TOXIC SUBSTANCE REDUCTION PLAN SUMMARY

This Toxic Substance Reduction Plan Summary has been prepared in accordance with Section 8(2) of the Toxics Reduction Act and satisfies the minimum Plan Summary content requirements stipulated in Section 24 of Ontario Regulation (O.Reg.) 455/09.

Basic Facility Information

Mandatory Basic Facility Information Item	Details
Substance Name and Chemical Abstracts Service (CAS) Registry Number for the Substance(s) whose Toxic Substance Reduction Plans are summarized by this this Plan Summary	This Plan Summary applies to the Toxic Substance Reduction Plans for the following prescribed Toxic Substances: PM_{10} - Particulate Matter <= 10 Microns (PM_{10}) and $PM_{2.5}$ - Particulate Matter <= 2.5 Microns ($PM_{2.5}$) (Per O.Reg. 455/09; "no single CAS numbers apply to these substances")
National Pollutant Release Inventory (NPRI) and O.Reg.127/01 Identification Numbers	NPRI ID: 7243 O.Reg.127/01 ID: N/A
The legal and trade names of the owner and the operator of the facility, the street address of the facility and the mailing address of the facility, if different	Lafarge Canada Inc. Stoney Creek Grinding Terminal 360 Jones Road Stoney Creek, ON L8E 5N2
The number of full time employee equivalents at the facility	11
The two- and four-digit North American Industry Classification System (NAICS) codes and the six-digit NAICS Canada code	32 – Manufacturing 3273 – Cement and Concrete Product Manufacturing 327390 – Other Concrete Product Manufacturing
Public contact	Brent Burnell Operations Manager Stoney Creek Grinding Terminal 360 Jones Road Stoney Creek, ON L8E 5N2
The spatial coordinates of the facility expressed in Universal Transverse Mercator (UTM) within a North American Datum 83 (NAD83) datum	606591.91, 4786459.66, Zone 17T
Parent Company Information	Lafarge Canada Inc. 334 Avro Avenue Point Claire, QC H9R 5W5

List of All Substances for which Toxic Substance Reduction Plans Have Been Prepared at the Facility

The Facility has prepared Toxic Substance Reduction Plans for the following prescribed Toxic Substances:

PM_{10} - Particulate Matter <= 10 Microns (PM_{10}) *

$PM_{2.5}$ - Particulate Matter <= 2.5 Microns ($PM_{2.5}$)*

*Per O.Reg. 455/09, "no single CAS numbers apply to these substances"

Statement of Intent

As required by s.4(1) of the TRA, a Plan must include either a statement of the Facility's intent to reduce the use and/or creation of the Toxic Substance at the Facility, or the reasons for not including this statement.

A statement of the Facility's intent to reduce its "creation" of the Toxic Substances has not been included as a part of this Master Document. The Toxic Substances cannot be "used" in the Facility process and therefore no statement with respect to intent to reduce use of the Toxic Substances is required.

The Toxic Substances have triggered reporting under the TRA and O. Reg. 455/09 due to two activities at the Facility which are interpreted as "creation" of the Toxic Substances under the TRA framework. The first activity that has been classified as a "creation" of the Toxic Substances for the purpose of the required TRA Quantification, Accounting and Reporting exercise for the Toxic Substances is the generation by physical means of suspended particulate matter in various size fractions commonly referred to as dust; which is subsequently released either as stack or fugitive emissions. The second activity that has been classified as a "creation" of the Toxic Substances is the generation of suspended particulate matter as a by-product of combustion of fuels in stationary equipment.

The MOE has stated that the TRA is not intended to focus on "end of pipe" emissions as they don't necessarily have any bearing on the amount of a substance that is "used" or "created," however in this case, "end of pipe" emissions of suspended particulate matter is the determining factor of the Facility's TRA reporting status with respect to the Toxic Substances.

Despite the Facility's reporting status with respect to the Toxic Substances, the Facility feels that it has previously optimized its control of the "creation" and subsequent release of the Toxic Substances to the greatest extent that can reasonably be expected. This opinion is supported by the following two aspects:

1) <u>Compliance with Regulatory Requirements</u>

It is well documented that release of suspended particulate matter is an inherent by-product of slag grinding and that the activities leading to the release of suspended particulate matter are essential to the process of slag grinding. In recognition of this, the MOE has imposed various regulatory requirements related to the release of suspended particulate matter, which include:

- Ontario Regulation 419/05, under which a Facility must demonstrate compliance with substance-specific ground-level concentration limits of emitted substances, including suspended particulate matter in all forms that are reportable under the NPRI and TRA reporting programs.
- The requirement for any Facility that may discharge any contaminant to the atmosphere to apply for and obtain an Environmental Compliance Approval (ECA) for air which approves the facility's emissions and provides performance limits, documentation requirements and reporting requirements which a Facility must meet in order to maintain compliance with the ECA on an ongoing basis.
- The requirement for qualifying a facility to prepare and implement a "Fugitive Dust Best Management Practices Plan." This document outlines controls in place with respect to minimizing suspended particulate matter releases in the form fugitive dust at the facility, along with the decision making process that was used to identify fugitive dust emission sources and to develop appropriate best management practices for each type of source. A qualifying facility's Fugitive Dust Best Management Practices Plan must be approved by the MOE as a part of the ECA implementation process.
- The requirement to prepare and implement an Operations and Maintenance Manual which outlines operating procedures and maintenance programs for processes with what the MOE refers to as "Significant Environmental Impacts." This document assists Facility personnel in operating the Facility in a manner that minimizes the potential for environmental impacts and is also a part of the ECA implementation process.

Lafarge currently meets and/or exceeds all of the above regulatory requirements which are designed to control the release of the Toxic Substances and minimize potential off-site impacts resulting from the release of the Toxic Substances.

2) <u>Measures Currently in Place to Minimize Releases of Suspended Particulate Matter</u>

As a result of satisfying all of the above noted regulatory requirements in addition to voluntary actions with respect to suspended particulate matter releases, Lafarge actively implements a variety of controls to minimize suspended particulate matter releases from different parts of its process components. These controls include, but are not limited to, the following:

- Implementation of the controls outlined in the Facility's Fugitive Dust Best Management Practices Plan, which was developed in consultation with the MOE; such as:
- dust suppressant application to Facility unpaved roadways;
- strategic placement of stockpiles with respect to windbreaks (buildings, hills, trees etc…) for material that is susceptible to wind erosion;
- optimization of material stockpile size, location and drop heights;
- reactive measures including curtailing operations in the event of visual disturbance of dust that may occur despite the above controls; and
- operation of baghouses serving the grinding process components to minimize suspended particulate matter. This equipment is actively maintained as outlined in the Facility's Operations and Maintenance Manual, which was developed in consultation with the MOE.

The Facility currently utilizes natural gas in the combustion equipment installed at the Facility. In the future, if the Facility upgrades its combustion equipment, they may look at alternative fuels for their economic viability and reduction in the creation and release of the Toxic Substances, however at this point in time due to regulatory limitations, natural gas is the only viable option for the Facility. In an effort to reduce fuel consumption and reduce the creation and release of the Toxic Substances, the Facility provides routine maintenance on the fuel burning equipment to ensure they are operating efficiently and are not burning excess fuel, which leads to unnecessary additional creation and release of the Toxic Substances. In addition, comfort heating through fuel combustion is the only practical source of comfort heat at this time.

Objectives of the Toxic Substance Reduction Plan

The objectives of this Toxics Reduction Plan (TRP) Master Document and subsequent individual TRPs are the following:

- Provide the reader with information on measures currently in place at the Facility which control the "creation" and subsequent release of the Toxic Substance;
- Provide support for the Facility's position with respect to the Statement of Intent of this Plan; and
- Document how the Facility has fulfilled the applicable requirements under the TRA and O. Reg. 455/09 with respect to the Toxic Substances.

Description of Why the Toxic Substance Is Used or Created

At the Facility, raw materials (e.g. slag) are received and ground in a ball mill. Ground slag is then blown into storage silos and blended to manufacture supplementary cementitious products. These products are then shipped off-site for market sale. Supplementary cementitious products are cement products that are created from waste materials from other industries, such as the iron ore industry. These products allow for the substitution of virgin raw materials (e.g. limestone), and are a significantly less energy intensive, and less carbon intensive product than traditional cement manufacturing.

The Toxic Substances have triggered reporting under the TRA and O. Reg. 455/09 due to two activities at the Facility which are defined as "creations" of the Toxic Substances under the TRA framework. The first activity that has been classified as a "creation" of the Toxic Substances is the generation by physical means of suspended particulate matter in various size fractions as dust; which is subsequently released either as stack or fugitive emissions. The second activity that has been classified as a "creation" of the Toxic Substances is the generation of particulate matter as a by-product of combustion of fuels in stationary equipment. Due to the nature of the Toxic Substances, the substance can never be "used" in the Facility process.

For the purpose of the required TRA Quantification, Accounting and Reporting exercise for the Toxic Substances, the calculated "release" values have been assumed to be equal to the amount "created" for each emission source, despite the fact that some of these releases are controlled releases. S.12(6) of O. Reg. 455/09 provides considerations for determining the "Best Available Methods" for tracking and quantifying the Toxic Substances. MOE guidance pertaining to this section of O. Reg. 455/09 states that the importance of selecting Best Available Methods is to provide the best decision making information when determining which toxics reduction options, if any, are worthwhile to implement. It should be noted that, given the Facility's decision to not include in this Plan a statement of its intent to reduce the "creation" of the Toxic Substances (as supported by the information provided in the Statement of Intent section of the Plan), no decisions will be made with respect to toxics reduction based on the calculated "creation" values for the

Toxic Substances. Taking this into consideration, the Facility used judgement based on relevance and effort required to obtain information and feels that it has gone to reasonable efforts in identifying and applying the Best Available Methods for quantifications in this case.

Rationale for Not Implementing Toxic Substance Reduction Options

As required by s.18(4) of O.Reg.455/09 (as amended by s.9(3) of O.Reg.214/11), a Plan must contain an explanation of why no toxic substance reduction options will be implemented.

Facility personnel have considered each of the seven categories for toxic substance reduction options, and, in light of the information provided in the Statement of Intent section of this Plan, the Facility feels that no toxic substance reduction options can be identified in any of the seven toxic substance reduction categories.

Therefore the rationale for not implementing toxic substance reduction options is that no toxic substance reduction options could be identified.

Statement that the Plan Summary Accurately Reflects the Current Version of the Plan

As required by s.24(1)8 of O.Reg.455/09 this Plan Summary accurately reflects the current version of the Plan.

Planner License Number

As required by s.18(2) of O.Reg.455/09 (as amended by s. 9(2) of O.Reg.214/11), the Licensed Toxic Substance Reduction Planner responsible for providing Planner Recommendations on and certification of this Plan is as follows:

James McEvoy
Air Quality Specialist
Golder Associates Ltd.
Toxic Substance Reduction Planner License Number TSRP0288

Copies of the Certification

Certification statements are provided in the following page.

Toxic Substance Reduction Plans Certification by Highest Ranking Employee

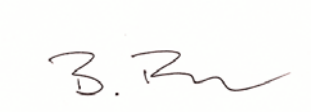
As required by s.4(2) of the *Toxics Reduction Act* (TRA), Toxic Substance Reduction Plans must contain a certification, signed by the highest ranking employee at the Facility who has management responsibilities relating to the Facility.

The following Certification Statement is being made under s.19(2) of Ontario Regulation (O.Reg.) 455/09 (as amended by s.11 of O.Reg.214/11) and satisfies the requirements of s.4(2) of the TRA for the Toxic Substance Plans that are assembled within this single document as of the date of this Certification Statement. Furthermore, the following Certification Statement is limited to the respective versions of the Plans which are dated as indicated in the Certification Statement:

> *As of December 18, 2013, I, Brent Burnell, certify that I have read the toxic substance reduction plans for the toxic substances referred to below and am familiar with their contents, and to my knowledge the plans are factually accurate and comply with the Toxics Reduction Act,2009 and Ontario Regulation 455/09 (General) made under that Act.*
>
> - *PM_{10} (dated, December 11, 2013)*
> - *$PM_{2.5}$ (dated, December 11, 2013)*

_____ __December 18, 2013_____

Signature



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Brent Burnell
Operations Manager
Lafarge Stoney Creek Grinding Terminal
360 Jones Road
Stoney Creek, ON

December 18, 2013 Project No. 13-1151-0006

Brent Burnell
Lafarge Canada Inc.

LICENSED TOXIC SUBSTANCE REDUCTION PLANNER CERTIFICATION STATEMENT FOR PHASE II TOXIC SUBSTANCE REDUCTION PLANS FOR LAFARGE CANADA INC. – STONEY CREEK GRINDING TERMINAL, STONEY CREEK, ONTARIO

Dear Mr. Burnell:

Golder Associates Ltd. (Golder) was retained by the Lafarge Canada Inc. (Lafarge) facility located at 360 Jones Road, Stoney Creek, Ontario, (the Facility) to provide various services pertaining to Phase II Toxic Substance Reduction Plan preparation under the *Toxic Reduction Act* (TRA), including Toxic Substance Reduction Planner (Planner) certification of Phase II Toxic Substance Reduction Plans (the Plans).

The following Planner Certification Statement which is made under s.19.1(4) of Ontario Regulation (O.Reg.) 455/09 (as amended by s.11 of O.Reg.214/11) satisfies the Planner Certification requirements for the Plans that are assembled as a single document as of the date of this Certification Statement. Furthermore, the following Certification Statement is limited to the respective versions of the Plans which are dated as indicated in the Certification Statement:

> *As of December 18, 2013, I, James McEvoy certify that I am familiar with the processes at the Lafarge Canada Inc. Stoney Creek Grinding Terminal located at 360 Jones Road in Stoney Creek, Ontario that uses the toxic substances referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the Toxics Reduction Act, 2009 that are set out in the toxic substance reduction plans referred to below for the toxic substances and that the plans comply with that Act and Ontario Regulation 455/09 (General) made under that Act.*

- *PM_{10} (dated, December 18, 2013)*
- *$PM_{2.5}$ (dated, December 18, 2013)*

_____ December 18, 2013_____

James McEvoy
Toxic Substance Reduction Planner
License No. TSRP0288

Date

JDM/ng