

**Toxic Substance Reduction Plan – 2015 Annual Public Report**

**Novelis Inc. – Kingston Works**

## General Facility Information

<b>Legal Name of Company</b>	Novelis Inc.
<b>Company Street Address/Mailing Address</b>	Novelis Corporation (100% ownership) 3560 Lenox Road, Suite 2000, Atlanta, GA, United States 30326
<b>Facility Street Address/Mailing Address</b>	1 Lappan's Lane, Kingston, Ontario, Canada K7L 4Z5
<b>NPRI Identification Number</b>	4197
<b>Reg. 127 Reporting ID Number</b>	Not applicable
<b>Number of Full-Time Employees</b>	250
<b>NAICS code</b>	(Two-digit): .... 31-33 (Four-digit): ... 3313 (Six-digit): ..... 331317
<b>Spatial Co-ordinates of Facility</b>	(44.2498, -76.5153) – NAD83 Datum
<b>Public Contact Person</b>	Mr. Jacob Czyz, Plant Manager Telephone: (613) 541-7056 Facsimile: (613) 541-7003

## Toxic Substances Present

List of Toxic Substances Present at Facility	CAS Registry Number
Manganese, and its compounds	Not applicable
White Mineral Oil	8042-47-5
Particulate Matter <= 10 microns, PM10	Not applicable
Particulate Matter <= 2.5 microns, PM2.5	Not applicable
Sulphuric Acid	7664-93-9

## Planner Information

The Toxic Substance Reduction (TSR) Plans were certified by Mr. Frankie Man, Ms. Danielle Arsenault, and Mr. Matthew Costigane of AECOM, each a licensed Toxic Substance Reduction Planner. Reduction option recommendations for each TSR Plan were also provided by each TSR Planner, in consultation with Novelis. The planners' license information is provided below.

<b>Name</b>	<b>Frankie Man</b>
<b>Company</b>	AECOM
<b>License Number</b>	TSRP0177
<b>Plan(s) Certified</b>	Manganese, and its compounds

<b>Name</b>	<b>Danielle Arsenault</b>
<b>Company</b>	AECOM
<b>License Number</b>	TSRP0289
<b>Plan(s) Certified</b>	White Mineral Oil; Particulate Matter <= 10 microns, PM10; Particulate Matter <= 2.5 microns, PM2.5

<b>Name</b>	<b>Matthew Costigane</b>
<b>Company</b>	AECOM
<b>License Number</b>	TSRP0082
<b>Plan(s) Certified</b>	Sulphuric Acid

## **Manganese (and its compounds), CAS No. not available**

### **Statement of Intent**

As manganese is used to achieve specific performance properties in finished aluminum alloy metals, which are specified by customers and manufactured off-site, the Novelis Facility in Kingston is not in a position that would easily allow it to pursue reduction options. As such, the Facility does not intend to pursue reduction in the use or creation of manganese at the Facility in its alloys. However, Novelis is committed to reducing the generation of scrap in its converting process in an effort to reduce the quantity of rework required off-site by the aluminum alloy manufacturers.

### **Objectives of Plan and Toxic Reduction Target**

In light of the Statement of Intent above, Novelis' objectives are to reduce the creation of scrap alloys and manganese-containing wastes to the greatest extent that circumstances permit, and to prioritize the treatment of waste in the order of reuse, recycling, and disposal.

### **Description of Manganese Use at Facility**

The majority of manganese is contained within the coiled aluminum sheets delivered to and processed at the Facility. The desired thickness of the aluminum alloy sheets is obtained by pressing the alloy sheets through steel work rolls. The aluminium coil production process includes receiving, cold rolling, annealing/heat treatment, finishing, and delivery, including quality assurances and controls throughout.

### **Toxic Reduction Options**

The Facility reviewed and considered potential options in each of the seven (7) reduction options categories. No technically feasible or economically viable options were identified.

### **Implementation Plan**

Since no options were identified for implementation, a timeline was not prepared.

### **Plan Summary**

This plan summary accurately reflects the contents of the Facility's Toxic Substance Reduction Plan that was prepared by AECOM for manganese and its compounds, dated November 16, 2012.

**Manganese (and its compounds), CAS No. not available**

<b>Toxic Substance Accounting on a Facility Wide Basis</b>	<b>2014</b>	<b>2015</b>	<b>Comparison (%)</b>	<b>Comparison (tonnes)</b>	<b>Reason</b>
Amount of substance that entered the Facility as the substance itself or as a constituent of another substance:	>100 to 1000 tonnes	>100 to 1000 tonnes	26% decrease from 2014	>10 to 100 tonnes	Lower Manganese content in raw material
Amount of substance that was created at the Facility:	0 tonnes	0 tonnes	No change	-	-
Amount of substance that was contained in product:	>100 to 1000 tonnes	>100 to 1000 tonnes	40% decrease from 2014	>10 to 100 tonnes	Lower Manganese content in product material

On-site releases from the Facility to: air, water, land, on-site and off-site disposal, off-site recycling (if applicable) can be viewed by searching for this facility at <http://www.ec.gc.ca/inrp-npri/>

## **White Mineral Oil, CAS No. 8042-47-5**

### **Statement of Intent**

Novelis strives to maintain compliance with municipal, provincial and federal law, as well as any corporate requirements with respect to the control of its environmental aspects. Novelis is committed to optimizing the usage of the white mineral oil to ensure that all releases via air and waste are minimized. White mineral oil is the main component in its lubricant which is essential to the production of its aluminum coil products. At this time, Novelis cannot implement any technically and economically feasible reduction options to reduce its use of white mineral oil.

### **Objectives of Plan and Toxic Reduction Target**

Novelis will continue to strive to optimize the usage of white mineral oil through reclaiming the substance on-site and distilling it for further use. Efforts already implemented by Novelis reflect standard and best management industry practices, including implementation of ISO 14001 and waste management and reduction as part of the Facility's objective of continual improvement. No specific reduction target has been set for the toxic reduction of white mineral oil.

### **Description of White Mineral Oil Use at Facility**

The white mineral oil is applied at the rolling operations and at the finishing line to provide lubrication and reduce friction.

### **Toxic Reduction Options**

The Facility reviewed and considered potential options in each of the seven (7) reduction options categories. No technically feasible or economically viable options were identified.

### **Implementation Plan**

Since no options were identified for implementation, a timeline was not prepared.

### **Plan Summary**

This plan summary accurately reflects the contents of the Facility's Toxic Substance Reduction Plan that was prepared by AECOM for white mineral oil, dated December 6, 2013.

**White Mineral Oil, CAS No. 8042-47-5**

<b>Toxic Substance Accounting on a Facility Wide Basis</b>	<b>2014</b>	<b>2015</b>	<b>Comparison (%)</b>	<b>Comparison (tonnes)</b>	<b>Reason</b>
Amount of substance that entered the Facility as the substance itself or as a constituent of another substance:	>100 to 1000 tonnes	>100 to 1000 tonnes	10% increase since 2014	>10 to 100 tonnes	Increase in raw material containing white mineral oil purchased
Amount of substance that was created at the Facility:	0 tonnes	0 tonnes	No change	-	-
Amount of substance that was contained in product:	0 tonnes	0 tonnes	No change	-	-

On-site releases from the Facility to: air, water, land, on-site and off-site disposal, off-site recycling (if applicable) can be viewed by searching for this facility at <http://www.ec.gc.ca/inrp-npri/>

## **Particulate Matter <= 10 microns (PM10), CAS No. not available**

### **Statement of Intent**

Novelis strives to maintain compliance with municipal, provincial and federal law, as well as any corporate requirements with respect to the control of its environmental aspects. Novelis is committed to optimizing the usage of its equipment and fuel, and maintaining the equipment in excellent working order to ensure all releases of particulate matter less than 10 microns (PM10) to air are minimized. At this time, Novelis cannot implement any technically and economically feasible reduction options to reduce its creation of PM10.

### **Objectives of Plan and Toxic Reduction Target**

Novelis will continue to strive to optimize the usage of equipment that releases PM10 through preventative maintenance and using the equipment only when needed. Efforts already implemented by Novelis reflect standard and best management industry practices, including implementation of ISO 14001 and waste management and reduction as part of the Facility's objective of continual improvement. No specific reduction target has been set for the toxic reduction of PM10.

### **Description of PM10 Creation at Facility**

This substance is created by the operation of combustion equipment that utilizes natural gas and diesel fuels for the purposes of process heat, comfort heating and for emergency power. It is also emitted as an air release from the Cold Mill production operations and from the use of two cooling towers on-site. In addition, it is generated from maintenance welding activities.

### **Toxic Reduction Options**

The Facility reviewed and considered potential options in each of the seven (7) reduction options categories. No technically feasible or economically viable options were identified.

### **Implementation Plan**

Since no options were identified for implementation, a timeline was not prepared.

### **Plan Summary**

This plan summary accurately reflects the contents of the Facility's Toxic Substance Reduction Plan that was prepared by AECOM for PM10, dated December 6, 2013.

**Particulate Matter <= 10 microns (PM10), CAS No. not available**

<b>Toxic Substance Accounting on a Facility Wide Basis</b>	<b>2014</b>	<b>2015</b>	<b>Comparison (%)</b>	<b>Comparison (tonnes)</b>	<b>Reason</b>
Amount of substance that entered the Facility as the substance itself or as a constituent of another substance:	0 tonnes	0 tonnes	No change	-	-
Amount of substance that was created at the Facility:	>1 to 10 tonnes	>1 to 10 tonnes	1% decrease since 2014	> 0 to 1 tonne	Decrease in natural gas combusted
Amount of substance that was contained in product:	0 tonnes	0 tonnes	No change	-	-

On-site releases from the Facility to: air, water, land, on-site and off-site disposal, off-site recycling (if applicable) can be viewed by searching for this facility at <http://www.ec.gc.ca/inrp-npri/>

## **Particulate Matter <= 2.5 microns (PM2.5), CAS No. not available**

### **Statement of Intent**

Novelis strives to maintain compliance with municipal, provincial and federal law, as well as any corporate requirements with respect to the control of its environmental aspects. Novelis is committed to optimizing the usage of its equipment and fuel, and maintaining the equipment in excellent working order to ensure all releases of particulate matter less than 2.5 microns (PM2.5) to air are minimized. At this time, Novelis cannot implement any technically and economically feasible reduction options to reduce its creation of PM2.5.

### **Objectives of Plan and Toxic Reduction Target**

Novelis will continue to strive to optimize the usage of equipment that releases PM2.5 through preventative maintenance and using the equipment only when needed. Efforts already implemented by Novelis reflect standard and best management industry practices, including implementation of ISO 14001 and waste management and reduction as part of the Facility's objective of continual improvement. No specific reduction target has been set for the toxic reduction of PM2.5.

### **Description of PM2.5 Creation at Facility**

This substance is mainly created by the operation of combustion equipment that utilizes natural gas and diesel fuels for the purposes of process heat, comfort heating and for emergency power. It is also released as an air emission from the Cold Mill operations.

### **Toxic Reduction Options**

The Facility reviewed and considered potential options in each of the seven (7) reduction options categories. No technically feasible or economically viable options were identified.

### **Implementation Plan**

Since no options were identified for implementation, a timeline was not prepared.

### **Plan Summary**

This plan summary accurately reflects the contents of the Facility's Toxic Substance Reduction Plan that was prepared by AECOM for PM2.5, dated December 6, 2013.

**Particulate Matter <= 2.5 microns (PM2.5), CAS No. not available**

<b>Toxic Substance Accounting on a Facility Wide Basis</b>	<b>2014</b>	<b>2015</b>	<b>Comparison (%)</b>	<b>Comparison (tonnes)</b>	<b>Reason</b>
Amount of substance that entered the Facility as the substance itself or as a constituent of another substance:	0 tonnes	0 tonnes	No change	-	-
Amount of substance that was created at the Facility:	> 0 to 1 tonne	> 0 to 1 tonne	6% decrease since 2014	> 0 to 1 tonne	Decrease in natural gas combusted
Amount of substance that was contained in product:	0 tonnes	0 tonnes	No change	-	-

On-site releases from the Facility to: air, water, land, on-site and off-site disposal, off-site recycling (if applicable) can be viewed by searching for this facility at <http://www.ec.gc.ca/inrp-npri/>

## **Sulphuric Acid, CAS No. 7664-93-9**

### **Statement of Intent**

Novelis strives to maintain compliance with local, provincial and federal law, as well as any corporate requirements with respect to the control of its environmental aspects. Novelis is committed to optimizing the usage of sulphuric acid to ensure that there are no releases and that the entire quantity is destroyed through neutralization. Sulphuric acid is used as a cleaning agent at the Finishing Line operations.

Sulphuric acid is fully neutralized (destroyed) through pH adjustment of process water before leaving the treatment facility, entering the natural environment. At this time, Novelis cannot implement any technically and economically feasible reduction options to reduce its use of sulphuric acid.

### **Objectives of Plan and Toxic Reduction Target**

Novelis will continue to strive to optimize the usage of sulphuric acid through accurate dosing/metering. Efforts already implemented by Novelis reflect standard and best management industry practices, including implementation of ISO 14001 and waste management and reduction as part of the Facility's objective of continual improvement.

### **Description of Sulphuric Acid Destruction at Facility**

This substance is fully neutralized (destroyed) through pH adjustment of process water before leaving the treatment facility.

### **Toxic Reduction Options**

The Facility reviewed and considered potential options in each of the seven (7) reduction options categories. No technically feasible or economically viable options were identified.

### **Implementation Plan**

Since no options were identified for implementation, a timeline was not prepared.

### **Plan Summary**

This plan summary accurately reflects the contents of the Facility's Toxic Substance Reduction Plan that was prepared by AECOM for Sulphuric Acid, dated July 10, 2015.

**Sulphuric Acid, CAS No. 7664-93-9**

<b>Toxic Substance Accounting on a Facility Wide Basis</b>	<b>2014</b>	<b>2015</b>	<b>Comparison (%)</b>	<b>Comparison (tonnes)</b>	<b>Reason</b>
Amount of substance that entered the Facility as the substance itself or as a constituent of another substance:	>10 to 100 tonnes	>10 to 100 tonnes	8% increase since 2014	> 0 to 1 tonne	Increased use for cleaning of final product (as per client specification)
Amount of substance that was created at the Facility:	0 tonnes	0 tonnes	No change	-	-
Amount of substance that was contained in product:	0 tonnes	0 tonnes	No change	-	-
Amount of substance that was destroyed at the Facility:	>10 to 100 tonnes	>10 to 100 tonnes	8% increase since 2014	> 0 to 1 tonne	Increased use for cleaning of final product (as per client specification)

On-site releases from the Facility to: air, water, land, on-site and off-site disposal, off-site recycling (if applicable) can be viewed by searching for this facility at <http://www.ec.gc.ca/inrp-npri/>

**2015 Certification Statement from Highest Ranking Employee**

CAS RN	Substance Name	Reductions due to additional actions taken	Quantity
8042-47-5	White mineral oil	The amount of reduction in <b>release to air</b> of the substance at the facility during the reporting period that resulted due to the additional actions.	
8042-47-5	White mineral oil	The amount of reduction in <b>release to water</b> of the substance at the facility during the reporting period that resulted due to the additional actions.	
8042-47-5	White mineral oil	The amount of reduction in <b>release to land</b> of the substance at the facility during the reporting period that resulted due to additional actions.	
8042-47-5	White mineral oil	The amount of reduction in the substance <b>disposed on-site</b> (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions.	
8042-47-5	White mineral oil	The amount of reduction in the substance <b>disposed off-site</b> (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions.	
8042-47-5	White mineral oil	The amount of reduction in the substance <b>recycled off-site</b> at the facility during the reporting period that resulted due to the additional actions.	

## Progress on TRA Plan - Amendments

CAS RN	Substance Name	Were any amendments made to the toxic substance reduction plan during the reporting period	Description any amendments that were made to the toxic substance reduction plan during the reporting period	Provide a public summary of the description of any amendments that were made to the toxic substance reduction plan during the reporting period
NA - 09	Manganese (and its compounds)	No		
NA - M09	PM10 - Particulate Matter <= 10 Microns	No		
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No		
7664-93-9	Sulphuric acid	No		
8042-47-5	White mineral oil	No		

## Report Submission and Electronic Certification

### NPRI - Electronic Statement of Certification

Specify the language of correspondence

English

Comments (optional)

I hereby certify that I have exercised due diligence to ensure that the submitted information is true and complete. The amounts and values for the facility(ies) identified below are accurate, based on reasonable estimates using available data. The data for the facility(ies) that I represent are hereby submitted to the programs identified below using the Single Window Reporting Application.

I also acknowledge that the data will be made public.

Note: Only the person identified as the Certifying Official or the authorized delegate should submit the report(s) identified below.

Company Name

Novelis Inc.

Certifying Official (or authorized delegate)

Jacob Czyz

Report Submitted by

Audethy Tallack

I, the Certifying Official or authorized delegate, agree with the statements above and acknowledge that by pressing the "Submit Report(s)" button, I am electronically certifying and submitting the facility report(s) for the identified company to its affiliated programs.

### ON MOE TRA - Electronic Certification Statement

#### Annual Report Certification Statement

As of 5/5/2016, I, Jacob Czyz, 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.

#### TRA Substance List

CAS RN

Substance Name

NA - M09

PM10 - Particulate Matter <= 10 Microns

NA - M10

PM2.5 - Particulate Matter <= 2.5 Microns

NA - M16

Volatile Organic Compounds (VOCs)

7664-93-9

Sulphuric acid

NA - 09

Manganese (and its compounds)

Company Name

Novelis Inc.

Highest Ranking Employee

Jacob Czyz

Report Submitted by

Audethy Tallack

Website address

I, the highest ranking employee, agree with the certification statement(s) above and acknowledge that by checking the box I am electronically signing the statement(s). I also acknowledge that by pressing the 'Submit Report(s)' button I am submitting the facility record(s)/report(s) for the identified facility to the Director under the Toxics Reduction Act, 2009. I also acknowledge that the Toxics Reduction Act, 2009 and Ontario Regulation 455/09 provide the authority to the Director under the Act to make certain information as specified in subsection 27(5) of Ontario Regulation 455/09 available to the public.

Submitted Report

Period	Submission Date	Facility Name	Province	City	Programs
2015	5/5/2016	Kingston Works	Ontario	Kingston	NPRI,ON MOE TRA

Note: If there is a change in the contact information for the facility, a change in the owner or operator of the facility, if operations at the facility are terminated, or if information submitted for any previous year was mistaken or inaccurate, please update this information through SWIM or by contacting the National Pollutant Release Inventory directly.

Version:



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