

The Toxics Reduction Act (the Act) and associated Ontario Regulation 455/09 (O. Reg. 455/09) was introduced in the Province of Ontario in 2010; the Act requires regulated facilities to complete the following tasks.

1. Track, quantify and report annually on the toxic substances they use, create, release, dispose, transfer and contain in products.
2. Develop plans to reduce the use and creation of these substances.
3. Make annual reports and summaries of their plans available to their employees and the public.

## Section 1: General Facility Information

<b>Business Name:</b>	<b>Bombardier Inc.</b>
<b>Street / Mailing Address:</b>	800 Rene-Leveque Boulevard, Montreal, Quebec H3B 1Y8
<b>% Ownership:</b>	100%
<b>Facility Name:</b>	<b>Bombardier Inc. Thunder Bay Plant.</b>
<b>Street / Mailing Address:</b>	1001 Montreal Street, Thunder Bay, Ontario P7C 4V6
<b>2 Digit, 4 Digit and 6 Digit NAICS ID:</b>	33, 3365, 336510
<b>NPRI ID:</b>	0000005601
<b>UTM Easting / UTM Northing:</b>	328397 / 5359686
<b>Number of Employees:</b>	1137
<b>Public/Technical Contact:</b>	<b>Lindsay Fenton</b> Director of Technical Services 1001 Montreal Street Thunder Bay, Ontario P7C 4V6 (807) 475-2800
<b>Company Certifying Official:</b>	<b>Lindsay Fenton</b> Head of Technical Services 1001 Montreal Street Thunder Bay, Ontario P7C 4V6 (807) 475-2800
<b>Company Highest Ranking Employee:</b>	<b>David Black</b> General Manager 1001 Montreal Street Thunder Bay, Ontario P7C 4V6 (807) 475-1862

## Section 2: Prescribed Toxic Substances On-Site

Eighteen (18) toxic substances were identified to be reported on a facility wide basis under O. Reg. 455/09. A summary of the substances is provided in Table 1 below. A summary of the reasons for changes in quantification of substances between calendar years is also provided on the following page.

TRA Exit records were completed for **PM2.5, Selenium (and its compounds)** and **Hydrotreated Light Distillate**.

**Table 1:** Substances Reported on a Facility Wide Basis

Substance Name	Reporting Year	CAS	Use	Creation	Contained in Product	Releases to Air	Transfers	Disposals
			tonnes					
Chromium (and its compounds)	2018	NA-04	32.03	0	32.03	0.0021	14.34	0.0966
	2017		30.79	0	30.79	0.0079	20.00	0.0788
	Change		1.24	0	1.24	-0.0058	-5.66	0.0178
	% Change		4.03%	0	4.03%	-73.42%	-28.30%	22.59%
Copper (and its compounds)	2018	NA-06	24.84	0	24.84	0.010	54.97	0.0003
	2017		33.31	0	33.31	0.014	58.40	0.0003
	Change		-8.47	0	-8.47	-0.004	-3.43	0
	% Change		-25.43%	0	-25.43%	-28.57%	-5.87%	0%
Hydrotreated Heavy Naphtha	2018	64742-48-9	2.50	0	0	2.50	0	0
	2017		2.21	0	0	2.21	0	0
	Change		0.29	0	0	0.29	0	0
	% Change		13.12%	0	0	13.12%	0	0
Ethyl Acetate	2018	141-78-6	12.13	0	0	12.13	0	0
	2017		7.70	0	0	7.70	0	0
	Change		4.43	0	0	4.43	0	0
	% Change		57.53%	0	0	57.53%	0	0
Isopropyl Alcohol	2018	67-63-0	6.33	0	0	6.33	0	0
	2017		4.87	0	0	4.87	0	0
	Change		1.46	0	0	1.46	0	0
	% Change		29.98%	0	0	29.98%	0	0
Manganese (and its compounds)	2018	NA-09	17.98	0	17.98	0.008	5.45	0.0006
	2017		15.90	0	15.90	0.014	17.27	0.0006
	Change		2.08	0	2.08	-0.006	-11.82	0
	% Change		13.08%	0	13.08%	-42.86	-68.44%	0%
Methanol	2018	67-56-1	5.38	0	0	5.38	0	0
	2017		9.67	0	0	9.67	0	0
	Change		-4.29	0	0	-4.29	0	0
	% Change		-44.36%	0	0	-44.36%	0	0
Methyl Ethyl Ketone	2018	78-93-3	15.32	0	0	15.32	6.85	0
	2017		12.65	0	0	12.65	6.56	0
	Change		2.67	0	0	2.67	0.29	0
	% Change		21.11%	0	0	21.11%	4.42%	0
Nickel (and its compounds)	2018	NA-11	38.68	0	38.68	0.010	16.50	0.0014
	2017		41.05	0	41.05	0.016	24.15	0.0016
	Change		-2.37	0	-2.37	-0.006	-7.65	0.0002
	% Change		-5.77%	0	-5.77%	-37.50%	-31.68%	-12.50%
Zinc (and its compounds)	2018	NA-14	43.38	0	43.38	0.022	6.50	0.0001
	2017		43.21	0	43.21	0.029	3.91	0.0001
	Change		0.17	0	0.17	-0.007	2.59	0
	% Change		0.39%	0	0.39%	-24.14%	-66.24%	0%

Substance Name	Reporting Year	CAS	Use	Creation	Contained in Product	Releases to Air	Transfers	Disposals
			tonnes					
PM10 [2]	2018	NA-M09	0	1.2328	0	1.2328	0	0
	2017		0	1.190	0	1.190	0	0
	Change		0	0.0428	0	0.0428	0	0
	% Change		0	3.60%	0	3.60%	0	0
Solvent Naphtha Medium Aliphatic	2018	64742-88-7	4.48	0	0	4.48	0	0
	2017		2.40	0	0	2.40	0	0
	Change		2.08	0	0	2.08	0	0
	% Change		86.67%	0	0	86.67%	0	0
Toluene	2018	108-88-3	19.31	0	0	19.31	20.65	0
	2017		33.86	0	0	33.86	21.34	0
	Change		-14.55	0	0	-14.55	-0.69	0
	% Change		-42.97%	0	0	-42.97%	-3.23%	0
Xylene (all isomers)	2018	1330-20-7	4.83	0	0	4.83	0	0
	2017		1.83	0	0	1.83	0	0
	Change		3.00	0	0	3.00	0	0
	% Change		169.93%	0	0	169.93%	0	0
<b>Lead (and its compounds)</b> [1]	2018	NA-08	<b>2975.09</b>	0	<b>2975.09</b>	<b>3.37</b>	<b>583.91</b>	0
	2017		3566.23	0	3566.23	<b>4.66</b>	<b>2425.36</b>	0
	<b>Change</b>		<b>-591.14</b>	0	<b>-591.14</b>	<b>-1.29</b>	<b>-1841.45</b>	0
	<b>% Change</b>		<b>-16.58%</b>	0	<b>-16.58%</b>	<b>-27.68%</b>	<b>-75.92%</b>	0
<b>Cobalt (and its compounds)</b> [1]	2018	NA-05	<b>1574.74</b>	0	<b>1574.74</b>	<b>1.23</b>	<b>368.93</b>	<b>0.074</b>
	2017		<b>1834.58</b>	0	<b>1834.58</b>	<b>1.61</b>	<b>159.91</b>	<b>0.086</b>
	<b>Change</b>		<b>-259.84</b>	0	<b>-259.84</b>	<b>-0.38</b>	<b>209.02</b>	<b>-0.012</b>
	<b>% Change</b>		<b>-14.16%</b>	0	<b>-14.16%</b>	<b>-23.60%</b>	<b>130.71%</b>	<b>-13.95%</b>
Stoddard Solvent	2018	8052-41-3	1.73	0	0	1.73	0	0
	2017		2.10	0	0	2.10	0	0
	Change		-0.37	0	0	-0.37	0	0
	% Change		-17.62%	0	0	-17.62%	0	0
Methyl isobutyl ketone	2018	108-10-1	2.62	0	0	2.62	0	0
	2017		Not Reportable	0	0	Not Reportable	0	0
	Change		100	0	0	100	0	0
	% Change		100%	0	0	100%	0	0

**Notes:**

[1] Substances in bold and italics are reportable to the NPRI in kilograms

[2] Quantities include road dust for particulate matter

### Section 3: Summary of Changes

A summary of reasons for changes in quantification of substances include:

- **Metals** –The changes in contaminant concentrations, quantities purchased and/or recycled contribute to the changes in reportable air emissions and transfers offsite for recycling.
- **VOCs** - The changes in contaminant concentrations and quantities purchased and used in the process contribute to the changes in reportable air emissions.
- **PM<sub>10</sub>** - Air emission releases from process increased due to an increase in use of paint products (solids).

### Section 4: Toxic Substance Reduction Comparison to Plan

**Table 2:** 2018 Toxic Substance Plans – Bombardier Inc. Thunder Bay Plant

Substance Name	CAS#	Objectives/Reduction/Comparison to Plan
<b>Chromium</b> (and its compounds)	<b>NA-04</b>	<p><b>OBJECTIVES:</b> Implement reduction options that consider equipment or process modification, inventory management/purchasing techniques and training or improved operating practices.</p> <p><b>REDUCTIONS:</b> No actions were implemented for reduction in the 2018 reporting year.</p> <p><b>COMPARISON TO PLAN:</b> Equipment or process modification - Optimized nesting techniques and material cutting operations as per plan schedule. Inventory management/purchasing techniques - New inventory management system implemented. Improved operating practices – No additional steps were taken in the reporting period.</p>
<b>Copper</b> (and its compounds)	<b>NA-06</b>	
<b>Cobalt</b> (and its compounds)	<b>NA-05</b>	
<b>Manganese</b> (and its compounds)	<b>NA-09</b>	
<b>Nickel</b> (and its compounds)	<b>NA-11</b>	
<b>Zinc</b> (and its compounds)	<b>NA-14</b>	
<b>Lead</b> (and its compounds)	<b>NA-08</b>	<p><b>OBJECTIVES:</b> Implement reduction options that consider equipment or process modification, inventory management/purchasing techniques and training or improved operating practices.</p> <p><b>REDUCTIONS:</b> The facility intends to reduce the use of Toluene by 70% or 6.64 tonnes by December 31, 2016. No reductions were achieved in the reporting period as per plan. Equipment will be removed from service as it does not meet the performance expectations as per manufactures’ specifications.</p> <p><b>COMPARISON TO PLAN:</b> Equipment or process modification – Solvent Recovery System purchased, and installation completed. Equipment will be removed from service as it does not meet the performance expectations as per manufactures’ specifications Inventory management/purchasing techniques - New inventory management system implemented as per plan schedule. Improved operating practices – No steps were taken in the reporting period to implement this option.</p>
<b>Toluene</b>	<b>108-88-3</b>	

Substance Name	CAS#	Objectives/Reduction/Comparison to Plan
<b>Xylene</b> (all isomers)	<b>1330-20-7</b>	<p><b>OBJECTIVES:</b> Implement reduction options that consider inventory management/purchasing techniques and training or improved operating practices.</p> <p><b>REDUCTIONS:</b> No actions were implemented for reduction in the 2018 reporting year.</p> <p><b>COMPARISON TO PLAN:</b> Inventory management/purchasing techniques - New inventory management system implemented as per plan schedule. Improved operating practices - No steps were taken in the reporting period to implement this option.</p>
<b>PM<sub>10</sub> - Particulate Matter &lt;=10 Microns</b>	<b>NA - M09</b>	<p><b>OBJECTIVES:</b> Implement reduction options that consider improved operating practices.</p> <p><b>REDUCTIONS:</b> Dust suppressant applied summer of 2018.</p> <p><b>COMPARISON TO PLAN:</b> Improved operating practices - Calcium application annually to unpaved roadways.</p>
<b>Stoddard solvent</b>	<b>8052-41-3</b>	<p><b>OBJECTIVES:</b> Bombardier Inc. - Thunder Bay Plant in compliance with the Toxics Reduction Act (2009) and O.Reg. 455/09, does not intend to reduce the use of 2-Butoxyethanol, Stoddard solvent, Ethyl acetate, Ethylene glycol butyl ether acetate, Hydrotreated heavy naphtha, Isopropyl alcohol, methanol, Methyl ethyl ketone, Methyl isobutyl ketone, n-Butyl acetate, Solvent naphtha medium aliphatic as no option was determined to be technically or economically feasible under the plan.</p>
<b>Ethyl acetate</b>	<b>141-78-6</b>	
<b>Hydrotreated heavy naphtha</b>	<b>64742-48-9</b>	
<b>Isopropyl alcohol</b>	<b>67-63-0</b>	
<b>Methanol</b>	<b>67-56-1</b>	
<b>Methyl ethyl ketone</b>	<b>78-93-3</b>	
<b>Methyl isobutyl ketone</b>	<b>108-10-1</b>	
<b>Solvent naphtha medium aliphatic</b>	<b>64742-88-7</b>	

## Section 5: Exit Record Certification by Highest Ranking Employee

As of June 1, 2019, I, David Black certify that I have read the records created for the purposes of section 11.2 of O. Reg. 455/09 (General) made under the Toxics Reductions Act, (2009) in respect of the use and creation of the toxic substances referred to below at the Bombardier Inc. Thunder Bay Plant and am familiar with its contents and to my knowledge they are factually accurate.

- PM<sub>2.5</sub> – Particulate Matter <= 2.5 Microns (CAS NA-M10)
- Selenium (and its compounds) (CAS NA-12)
- Hydrotreated Light Distillate (CAS 64742-47-8)

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**David Black** (General Manager)  
Bombardier Inc.

## Section 6: Certification by Highest Ranking Employee

As of June 1, 2019, I, David Black certify that I have read the report on the toxic substance tracking, accounting and reporting for the toxic substances referred to above and am familiar with its contents, and to my knowledge the information contained in the report is factually accurate and the report complies with the Toxics Reduction Act, 2009 and O. Reg. 455/09 (General) made under that Act.

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**David Black** (General Manager)  
Bombardier Inc.