



**Axens Canada Specialty
Aluminas Inc.**

Toxic Substance Annual Report for
Particulate Matter $\leq 2.5 \mu\text{m}$

September 30, 2021

Prepared for:

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Project No. 160925073

Sign-off Sheet

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1.0 INTRODUCTION AND BASIC FACILITY INFORMATION

This Toxics Reduction Annual Report 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 μm ($\text{PM}_{2.5}$) 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 μm (PM_{10}).

This Annual Report is for $\text{PM}_{2.5}$ in the 2020 reporting year and 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

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:	61
Spatial Coordinates:	Latitude: 44.6243 Longitude: -77.7017
Datum:	1983



AXENS CANADA SPECIALTY ALUMINAS INC.

Introduction and Basic Facility Information
 September 30, 2021

Table 1.1: Basic Facility Information

Facility Information	
Parent Company Information	
Legal Name of Parent Company:	Axens Canada Specialty Aluminas Inc.
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
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2.0 STATEMENT OF INTENT AND OBJECTIVES

Total Particulate Matter $\leq 2.5 \mu\text{m}$ ($\text{PM}_{2.5}$) is the subject toxic substance of the Annual Report. 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. The $\text{PM}_{2.5}$ also exits the process via releases to air.

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 the current plan and the facility's current toxics reduction efforts.



3.0 SUMMARY OF FACILITY-WIDE ACCOUNTING INFORMATION

Facility-wide quantification data determined as a result of the toxic substance accounting performed for PM_{2.5} for the year 2020 is outlined in the table below.

Table 3.1: Facility-Wide Accounting

Category	Quantity Range (tonnes)
Enters Process	0
Created	100 to 1,000
On-site Release to Air	10 to 100
Disposals to Off-site Facilities	Not applicable
Transfer to Off-site Recycling	Not applicable
Transformed	Not applicable
Contained in Product	Not applicable



4.0 PLAN PROGRESS

The following table is a summary of the changes in the quantity of PM_{2.5} accounted for at the facility between 2019 and 2020.

Table 4.1: Change in PM_{2.5} Quantities between 2019 and 2020

Category	Change % (tonnes)
Enters Process	Not applicable
Created	19% decrease (221 tonnes)
On-site Release to Air	7.9% decrease (0.9 tonnes)
Disposals to Off-site Facilities	Not applicable
Transfer to Off-site Recycling	Not applicable
Transformed	Not applicable
Contained in Product	Not applicable

There were no significant changes to the facility's processes. Differences in the quantity of PM accounted for at the facility are due to changes in production levels. No changes were made to the Toxic Substance Reduction Plan for Particulate Matter ≤ 2.5 µm, dated December 18, 2013.

