

**Axens Canada Specialty  
Aluminas Inc.  
Toxic Substance Reduction  
Plan Summary for Particulate  
Matter  $\leq 2.5 \mu\text{m}$**



Prepared for:  
Axens Canada Specialty  
Aluminas Inc.

Prepared by:  
Stantec Consulting Ltd.

December 18, 2013

## Sign-off Sheet

This document entitled Axens Canada Specialty Aluminas Inc. Toxic Substantec Reduction Plan Summary for Particulate Matter  $\leq 2.5 \mu\text{m}$  was prepared by Stantec Consulting Ltd. for the account of Axens Canada Specialty Aluminas Inc. The material in it reflects Stantec's best judgment in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibilities of such third parties. Stantec Consulting Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.



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**AXENS CANADA SPECIALTY ALUMINAS INC.  
TOXIC SUBSTANCE REDUCTION PLAN SUMMARY FOR PARTICULATE MATTER ≤ 2.5 µM**

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TOXIC SUBSTANCE REDUCTION PLAN SUMMARY FOR PARTICULATE MATTER  $\leq 2.5 \mu\text{M}$**

INTRODUCTION AND BASIC FACILITY INFORMATION  
December 18, 2013

**1.0 INTRODUCTION AND BASIC FACILITY INFORMATION**

This Toxics Reduction Plan Summary was prepared to meet the requirements of the Ontario Toxics Reduction Act (2009) (TRA) and Ontario Regulation 455/09 (the Regulation) for the Axens Canada Specialty Aluminas Inc. (Axens) facility located at 4000 Development Drive in Brockville, Ontario. The subject toxic substance is particulate matter of diameter less than or equal to  $2.5 \mu\text{m}$  ( $\text{PM}_{2.5}$ ) present at the facility.

The TRA and the Regulation require regulated facilities to undertake toxic substance accounting to better understand the quantities of toxic substances that are used, created, transformed, destroyed, released, and disposed of. As this substance is a criteria air contaminant listed in Part 4 of Schedule 1 of National Pollutant Release Inventory (NPRI) notices, the quantity of substance contained in product does not need to be evaluated under the TRA and the Regulation. For each substance, regulated facilities must develop a plan that examines how the amount of the substance used or created at the facility could be reduced or eliminated by implementing technically and economically feasible toxic substance reduction options. Axens has also prepared a plan for total particulate matter (PM) and a plan for particulate matter of diameter less than or equal to  $10 \mu\text{m}$  ( $\text{PM}_{10}$ ).

This plan summary is accurate, up to date and reflects the current version of the plan (Axens Canada Specialty Aluminas Inc., Toxic Substance Reduction Plan for Particulate Matter  $\leq 2.5 \mu\text{m}$ , dated December 18, 2013).

**1.1 BASIC FACILITY INFORMATION**

Basic information of the subject facility is provided in Table 1.1 below.

**Table 1.1 Basic Facility Information**

<b>Facility Information</b>	
Company Name:	Axens Canada Specialty Aluminas Inc.
Facility Name:	Brockville Activated Alumina Plant
NPRI Identification Number:	11651
NAICS 2 Code:	32 - Manufacturing
NAICS 4 Code:	3259 - Other Chemical Product Manufacturing
NAICS 6 Code:	325999 - All Other Miscellaneous Chemical Product Manufacturing
Number of Full-time Employees:	54
Spatial Coordinates:	Latitude: 44.6243 Longitude: -77.7017
Datum:	1983
<b>Parent Company Information</b>	
Legal Name of Parent Company:	Axens Canada Specialty Aluminas Inc.



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INTRODUCTION AND BASIC FACILITY INFORMATION  
December 18, 2013

Address of Parent Company:	666 Burrard St Park Place, No. Suite 1700 Vancouver, BC
Percentage of Facility Owned by Company:	100%
<b>Toxic Substances for Which Facility Must Prepare Plan:</b>	
Substance (CAS)	Particulate Matter (NA – M08) Particulate Matter ≤ 10 µm (NA – M09) Particulate Matter ≤ 2.5 µm (NA – M10)
<b>Person Who Certified the Plan and Made Plan Recommendations</b>	
Name:	Gizem Gunal-Akgol
TSRP License Number:	TSRP0238
<b>Public Contact</b>	
Name:	Jack Flannagan
Position:	General Manager
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**AXENS CANADA SPECIALTY ALUMINAS INC.**  
**TOXIC SUBSTANCE REDUCTION PLAN SUMMARY FOR PARTICULATE MATTER  $\leq 2.5 \mu\text{M}$**

STATEMENT OF INTENT AND OBJECTIVES  
December 18, 2013

## **2.0 STATEMENT OF INTENT AND OBJECTIVES**

Particulate matter of diameter less than or equal to  $2.5 \mu\text{m}$  ( $\text{PM}_{2.5}$ ) is the subject toxic substance of this plan. The Axens facility is a producer of activated alumina products. No  $\text{PM}_{2.5}$  enters the process via raw materials or other channels.  $\text{PM}_{2.5}$  is created during processing of raw materials and products as well as during fuel combustion and welding operations. Some of the  $\text{PM}_{2.5}$  created during the process is recycled onsite and reused. The  $\text{PM}_{2.5}$  also exits the process via releases to air, off-site disposal and off-site recycling.

Axens does not currently intend to implement any toxics reduction options for  $\text{PM}_{2.5}$  due to the limitations on the materials and products imposed by the equipment and the customers, and because of the currently implemented procedures and equipment already in place to minimize the creation of toxics. These initiatives include:

- Use of clean-burning natural gas for most of the on-site combustion activities;
- Creation of a Best Management Practices Plan for the Operation and Maintenance of Processes with Significant Environmental Aspects;
- Creation of a Best Management Practices Plan for the Control of Fugitive Dust Emissions;
- Employment of full-time maintenance personnel;
- Use of onsite recycling of  $\text{PM}_{2.5}$ ;
- Training of forklift, welding and other process operators on standard procedures;
- Training of supervisors on facility best management practices;
- Training of pelletizer operators for  $\text{PM}_{2.5}$  minimization;
- Documentation of training received and maintenance of training database; and,
- Documentation of best management practices effectiveness.

These initiatives form the basis of this plan and the facility's current toxics reduction efforts.

**AXENS CANADA SPECIALTY ALUMINAS INC.  
TOXIC SUBSTANCE REDUCTION PLAN SUMMARY FOR PARTICULATE MATTER  $\leq 2.5 \mu\text{M}$**

PLAN CERTIFICATIONS  
December 18, 2013

### 3.0 PLAN CERTIFICATIONS

#### CERTIFICATION BY HIGHEST RANKING EMPLOYEE

As of December 18, 2013, I, Jack Flannagan, certify that I have read the toxic substance reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the Toxics Reduction Act, 2009 and Ontario Regulation 455/09 (General) made under that Act.

Toxic Substance: Particulate Matter  $\leq 10 \mu\text{m}$  (PM<sub>2.5</sub>: NA – M10)



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Date

#### CERTIFICATION BY LICENSED PLANNER

As of December 18, 2013, I, Gizem Gunal-Akgol certify that I am familiar with the processes at Axens Canada Specialty Aluminas Inc.'s Brockville Activated Alumina Plant that use or create the toxic substance 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 plan dated October 1, 2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

Toxic Substance: Particulate Matter  $\leq 10 \mu\text{m}$  (PM<sub>2.5</sub>: NA – M10)



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December 18<sup>th</sup>, 2013

Date

