

Toxic Substance Accounting Report For 2016

1. FACILITY INFORMATION

Company Name:	Pembroke MDF Inc.
Website:	www.Pembrokemdf.com
Date of Report:	31/05/2017
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 Coordinator, 613-732-3939 ext. 267
Highest Ranking Employee:	Patricio Osses, Plant Manager, 613-732-3939

2. SUBSTANCE 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	>100 to 1000	>100 to 1000	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	>100 to 1000	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 2015	Rationale For Change
Acetone	67-64-1	Used	0%	No Change
		Created	3%	Increase in production levels. Change in quantification methodology
		Released to Air	3%	Increase in production levels. Change in quantification methodology
Ammonia	NA – 16	Used	0%	No Change
		Created	3%	Increase in production levels. Change in quantification methodology
		Released to Air	3%	Increase in production levels. Change in quantification methodology
Carbon Monoxide	630-08-0	Used	0%	No Change
		Created	7%	Increase in production levels. Change in quantification methodology
		Released to Air	7%	Increase in production levels. Change in quantification methodology
Formaldehyde	50-00-0	Used	0%	No Change
		Created	14%	Increase in production levels. Change in quantification methodology
		Released to Air	14%	Increase in production levels. Change in quantification methodology
Formic Acid	64-18-6	Used	0%	No Change
		Created	3%	Increase in production levels. Change in quantification methodology
		Released to Air	3%	Increase in production levels. Change in quantification methodology
Methanol	67-56-1	Used	30%	Increase in production levels. Change in quantification methodology
		Created	0%	No Change
		Released to Air	25%	Increase in production levels. Change in quantification methodology
Nitrogen Oxides	11104-93-1	Used	0%	No Change
		Created	9%	Increase in production levels. Change in quantification methodology
		Released to Air	9%	Increase in production levels. Change in quantification methodology
PM 10	NA – M09	Used	0%	No Change
		Created	0%	No Change
		Released to Air	0%	No Change
PMDI	9016-87-9	Used	-33%	Decrease in MDI production levels. Change in quantification methodology
		Created	0%	No Change
		Released to Air	-33%	Decrease in MDI production levels. Change in quantification methodology
Total Particulate	NA – M08	Used	0%	No Change
		Created	33%	Increase in production levels. Change in quantification methodology
		Released to Air	33%	Increase in production levels. Change in quantification methodology
Total VOCs	NA – M16	Used	30%	Increase in production levels. Change in quantification methodology
		Created	14%	Increase in production levels. Change in quantification methodology
		Released to Air	18%	Increase in production levels. Change in quantification methodology

4. SIGNIFICANT CHANGES FROM 2015-2016

Pembroke MDF changed quantification methods between the year 2015 and 2016 in response to recommendations from our Toxic Substance Planner. Previously, substance emission tonnages were calculated using the substance's "total emission rate" rather than calculating based on the emission rate from each individual emission source and the source's respective operation time. This more detailed method resulted in a reduction in most values, but a higher production output in 2016 resulted in most tonnages increasing compared to 2015. PMDI saw a decrease in usage and emissions as production with this material decreased in 2016. As Pembroke MDF 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.	<ul style="list-style-type: none"> - Previously raw material was only separated as "Hard wood or Softwood". Now material is separated to "Hardwood, softwood, and poplar". - Tracking usage and determining ideal recipe ratios 	<ul style="list-style-type: none"> - Steps on track as detailed in plan. - Timetable still on track. 	<ul style="list-style-type: none"> - 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. 	<ul style="list-style-type: none"> - Insufficient data to know a reduction, implementation began at the end of 2016.
Increased material recirculation within the process – Change use of recycled fibre from hogfuel to board use	<ul style="list-style-type: none"> - Still in development phase, no equipment modifications completed in 2016. 	<ul style="list-style-type: none"> - Equipment modifications were planned to have begun by December 2016, these modifications have not yet been completed. - Timetable delayed until equipment modifications occur, suspected to be completed July 2017. 	<ul style="list-style-type: none"> - Reduced resin usage since recycled fibre is already treated. - Reduced waste fibre disposal. - Reduced emissions by diverting fibre material away from combustor. 	<ul style="list-style-type: none"> - Activity not yet implemented, no data to report.
Install and operate dust burner	<ul style="list-style-type: none"> - Confirm Dust burner is included in ECA. - Continue recommissioning of unit. 	<ul style="list-style-type: none"> - Steps on track as detailed in plan. - dust burner began operation in 2017 on schedule 	<ul style="list-style-type: none"> - Improved combustion efficiency, reduced fugitive emissions from handling loose sander dust 	<ul style="list-style-type: none"> - Dust burner not operated in 2016, no reduction data at this point.
Send ash to farms instead of landfill	<ul style="list-style-type: none"> - Ash Testing and Approval applications submitted 	<ul style="list-style-type: none"> - Steps on track as detailed in plan. - On Track to gain approval in 2017. 	<ul style="list-style-type: none"> - No substantial change in the Use and Creation of substances. However, ash could be considered as a "Product" rather than "Waste" 	<ul style="list-style-type: none"> - No ash diverted in 2016

Pelletizing of sander dust	<ul style="list-style-type: none"> - Pelletizer began operation in late 2016. - Operation halted with the re-start of dust burner. 	<ul style="list-style-type: none"> - 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. 	<ul style="list-style-type: none"> - Reduced fugitive PM emissions from handling loose sander dust - Improved heater efficiency when utilizing "dry fuel" 	<ul style="list-style-type: none"> - Improved heater function and reduced waste was noticed after implementation. - Exact value estimates are not known.
Control humidity level from vendors	<ul style="list-style-type: none"> - Began stringent humidity tracking of raw materials. - Suppliers receiving communications regarding high moisture shipments 	<ul style="list-style-type: none"> - Steps on track as detailed in plan. - Timeline set in plan still on track. 	<ul style="list-style-type: none"> - Reduced energy consumption in combustor and in preparing chips and sawdust for refining. 	<ul style="list-style-type: none"> - Insufficient data to know a reduction, implementation began at the end of 2016.

6. CERTIFICATION

As of 31/05/2017, I, Patricio Osses, 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.



Patricio Osses

Plant Manager
 Pembroke MDF Inc.