materials chemistry <b>Released:</b> No reasons - quantities approximately the same				

Acetone, CAS # 67-64-1				
	2015	2014	Diff (tonnes)	Diff %
<b>Used</b>	950 tonnes	846 tonnes	104 tonnes	12.29 %
<b>Created</b>	13.4 tonnes	13.8 tonnes	-0.4 tonnes	-2.90 %
<b>Contained in Product</b>	0.0 tonnes	0.0 tonnes	0 tonnes	0 %
<b>Released</b>	13.4 tonnes	13.8 tonnes	-0.4 tonnes	-2.90 %
<b>Destroyed</b>	950 tonnes	846 tonnes	104 tonnes	12.29 %
The changes in the quantities of substance used and released are due to: <b>Used:</b> fluctuation in process resulting in change to specific VOC creation (total VOCs in line with previous years) <b>Released:</b> fluctuation in process resulting in change to specific VOC creation (total VOCs in line with previous years)				

<b>Ammonia, CAS # 16</b>				
	<b>2015</b>	<b>2014</b>	<b>Diff (tonnes)</b>	<b>Diff %</b>
<b>Used</b>	232 tonnes	488 tonnes	-256 tonnes	-52.46 %
<b>Created</b>	144 tonnes	127 tonnes	17 tonnes	13.39 %
<b>Contained in Product</b>	0 tonnes	0 tonnes	0 tonnes	0 %
<b>Released</b>	144 tonnes	127 tonnes	17 tonnes	13.39 %
<b>Destroyed</b>	232 tonnes	488 tonnes	-256 tonnes	-52.46 %
The changes in the quantities of substance used and released are due to: <b>Used:</b> fluctuations in process resulting in change to ammonia creation. <b>Released:</b> fluctuations in process resulting in change to ammonia creation.				

<b>Benzene, CAS # 71-43-2</b>				
	<b>2015</b>	<b>2014</b>	<b>Diff (tonnes)</b>	<b>Diff %</b>
<b>Used</b>	33 tonnes	20 tonnes	13 tonnes	65.00 %
<b>Created</b>	4.7 tonnes	5.6 tonnes	-0.9 tonnes	-16.07%
<b>Contained in Product</b>	0.0 tonnes	0.0 tonnes	0 tonnes	0 %
<b>Released</b>	4.7 tonnes	5.6 tonnes	-0.9 tonnes	-16.07%
<b>Destroyed</b>	33 tonnes	20 tonnes	13 tonnes	65.00 %
The changes in the quantities of substance used and released are due to: <b>Used:</b> fluctuation in process resulting in change to specific VOC creation (total VOCs in line with previous years) <b>Released:</b> fluctuation in process resulting in change to specific VOC creation (total VOCs in line with previous years)				

<b>Carbon Monoxide, CAS # 630-08-0</b>				
	<b>2015</b>	<b>2014</b>	<b>Diff (tonnes)</b>	<b>Diff %</b>
<b>Used</b>	0 tonnes	0 tonnes	0 tonnes	0 %
<b>Created</b>	1183 tonnes	1245 tonnes	-62 tonnes	-4.98 %
<b>Contained in Product</b>	0 tonnes	0 tonnes	0 tonnes	0 %
<b>Released</b>	1183 tonnes	1245 tonnes	-62 tonnes	-4.98 %
<b>Destroyed</b>	0 tonnes	0 tonnes	0 tonnes	0 %
The changes in the quantities of substance used and released are due to: <b>Used:</b> No reasons – quantities are approximately the same <b>Released:</b> : No reasons – quantities are approximately the same				

<b>Dioxins and Furans</b>				
	<b>2015</b>	<b>2014</b>	<b>Diff</b>	<b>Diff %</b>
<b>Used</b>	Below level of quantification	Below level of quantification	-	-
<b>Created</b>	Below level of quantification	Below level of quantification	-	-
<b>Contained in Product</b>	Below level of quantification	Below level of quantification	-	-
<b>Released</b>	Below level of quantification	Below level of quantification	-	-
<b>Destroyed</b>	Below level of quantification	Below level of quantification	-	-
The changes in the quantities of substance used and released are due to: <b>Used:</b> No reasons - quantities approximately the same <b>Released:</b> No reasons - quantities approximately the same				

<b>Fluorene, CAS # 86-73-7</b>				
	<b>2015</b>	<b>2014</b>	<b>Diff (kg)</b>	<b>Diff %</b>
<b>Used</b>	1437 kilograms	6007 kilograms	-4534 kilograms	-75.48%
<b>Created</b>	13.6 kilograms	13.9 kilograms	-0.3 kilograms	-2.16%
<b>Contained in Product</b>	0.0 kilograms	0.0 kilograms	0 kilograms	0 %
<b>Released</b>	13.6 kilograms	13.9 kilograms	-0.3 kilograms	-2.16%
<b>Destroyed</b>	1437 kilograms	6007 kilograms	-4534 kilograms	-75.48%
The changes in the quantities of substance used and released are due to: <b>Used:</b> fluctuations in material chemistry <b>Released:</b> No reasons – quantities approximately the same				

<b>Hexachlorobenzene, CAS # 118-74-1</b>				
	<b>2015</b>	<b>2014</b>	<b>Diff (g)</b>	<b>Diff %</b>
<b>Used</b>	0.0 grams	0.0 grams	0.0 grams	0 %
<b>Created</b>	30.4 grams	31.6 grams	1.2 grams	-3.80 %
<b>Contained in Product</b>	0.0 grams	0.0 grams	0.0 grams	0 %
<b>Released</b>	30.4 grams	31.6 grams	1.2 grams	-3.80 %
<b>Destroyed</b>	0.0 grams	0.0 grams	0.0 grams	0 %
The changes in the quantities of substance used and released are due to: <b>Used:</b> No reasons – quantities approximately the same <b>Released:</b> No reasons – quantities approximately the same				



### Hydrochloric Acid, CAS # 7647-01-0

	2015	2014	Diff (tonnes)	Diff %
<b>Used</b>	0.0 tonnes	0.0 tonnes	0.0 tonnes	0 %
<b>Created</b>	27 tonnes	46 tonnes	-19 tonnes	-41.30 %
<b>Contained in Product</b>	0.0 tonnes	0.0 tonnes	0.0 tonnes	0 %
<b>Released</b>	27 tonnes	46 tonnes	-19 tonnes	-41.30 %
<b>Destroyed</b>	0.0 tonnes	0.0 tonnes	0.0 tonnes	0 %

The changes in the quantities of substance used and released are due to:

**Used:** fluctuations in process resulting in change to HCl creation.

**Released:** fluctuations in process resulting in change to HCl creation.

### Mercury, CAS # 7439-97-6

	2015	2014	Diff (kg)	Diff %
<b>Used</b>	37 kilograms	37 kilograms	0.0 kilograms	0 %
<b>Created</b>	0.0 kilograms	0.0 kilograms	0.0 kilograms	0 %
<b>Contained in Product</b>	15 kilograms	12 kilograms	3.0 kilograms	25.00 %
<b>Released</b>	17.3 kilograms	20.1 kilograms	-2.8 kilograms	-13.93 %
<b>Destroyed</b>	0.0 kilograms	0.0 kilograms	0.0 kilograms	0 %

The changes in the quantities of substance used and released are due to:

**Used:** No reasons - quantities approximately the same

**Released:** fluctuation in material chemistry

### Methyl Ethyl Ketone, CAS # 78-93-3

	2015	2014	Diff (-)	Diff %
<b>Used</b>	1005 tonnes	521 tonnes	484 tonnes	92.90 %
<b>Created</b>	1.3 tonnes	1.4 tonnes	-0.1 tonnes	-7.14 %
<b>Contained in Product</b>	0.0 tonnes	0.0 tonnes	0.0 tonnes	0 %
<b>Released</b>	1.3 tonnes	1.4 tonnes	-0.1 tonnes	-7.14 %
<b>Destroyed</b>	1005 tonnes	521 tonnes	484 tonnes	92.90 %

The changes in the quantities of substance used and released are due to:

**Used:** fluctuation in material chemistry

**Released:** No reasons - quantities approximately the same

**Nitrogen oxides (expressed as NO<sub>2</sub>), CAS # 11104-93-1**

	<b>2015</b>	<b>2014</b>	<b>Diff (tonnes)</b>	<b>Diff %</b>
<b>Used</b>	0 tonnes	0 tonnes	0 tonnes	0 %
<b>Created</b>	2524 tonnes	2334 tonnes	190 tonnes	8.14 %
<b>Contained in Product</b>	0 tonnes	0 tonnes	0 tonnes	0 %
<b>Released</b>	2524 tonnes	2334 tonnes	190 tonnes	8.14 %
<b>Destroyed</b>	0 tonnes	0 tonnes	0 tonnes	0 %

The changes in the quantities of substance used and released are due to:

**Used:** No reasons - quantities approximately the same

**Released:** No reasons - quantities approximately the same

<b>Particulate Matter – Total (PM), CAS # M08</b>				
	<b>2015</b>	<b>2014</b>	<b>Diff (tonnes)</b>	<b>Diff %</b>
<b>Used</b>	94666 tonnes	76534 tonnes	18132 tonnes	23.69 %
<b>Created</b>	0 tonnes	0 tonnes	0 tonnes	0 %
<b>Contained in Product</b>	N/A *	N/A *		
<b>Released</b>	117 tonnes	121 tonnes	-4 tonnes	-3.31 %
<b>Destroyed</b>	0 tonnes	0 tonnes	0 tonnes	0 %
The changes in the quantities of substance used and released are due to: <b>Used:</b> Increase from material input <b>Released:</b> No reasons - quantities approximately the same				

<b>Particulate Matter &lt;= 10 Microns (PM10), CAS # M09</b>				
	<b>2015</b>	<b>2014</b>	<b>Diff (tonnes)</b>	<b>Diff %</b>
<b>Used</b>	27274 tonnes	21233 tonnes	6041 tonnes	28.45 %
<b>Created</b>	0 tonnes	0 tonnes	0 tonnes	0 %
<b>Contained in Product</b>	N/A *	N/A *		
<b>Released</b>	39 tonnes	40 tonnes	-1 tonnes	-2.50 %
<b>Destroyed</b>	0 tonnes	0 tonnes	0 tonnes	0 %
The changes in the quantities of substance used and released are due to: <b>Used:</b> Increase from material input <b>Released:</b> No reasons - quantities approximately the same				

<b>Particulate Matter &lt;= 2.5 Microns (PM2.5), CAS # M10</b>				
	<b>2015</b>	<b>2014</b>	<b>Diff (tonnes)</b>	<b>Diff %</b>
<b>Used</b>	8227 tonnes	6541 tonnes	1686 tonnes	25.78 %
<b>Created</b>	0 tonnes	0 tonnes	0 tonnes	0 %
<b>Contained in Product</b>	N/A *	N/A *		
<b>Released</b>	21 tonnes	23 tonnes	-2 tonnes	-8.70 %
<b>Destroyed</b>	0 tonnes	0 tonnes	0 tonnes	0 %
The changes in the quantities of substance used and released are due to: <b>Used:</b> Increase from material input <b>Released:</b> No reasons - quantities approximately the same				

\*Quantification for the amount of the substance that is contained in product is not required for Criteria Air Contaminants (Part 4 of NPRI Schedule 1).

### Phenanthrene, CAS # 85-01-8

	2015	2014	Diff (kg)	Diff %
<b>Used</b>	3780 kilograms	11959 kilograms	-8179 kilograms	-68.39 %
<b>Created</b>	48 kilograms	48 kilograms	0.0 kilograms	0 %
<b>Contained in Product</b>	0.0 kilograms	0.0 kilograms	0.0 kilograms	0 %
<b>Released</b>	48 kilograms	48 kilograms	0.0 kilograms	0 %
<b>Destroyed</b>	3780 kilograms	11959 kilograms	-8179 kilograms	-68.39 %

The changes in the quantities of substance used and released are due to:

**Used:** fluctuation in materials chemistry

**Released:** No reasons – quantities approximately the same

### Sulphur dioxide, CAS # 7446-09-5

	2015	2014	Diff (tonnes)	Diff %
<b>Used</b>	0 tonnes	0 tonnes	0 tonnes	0 %
<b>Created</b>	1403 tonnes	1382 tonnes	21 tonnes	1.52 %
<b>Contained in Product</b>	0 tonnes	0 tonnes	0 tonnes	0 %
<b>Released</b>	1403 tonnes	1382 tonnes	21 tonnes	1.52 %
<b>Destroyed</b>	0 tonnes	0 tonnes	0 tonnes	0 %

The changes in the quantities of substance used and released are due to:

**Used:** No reasons – quantities approximately the same

**Released:** No reasons – quantities approximately the same

### Toluene, CAS # 108-88-3

	2015	2014	Diff (tonnes)	Diff %
<b>Used</b>	2758 tonnes	3278 tonnes	-520 tonnes	-15.86 %
<b>Created</b>	2.0 tonnes	3.2 tonnes	-1.2 tonnes	-37.50 %
<b>Contained in Product</b>	0.0 tonnes	0.0 tonnes	0.0 tonnes	0 %
<b>Released</b>	2.0 tonnes	3.2 tonnes	-1.2 tonnes	-37.50 %
<b>Destroyed</b>	2758 tonnes	3278 tonnes	-520 tonnes	-15.86 %

The changes in the quantities of substance used and released are due to:

**Used:** fluctuation in process resulting in change to specific VOC creation (total VOCs in line with previous years)

**Released:** fluctuation in process resulting in change to specific VOC creation (total VOCs in line with previous years)

<b>Total VOCs (Volatile Organic Compounds)</b>				
	<b>2015</b>	<b>2014</b>	<b>Diff (tonnes)</b>	<b>Diff %</b>
<b>Used</b>	7585 tonnes	9970 tonnes	-2385 tonnes	-23.92 %
<b>Created</b>	17.1 tonnes	17.7 tonnes	-0.6 tonnes	-3.39 %
<b>Contained in Product</b>	0 tonnes	0 tonnes	0 tonnes	0 %
<b>Released</b>	17.1 tonnes	17.7 tonnes	-0.6 tonnes	-3.39 %
<b>Destroyed</b>	7585 tonnes	9970 tonnes	-2385 tonnes	-23.92 %
<p>The changes in the quantities of substance used and released are due to:</p> <p><b>Used:</b> fluctuation in process resulting in change to specific VOC creation (total VOCs in line with previous years)</p> <p><b>Released:</b> fluctuation in process resulting in change to specific VOC creation (total VOCs in line with previous years)</p>				

<b>Xylene, CAS # 1330-20-7</b>				
	<b>2015</b>	<b>2014</b>	<b>Diff (tonnes)</b>	<b>Diff %</b>
<b>Used</b>	1729 tonnes	2751 tonnes	-1022 tonnes	-37.15 %
<b>Created</b>	3.5 tonnes	1.6 tonnes	1.9 tonnes	118.75 %
<b>Contained in Product</b>	0.0 tonnes	0.0 tonnes	0.0 tonnes	0 %
<b>Released</b>	3.5 tonnes	1.6 tonnes	1.9 tonnes	118.75 %
<b>Destroyed</b>	1729 tonnes	2751 tonnes	1729 tonnes	-37.15 %
<p>The changes in the quantities of substance used and released are due to:</p> <p><b>Used:</b> fluctuation in process resulting in change to specific VOC creation (total VOCs in line with previous years)</p> <p><b>Released:</b> fluctuation in process resulting in change to specific VOC creation (total VOCs in line with previous years)</p>				

As of May 30, 2016, I, Kevin Hughes, certify that I have read the reports on the toxic substance reduction plans for the toxic substances referred to below and am familiar with their contents, and to my knowledge the information contained in the reports is factually accurate and the reports comply with the Toxics Reduction Act, 2009 and Ontario Regulation 455/09 (General) made under that Act.

- Acenaphthylene
- Acetone
- Ammonia
- Benzene
- Carbon Monoxide
- Dioxins and Furans
- Fluorene
- Hexachlorobenzine
- Hydrochloric Acid
- Mercury
- Methyl Ethyl Ketone
- Nitrogen Oxides (expressed as NO<sub>2</sub>)
- Particulate Matter
- Particulate Matter <= 10 microns
- Particulate Matter <= 2.5 microns
- Phenanthrene
- Sulphur Dioxide
- Toluene
- Total Volatile Organic Compounds (VOCs)
- Xylene



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Kevin Hughes,  
Plant Manager, CRH Mississauga Cement Plant