

**Axens Canada Specialty
Aluminas Inc.
Toxic Substance Reduction
Plan Summary for Particulate
Matter $\leq 10 \mu\text{m}$**



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 $\leq 10 \mu\text{m}$ 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.



Prepared by _____

Gizem Gunal-Akgol, P.Eng.

Atmospheric Engineer

Tel: (519) 569-8126

Fax: (519) 579-4239

ggunalakgol@stantec.com



Reviewed by _____

Nicole Flanagan, M.A.Sc., P.Eng.

Senior Atmospheric Engineer

Tel: (613) 738-6086

Fax: (613) 738-0721

nicole.flanagan@stantec.com

**AXENS CANADA SPECIALTY ALUMINAS INC.
TOXIC SUBSTANCE REDUCTION PLAN SUMMARY FOR PARTICULATE MATTER ≤ 10 µM**

Table of Contents

1.0 INTRODUCTION AND BASIC FACILITY INFORMATION 1
1.1 BASIC FACILITY INFORMATION 1

2.0 STATEMENT OF INTENT AND OBJECTIVES 3

3.0 PLAN CERTIFICATIONS 4
CERTIFICATION BY HIGHEST RANKING EMPLOYEE..... 4

LIST OF TABLES

Table 1.1 Basic Facility Information 1

**AXENS CANADA SPECIALTY ALUMINAS INC.
TOXIC SUBSTANCE REDUCTION PLAN SUMMARY FOR PARTICULATE MATTER ≤ 10 µM**

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 10 µm (PM₁₀) 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 2.5 µm (PM_{2.5}).

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 ≤ 10 µm, 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

Facility Information	
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
Parent Company Information	
Legal Name of Parent Company:	Axens Canada Specialty Aluminas Inc.



**AXENS CANADA SPECIALTY ALUMINAS INC.
TOXIC SUBSTANCE REDUCTION PLAN SUMMARY FOR PARTICULATE MATTER ≤ 10 µm**

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%
Toxic Substances for Which Facility Must Prepare Plan:	
Substance (CAS)	Particulate Matter (NA – M08) Particulate Matter ≤ 10 µm (NA – M09) Particulate Matter ≤ 2.5 µm (NA – M10)
Person Who Certified the Plan and Made Plan Recommendations	
Name:	Gizem Gunal-Akgol
TSRP License Number:	TSRP0238
Public Contact	
Name:	Jack Flannagan
Position:	General Manager
Address:	P.O. Box 250 Brockville, Ontario K6V 5V5
Phone Number:	613-342-6943 ext. 240
Fax Number:	613-342-6943
E-mail:	jflannagan@axenscanada.com

**AXENS CANADA SPECIALTY ALUMINAS INC.
TOXIC SUBSTANCE REDUCTION PLAN SUMMARY FOR PARTICULATE MATTER $\leq 10 \mu\text{m}$**

STATEMENT OF INTENT AND OBJECTIVES
December 18, 2013

2.0 STATEMENT OF INTENT AND OBJECTIVES

Particulate matter of diameter less than or equal to $10 \mu\text{m}$ (PM_{10}) is the subject toxic substance of this plan. The Axens facility is a producer of activated alumina products. No PM_{10} enters the process via raw materials or other channels. PM_{10} is created during processing of raw materials and products as well as during fuel combustion and welding operations. Some of the PM_{10} created during the process is recycled onsite and reused. The PM_{10} 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 PM_{10} 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 PM_{10} ;
- Training of forklift, welding and other process operators on standard procedures;
- Training of supervisors on facility best management practices;
- Training of pelletizer operators for PM_{10} 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 $\leq 10 \mu\text{M}$**

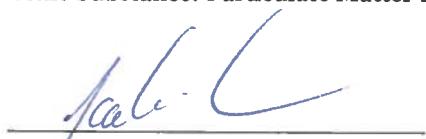
PLAN CERTIFICATIONS
December 18, 2013

3.0 PLAN CERTIFICATIONS

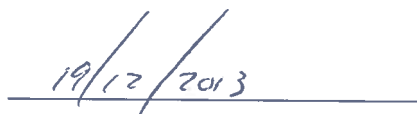
CERTIFICATION BY HIGHEST RANKING EMPLOYEE

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 $\leq 10 \mu\text{m}$ (PM₁₀: NA – M09)



Jack Flannagan
General Manager
4000 Development Drive,
Brockville, Ontario K6V 5V5
(613) 342-6943 Ext. 240
jflannagan@axenscanada.com



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 $\leq 10 \mu\text{m}$ (PM₁₀: NA – M09)



Gizem Gunal-Akgol, P.Eng. (Planner License No. TSRP0238)
Atmospheric Engineer, Stantec Consulting Ltd.
49 Frederick Street
Kitchener, ON N2H 6M7
Phone: (519) 569-8126
ggunalakgol@stantec.com

December 18th, 2013

Date

