Toxic Substance Accounting Report For 2017

1. FACILITY INFORMATION

Company Name:	Roseburg Forest Products Canada Ltd. (Pembroke MDF Facility)
Website:	http://www.pembrokemdf.com/
Date of Report:	01/06/2018
NACIS Code:	321216
NPRI ID:	5609
O. Reg 127 ID:	5090
Site Address:	777 Fibreboard Drive, Pembroke, ON, K8A6W4 Canada
Public Contact:	Nick Mariani, Environmental Manger, 613-732-3939 ext. 267
Highest Ranking Employee:	Alexandre Ouellette, Plant Manager, 613-732-3939

2. SUBSTACE INFORMATION

Substance Name	CAS Number	Used (tonnes)	Created (tonnes)	Released to Air (tonnes)	Amount Disposed (tonnes)	Amount Recycled (tonnes)	Amount Contained In Product (tonnes)
Acetone	67-64-1	0	>1 to 10	>1 to 10	0	0	0
Ammonia	NA – 16	0	>10 to 100	>10 to 100	0	0	0
Carbon Monoxide	630-08-0	0	>10 to 100	>10 to 100	0	0	0
Formaldehyde	50-00-0	0	>10 to 100	>10 to 100	0	0	0
Formic Acid	64-18-6	0	>10 to 100	>10 to 100	0	0	0
Methanol	67-56-1	>10 to 100	0	>10 to 100	0	0	0
Nitrogen Oxides	11104-93-1	0	>100 to 1000	>100 to 1000	0	0	0
PM 10	NA – M09	0	>0 to 1	>0 to 1	0	0	0
PMDI	9016-87-9	>10 to 100	0	>0 to 1	0	0	0
Total Particulate	NA – M08	0	>10 to 100	>10 to 100	0	0	0
Total VOCs	NA – M16	0	>10 to 100	>10 to 100	0	0	0

3. COMPARISON TO PREVIOUS YEAR

Substance Name	CAS Number	Used/Created/Released	% Change from 2016	Rationale For Change
Acetone	67-64-1	Used	0%	No Change
		Created	7%	Increase in operation time from 2016.
		Released to Air	7%	Increase in operation time from 2016.
Ammonia	NA – 16	Used	0%	No Change
		Created	7%	Increase in operation time from 2016.
		Released to Air	7%	Increase in operation time from 2016.
Carbon Monoxide	630-08-0	Used	0%	No Change
		Created	-91%	Updated Emissions Data - Improved Heater Operations
		Released to Air	-91%	Updated Emissions Data - Improved Heater Operations
Formaldehyde	50-00-0	Used	0%	No Change
		Created	21%	Updated Emissions Data and Increase in operation time from 2016.
		Released to Air	21%	Updated Emissions Data and Increase in operation time from 2016.
Formic Acid	64-18-6	Used	0%	No Change
		Created	6%	Increase in operation time from 2016.
		Released to Air	6%	Increase in operation time from 2016.
Methanol	67-56-1	Used	33%	Increase in total board production.
		Created	0%	No Change
		Released to Air	20%	Updated Emissions Data and Increase in operation time from 2016.
Nitrogen Oxides	11104-93-1	Used	0%	No Change
		Created	11%	Increase in operation time from 2016.
		Released to Air	11%	Increase in operation time from 2016.
PM 10	NA – M09	Used	0%	No Change
		Created	0%	No Change
		Released to Air	0%	No Change
PMDI	9016-87-9	Used	-92%	Decrease in MDI production levels. Change in quantification methodology
		Created	0%	No Change
		Released to Air	-94%	Updated Emissions Data and A Decrease in MDI Production Levels.
Total Particulate	NA – M08	Used	0%	No Change
		Created	-22%	Updated Emissions Data.
		Released to Air	-22%	Updated Emissions Data.
Total VOCs	NA – M16	Used	33%	Increase in production levels.
		Created	21%	Updated Emissions Data and Increase in operation time from 2016.
		Released to Air	21%	Updated Emissions Data and Increase in operation time from 2016.

4. SIGNIFICANT CHANGES FROM 2016-2017

Roseburg Forest Products performed source testing in 2017 which resulted in updated emissions factors for the subject substances. The updated emission factors were significantly lower – in some cases – to previous values. In the case of CO, the new emission factors had a very significant impact in overall emissions. For other substances, the new emission factors would have resulted in a reduction, but a higher production output in 2017 resulted in most tonnages increasing compared to 2016. PMDI saw a substantial decrease in usage and emissions as production with this material decreased once again in 2017. As Roseburg Forest Products' Pembroke MDF facility continues to move towards maximum production output, we expect most tonnages to continue to have a marginal increase year to year.

5. TSRP ACTIVITY OBJECTIVES AND RESULTS

Activity	Steps that were taken in the reporting period to implement this option	Difference between steps taken and those in the plan and indication of whether timetable for steps will be met	Expected Results	Estimate of substance reductions achieved
Change mix of hardwood/softwood/poplar in production recipe.	- Better separation and management of raw materials to control for variation in wood species.	- Have not yet determined exact quality and production impact since implementation.	- Better separation and control of wood species will result in better variable control and more consistency in the board making process. This is expected to reduce waste generated from upset conditions and improve product quality.	- This activity has resulted in less variation in raw materials, which should make production and quality more stable. It is difficult to calculate a substance reduction as production volume continues to increase.
Increased material recirculation within the process – Change use of recycled fibre from hog fuel to board use	- Implemented more recycling of production residuals back into the board making process. - Determined appropriate recipe/ratio of recycled material	- The steps described are the same as those listed in the plan.	- Reduced resin usage since recycled fibre is already treated. - Reduced waste fibre disposal. - Reduced emissions by diverting fibre material away from combustor.	- It is difficult to quantify any substance reduction as production volume and production up time continues to increase.
Install and operate dust burner	- Continual operation of Dust burner throughout year.	- Steps on track as detailed in plan.	- Improved combustion efficiency, reduced fugitive emissions from handling loose sander dust	- Dust burner consumed >15,000 tonnes of dust material in 2017 - Based on the newest emissions data measured in 2017 – CO emissions dropped substantially (91%). This could be, in part, related to the implementation of the dust burner and improved overall heater efficiencies.

Send ash to farms instead of landfill	- Farms approved for receiving ash material - Material delivered to farmers.	- Plan completed as outlined, increasing the number of farmers that wish to participate.	- Less ash to the landfill, now can is being used for beneficial purpose for farmers.	- Over 395 tonnes of ash diverted to local farmers.
Pelletizing of sander dust	- No new steps taken, dust burner operation was a far more efficient way to address excess wood dust material. - Pelletizer only operated briefly in 2017 before stopping.	- The stoppage of the pelletizer was not part of the reduction plan. - The activation of the dust burner made the operation of the pelletizer no longer needed.	- Reduced fugitive PM emissions from handling loose sander dust - Improved heater efficiency when utilizing "dry fuel"	- Impact unknown, operation no longer occurring.
Control humidity level from vendors	- New moisture analyser purchased, able to provide near instant readings of raw material moisture. - Suppliers now paid on DRY tonne, material moisture checked for every load.	- Moisture meter did not arrive until August 2017	- Reduced energy consumption in combustor and in preparing chips and sawdust for refining.	- Better moisture information has allowed us to improve fuel and raw material consistency in the process. Based on the newest emissions data measured in 2017 – CO emissions dropped substantially (91%). This could be, in part, related to improved fuel quality and heater efficiency.

6. CERTIFICATION

As of 01/06/2018, I, Alexandre Ouellette, certify that I have read the reports on the toxic substance reduction plans for the toxic substances referred to above 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.

Alexandre Ouellette

Plant Manager

Roseburg Forest Products Canada Ltd. (Pembroke MDF Facility)