



**2012 TOXIC SUBSTANCE REDUCTION PLAN  
SUMMARY (December 19, 2012)**

Dryden Mill

Prepared under the Toxics Reduction Act &  
O. Reg. 455/09

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## COPIES OF CERTIFICATIONS

### Certification by Highest Ranking Employee

As of December 19, 2012, I, James Blight, certify that I have read the toxic substance reduction plans for the toxic substances referred to below and am familiar with their contents, and to my knowledge the plans are factually accurate and comply with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

Cadmium (and its compounds)  
Chlorine  
2,3,7,8-Tetrachlorodibenzo-p-dioxin  
1,2,3,7,8-Pentachlorodibenzo-p-dioxin  
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin  
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin  
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin  
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin  
Octachlorodibenzo-p-dioxin  
2,3,7,8-Tetrachlorodibenzofuran  
2,3,4,7,8-Pentachlorodibenzofuran  
1,2,3,7,8-Pentachlorodibenzofuran  
1,2,3,4,7,8-Hexachlorodibenzofuran  
1,2,3,7,8,9-Hexachlorodibenzofuran  
1,2,3,6,7,8-Hexachlorodibenzofuran  
2,3,4,6,7,8-Hexachlorodibenzofuran  
1,2,3,4,6,7,8-Heptachlorodibenzofuran  
1,2,3,4,7,8,9-Heptachlorodibenzofuran  
Octachlorodibenzofuran  
Formaldehyde  
Hexachlorobenzene  
Hexavalent chromium compounds  
Hydrochloric acid  
Lead (and its compounds)  
Manganese (and its compounds)  
Methanol  
Selenium (and its compounds)  
Sulphuric acid

Original signed copy on file at the facility

James Blight  
General Manager  
Domtar Inc. – Dryden Mill

## Certification by Toxic Substance Reduction Planner

As of December 19, 2012, I, Jennifer Main certify that I am familiar with the processes at Domtar Inc. – Dryden Mill that use or create the toxic substances referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the *Toxics Reduction Act, 2009* that set out in the toxic substance reduction plans referred to below for the toxic substances and that the plans comply with that Act and Ontario Regulation 455/09 (General) made under that Act.

Cadmium (and its compounds)	December 19, 2012
Chlorine	December 19, 2012
2,3,7,8-Tetrachlorodibenzo-p-dioxin	December 19, 2012
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	December 19, 2012
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	December 19, 2012
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	December 19, 2012
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	December 19, 2012
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	December 19, 2012
Octachlorodibenzo-p-dioxin	December 19, 2012
2,3,7,8-Tetrachlorodibenzofuran	December 19, 2012
2,3,4,7,8-Pentachlorodibenzofuran	December 19, 2012
1,2,3,7,8-Pentachlorodibenzofuran	December 19, 2012
1,2,3,4,7,8-Hexachlorodibenzofuran	December 19, 2012
1,2,3,7,8,9-Hexachlorodibenzofuran	December 19, 2012
1,2,3,6,7,8-Hexachlorodibenzofuran	December 19, 2012
2,3,4,6,7,8-Hexachlorodibenzofuran	December 19, 2012
1,2,3,4,6,7,8-Heptachlorodibenzofuran	December 19, 2012
1,2,3,4,7,8,9-Heptachlorodibenzofuran	December 19, 2012
Octachlorodibenzofuran	December 19, 2012
Formaldehyde	December 19, 2012
Hexachlorobenzene	December 19, 2012
Hexavalent chromium compounds	December 19, 2012
Hydrochloric Acid	December 19, 2012
Lead (and its compounds)	December 19, 2012
Manganese (and its compounds)	December 19, 2012
Methanol	December 19, 2012
Selenium (and its compounds)	December 19, 2012
Sulphuric acid	December 19, 2012

Original signed copy on file at the facility

Jennifer Main

Toxic Substance Reduction Planner (License TSRP0001)

## DOMTAR ENVIRONMENTAL POLICY

# Environmental Policy

We will conduct business in a manner that conserves resources and constantly reduces our environmental footprint. We seek continual improvement in our environmental performance by setting, reviewing and updating environmental goals.

### We are committed to:

- Managing operations to comply with all applicable laws and regulations and other requirements to which we subscribe, with emphasis on pollution prevention, and minimizing adverse environmental impacts;
- Identifying and evaluating potential environmental risks and implementing appropriate measures to eliminate or control those risks;
- Developing and implementing measures to ensure sustainable use of materials, resources and energy;
- Promoting and developing awareness, leadership and accountability with respect to environmental protection among all our employees and persons working for us or on our behalf;
- Communicating with our employees, customers, suppliers, the communities in which we operate and public officials to build greater mutual understanding of environmental issues;
- Participating in the development of governmental environment policies based on sound science and sustainable growth principles;
- Supporting research aimed at improving process efficiency and environmental protection measures and applying such knowledge to our product stewardship;
- Conducting independent third party environmental audits to confirm that our management practices meet policy objectives, legislation and the principles of sound management; and reporting to the Board of Directors on the environmental status of our operations.

Our employees share in this responsibility and are accountable for the successful implementation of this policy. Local management is empowered to curtail operations, as necessary, to prevent serious environmental impacts.

*July 2009*



## BASIC FACILITY INFORMATION

The legal and trade names of the owner and operator of the facility, the street and mailing address of the facility	Domtar Inc. 1 Duke St. P.O. Box 3001 Dryden, ON P8N 2Z7
Facility NPRI identification number	928
The identification number assigned to the facility by the Ministry of the Environment for the purposes of Ontario Regulation 127/01	5100
Number of full-time employees	345
UTM Coordinates	x 0511258
	y 5514413
UTM Zone	15
Datum	1983
Legal name of Canadian parent company, the street and mailing address of the company	Domtar Inc. 395, de Maisonneuve Blvd. West Montreal, Quebec H3A 1L6
Percent Ownership	100%
North American Industry Classification System (NAICS) - 2, 4, and 6 digit codes	31-33 3221 322112
Facility Public Contact	Bonny Skene Public Affairs Manager 807 223 9035
Planner Responsible for Making Recommendations & Certifying the Plan	Jennifer Main TSRP0001

## **CADMIUM (AND ITS COMPOUNDS)**

CAS # \*\*

### **Plan Summary Statement**

This toxic substance plan summary accurately reflects the version of the plan that was certified on December 19, 2012 by Mr. James Blight (Highest Ranking Employee) and Ms. Jennifer Main (Certified Toxic Substance Reduction Planner)

### **Statement of Intent**

Domtar Inc. – Dryden Mill does not intend to reduce its use of cadmium (and its compounds) because it is an undesirable trace contaminant in raw materials (wood chips, natural gas and chemicals) for which there is no viable alternative. Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

### **Objectives**

Domtar Inc. – Dryden Mill does not intend to reduce its use of cadmium (and its compounds) because it is an undesirable trace contaminant in raw materials (wood chips, natural gas and chemicals) for which there is no viable alternative. Based on the information gathered in this report, the amount of cadmium (and its compounds) used is not expected to significantly increase. Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

### **Description of Why Toxic Substance is Used or Created**

Cadmium (and its compounds) is an undesirable trace contaminant present in wood chips, natural gas and sodium hydroxide for which there is no viable alternative.

Cadmium (and its compounds) is not created by the Kraft pulp manufacturing operation.

### **Options to be Implemented**

No options were identified to be technically or economically feasible. Therefore, no option will be implemented for the reduction of the use cadmium (and its compounds).

### **Estimated Reductions for Options to be Implemented**

Not applicable.

### **Timelines for Achieving Estimated Reductions**

Not applicable.

### **Projection of Effectiveness of Toxic Substance Reduction Plan**

As no options were identified for implementation and there has not been a significant increase in the production of Kraft pulp at the facility, the amount of cadmium (and its compounds) used is not expected to significantly increase.

## **CHLORINE**

CAS # 7782-50-5

### **Plan Summary Statement**

This toxic substance plan summary accurately reflects the version of the plan that was certified on December 19, 2012 by Mr. James Blight (Highest Ranking Employee) and Ms. Jennifer Main (Certified Toxic Substance Reduction Planner)

### **Statement of Intent**

Domtar Inc. – Dryden Mill does not intend to reduce its creation of chlorine because it is unintentional by-product of chlorine dioxide bleaching which is an integral process to the production of Kraft pulp for which there is no economically feasible alternative that maintains the product quality. Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

### **Objectives**

Domtar Inc. – Dryden Mill does not intend to reduce its creation of chlorine because it is unintentional by-product of chlorine dioxide bleaching which is an integral process to the production of Kraft pulp for which there is no economically feasible alternative that maintains the product quality. Based on the information gathered in this report, the amount of chlorine created is not expected to significantly increase. Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

### **Description of Why Toxic Substance is Used or Created**

Chlorine is not used in the Kraft pulp manufacturing operation.

Chlorine is an unintentional by-product created by the chlorine dioxide generation process and by the breakdown of chlorine dioxide in bleaching towers.

### **Options to be Implemented**

No options were identified to be technically or economically feasible. Therefore, no option will be implemented for the reduction of the creation of the chlorine.

### **Estimated Reductions for Options to be Implemented**

Not applicable.

### **Timelines for Achieving Estimated Reductions**

Not applicable.



**Projection of Effectiveness of Toxic Substance Reduction Plan**

As no options were identified for implementation and there has not been a significant increase in the production of Kraft pulp at the facility, the amount of chlorine created is not expected to significantly increase.

## DIOXINS, FURANS & HEXACHLOROBENZENE

	CAS #
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9
Octachlorodibenzo-p-dioxin	3268-87-9
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7
Octachlorodibenzofuran	39001-02-0
Hexachlorobenzene	118-74-1

### Plan Summary Statement

This toxic substance plan summary accurately reflects the version of the plan that was certified on December 19, 2012 by Mr. James Blight (Highest Ranking Employee) and Ms. Jennifer Main (Certified Toxic Substance Reduction Planner)

### Statement of Intent

Domtar Inc. – Dryden Mill does not intend to reduce its creation of the listed dioxins, furans and hexachlorobenzene because they are unintentional trace by-products of black liquor combustion in a Kraft recovery boiler. The operation of which is required for the efficient and economical recovery of process chemicals necessary to maintain the facility and its processes. Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

### Objectives

Domtar Inc. – Dryden Mill does not intend to reduce its creation of the listed dioxins, furans and hexachlorobenzene because they are unintentional trace by-products of black liquor combustion in a Kraft recovery boiler. The operation of which is required for the efficient and economical recovery of process chemicals necessary to maintain the facility and its processes. Based on the information gathered in this report, the amount of dioxins, furans & hexachlorobenzene created is not expected to significantly increase. Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

**Description of Why Toxic Substance is Used or Created**

The listed dioxins, furans and hexachlorobenzene are substances that are not used in the Kraft pulp manufacturing operation.

The listed dioxins, furans and hexachlorobenzene are formed as a result of chloride containing black liquor combustion in a Kraft recovery boiler. Chloride compounds are introduced as a trace contaminant in wood chips and sodium hydroxide into the Kraft pulp manufacturing operation.

**Options to be Implemented**

No options were identified to be technically or economically feasible. Therefore, no option will be implemented for the reduction of the creation of the listed dioxins, furans and hexachlorobenzene.

**Estimated Reductions for Options to be Implemented**

Not applicable.

**Timelines for Achieving Estimated Reductions**

Not applicable.

**Projection of Effectiveness of Toxic Substance Reduction Plan**

As no options were identified for implementation and there has not been a significant increase in the production of Kraft pulp at the facility, the amount of the listed dioxins, furans and hexachlorobenzene created is not expected to significantly increase.

## **FORMALDEHYDE**

CAS # 50-00-0

### **Plan Summary Statement**

This toxic substance plan summary accurately reflects the version of the plan that was certified on December 19, 2012 by Mr. James Blight (Highest Ranking Employee) and Ms. Jennifer Main (Certified Toxic Substance Reduction Planner)

### **Statement of Intent**

Domtar Inc. – Dryden Mill does not intend to reduce its creation of formaldehyde because it is an unintentional by-product of the Kraft pulp manufacturing operation. Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

### **Objectives**

Domtar Inc. – Dryden Mill does not intend to reduce its creation of formaldehyde because it is an unintentional by-product of Kraft pulp manufacturing operation. Based on the information gathered in this report, the amount of formaldehyde created is not expected to significantly increase. Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

### **Description of Why Toxic Substance is Used or Created**

Formaldehyde is not used in the Kraft pulp manufacturing operation.

Formaldehyde is a Volatile Organic Compound (VOC) that is created through complex chemical reactions in the Kraft pulp manufacturing operation.

### **Options to be Implemented**

No options were identified to be technically or economically feasible. Therefore, no option will be implemented for the reduction of the creation of formaldehyde.

### **Estimated Reductions for Options to be Implemented**

Not applicable.

### **Timelines for Achieving Estimated Reductions**

Not applicable.

### **Projection of Effectiveness of Toxic Substance Reduction Plan**

As no options were identified for implementation and there has not been a significant increase in the production of Kraft pulp at the facility, the amount of formaldehyde created is not expected to significantly increase.

## **HEXAVALENT CHROMIUM COMPOUNDS**

CAS # \*\*

### **Plan Summary Statement**

This toxic substance plan summary accurately reflects the version of the plan that was certified on December 19, 2012 by Mr. James Blight (Highest Ranking Employee) and Ms. Jennifer Main (Certified Toxic Substance Reduction Planner)

### **Statement of Intent**

Domtar Inc. – Dryden Mill does not intend to reduce its use of hexavalent chromium compounds because it is an undesirable trace contaminant in a raw material (sodium chlorate) for chlorine dioxide generation for which there is no viable alternative. Chlorine dioxide generation is an integral process to the production of Kraft pulp for which there is no economically feasible alternative that maintains product quality. Domtar Inc. – Dryden Mill does not intend to reduce its creation of hexavalent chromium compounds because it is an unintentional by-product of combustion of fuels containing trace chromium compounds (hog fuel and natural gas). Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

### **Objectives**

Domtar Inc. – Dryden Mill does not intend to reduce its use of hexavalent chromium compounds because it is an undesirable trace contaminant in a raw material (sodium chlorate) for chlorine dioxide generation for which there is no viable alternative. Chlorine dioxide generation is an integral process to the production of Kraft pulp for which there is no economically feasible alternative that maintains product quality. Domtar Inc. – Dryden Mill does not intend to reduce its creation of hexavalent chromium compounds because it is an unintentional by-product of combustion of fuels containing trace chromium compounds (hog fuel and natural gas). Based on the information gathered in this report, the amount of hexavalent chromium compounds created or used is not expected to significantly increase. Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

### **Description of Why Toxic Substance is Used or Created**

Hexavalent chromium compounds are undesirable trace contaminants present in sodium chlorate for which there is no viable alternative.

There is some information that may suggest that hexavalent chromium compounds are created as a result of combustion of fuels (natural gas and hog fuel) containing trace chromium compounds.

**Options to be Implemented**

No options were identified to be technically or economically feasible. Therefore, no option will be implemented for the reduction of the creation of formaldehyde.

**Estimated Reductions for Options to be Implemented**

Not applicable.

**Timelines for Achieving Estimated Reductions**

Not applicable.

**Projection of Effectiveness of Toxic Substance Reduction Plan**

As no options were identified for implementation and there has not been a significant increase in the production of Kraft pulp at the facility, the amount of hexavalent chromium compounds used or created is not expected to significantly increase.

## **HYDROCHLORIC ACID**

CAS # 7647-01-0

### **Plan Summary Statement**

This toxic substance plan summary accurately reflects the version of the plan that was certified on December 19, 2012 by Mr. James Blight (Highest Ranking Employee) and Ms. Jennifer Main (Certified Toxic Substance Reduction Planner)

### **Statement of Intent**

Domtar Inc. – Dryden Mill does not intend to reduce its use of hydrochloric acid because it is an ideal cleaning chemical for dissolving scale in the digester and heaters for which there is no current cost effective, practical alternative. Domtar Inc. – Dryden Mill does not intend to reduce its creation of hydrochloric acid because it is an unintentional by-product of combustion of trace chloride associated with raw materials (wood chips and sodium hydroxide). Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

### **Objectives**

Domtar Inc. – Dryden Mill does not intend to reduce its use of hydrochloric acid because it is an ideal cleaning chemical for dissolving scale in the digester and heaters for which there is no current cost effective, practical alternative. Domtar Inc. – Dryden Mill does not intend to reduce its creation of hydrochloric acid because it is an unintentional by-product of combustion of trace chloride associated with raw materials (wood chips and sodium hydroxide). Based on the information gathered in this report, the amount of hydrochloric acid used or created is not expected to significantly increase. Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

### **Description of Why Toxic Substance is Used or Created**

Hydrochloric acid is an ideal cleaning chemical used for dissolving scale in the digester and heaters.

Hydrochloric acid is an unintentional by-product created by the combustion of trace chloride associated with raw materials (wood, sodium hydroxide)

### **Options to be Implemented**

No options were identified to be technically or economically feasible. Therefore, no option will be implemented for the reduction of the use or creation of hydrochloric acid.

### **Estimated Reductions for Options to be Implemented**

Not applicable.

### **Timelines for Achieving Estimated Reductions**

Not applicable.

**Projection of Effectiveness of Toxic Substance Reduction Plan**

As no options were identified for implementation and there has not been a significant increase in the production of Kraft pulp at the facility, the amount of hydrochloric acid created or used is not expected to significantly increase.



## **LEAD (AND ITS COMPOUNDS)**

CAS # \*\*

### **Plan Summary Statement**

This toxic substance plan summary accurately reflects the version of the plan that was certified on December 19, 2012 by Mr. James Blight (Highest Ranking Employee) and Ms. Jennifer Main (Certified Toxic Substance Reduction Planner)

### **Statement of Intent**

Domtar Inc. – Dryden Mill does not intend to reduce its use of lead (and its compounds) because it is an undesirable trace contaminant in raw materials (wood chips, hog fuel, natural gas, raw water and chemicals) for which there is no viable alternative. Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

### **Objectives**

Domtar Inc. – Dryden Mill does not intend to reduce its use of lead (and its compounds) because it is an undesirable trace contaminant in raw materials (wood chips, hog fuel, natural gas and chemicals) for which there is no viable alternative. Based on the information gathered in this report, the amount of lead (and its compounds) used is not expected to significantly increase. Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

### **Description of Why Toxic Substance is Used or Created**

Lead (and its compounds) is an undesirable trace contaminant found in wood chips, hog fuel, natural gas, raw water and chemicals.

Lead (and its compounds) is not created in the Kraft pulp manufacturing operation.

### **Options to be Implemented**

No options were identified to be technically or economically feasible. Therefore, no option will be implemented for the reduction of the use of lead (and its compounds).

### **Estimated Reductions for Options to be Implemented**

Not applicable.

### **Timelines for Achieving Estimated Reductions**

Not applicable.

### **Projection of Effectiveness of Toxic Substance Reduction Plan**

As no options were identified for implementation and there has not been a significant increase in the production of Kraft pulp at the facility, the amount of lead (and its compounds) used is not expected to significantly increase.

## **MANGANESE (AND ITS COMPOUNDS)**

CAS # \*\*

### **Plan Summary Statement**

This toxic substance plan summary accurately reflects the version of the plan that was certified on December 19, 2012 by Mr. James Blight (Highest Ranking Employee) and Ms. Jennifer Main (Certified Toxic Substance Reduction Planner)

### **Statement of Intent**

Domtar Inc. – Dryden Mill does not intend to reduce its use of manganese (and its compounds) because it is an undesirable trace contaminant in raw materials (wood chips, hog fuel, natural gas, raw water and chemicals) for which there is no viable alternative. Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

### **Objectives**

Domtar Inc. – Dryden Mill does not intend to reduce its use of manganese (and its compounds) because it is an undesirable trace contaminant in raw materials (wood chips, hog fuel, natural gas, raw water and chemicals) for which there is no viable alternative. Based on the information gathered in this report, the amount of manganese (and its compounds) used is not expected to significantly increase. Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

### **Description of Why Toxic Substance is Used or Created**

Manganese (and its compounds) is an undesirable trace contaminant present in wood chips, hog fuel, natural gas, raw water and chemicals for which there is no viable alternative.

Manganese (and its compounds) is not created by the Kraft pulp manufacturing operation.

### **Options to be Implemented**

No options were identified to be technically or economically feasible. Therefore, no option will be implemented for the reduction of the use of manganese (and its compounds).

### **Estimated Reductions for Options to be Implemented**

Not applicable.

### **Timelines for Achieving Estimated Reductions**

Not applicable.

**Projection of Effectiveness of Toxic Substance Reduction Plan**

As no options were identified for implementation and there has not been a significant increase in the production of Kraft pulp at the facility, the amount of manganese used is not expected to significantly increase.

## **METHANOL**

CAS # 67-56-1

### **Plan Summary Statement**

This toxic substance plan summary accurately reflects the version of the plan that was certified on December 19, 2012 by Mr. James Blight (Highest Ranking Employee) and Ms. Jennifer Main (Certified Toxic Substance Reduction Planner)

### **Statement of Intent**

Domtar Inc. – Dryden Mill does not intend to reduce its use of methanol because it is an ideal reducing agent for chlorine dioxide generation which is an integral process to the production of Kraft pulp for which there is no economically feasible alternative. Domtar Inc. – Dryden Mill does not intend to reduce its creation of methanol (also known as wood alcohol) because it is an unintentional by-product of Kraft pulping. Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

### **Objectives**

Domtar Inc. – Dryden Mill does not intend to reduce its use of methanol because it is an ideal reducing agent for chlorine dioxide generation which is an integral process to the production of Kraft pulp for which there is no economically feasible alternative. Domtar Inc. – Dryden Mill does not intend to reduce its creation of methanol (also known as wood alcohol) because it is an unintentional by-product of Kraft pulping. Based on the information gathered in this report, the amount of methanol used or created is not expected to significantly increase. Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

### **Description of Why Toxic Substance is Used or Created**

Methanol is used in the chlorine dioxide generation process as a reducing agent.

Methanol (also known as wood alcohol) is a Volatile Organic Compound (VOC) that is created through complex chemical reactions in the Kraft pulp manufacturing operation.

### **Options to be Implemented**

Although there is currently not an option to reduce the use of methanol directly, one option was identified to reduce the use of methanol indirectly through improved utilization of chlorine dioxide in the bleaching process. More information is required to establish the applicability, potential magnitude of the reduction and the sustainability of implementing this option.

No option was identified to be technically or economically feasible for the reduction of the creation of methanol.

Therefore, no option will be implemented for the reduction of the creation and use of methanol. As per the Environmental Policy, Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

**Estimated Reductions for Options to be Implemented**

Not applicable.

**Timelines for Achieving Estimated Reductions**

Not applicable.

**Projection of Effectiveness of Toxic Substance Reduction Plan**

As no options were identified for implementation and there has not been a significant increase in the production of Kraft pulp at the facility, the amount of methanol created or used is not expected to significantly increase.

## **SELENIUM (AND ITS COMPOUNDS)**

CAS # \*\*

### **Plan Summary Statement**

This toxic substance plan summary accurately reflects the version of the plan that was certified on December 19, 2012 by Mr. James Blight (Highest Ranking Employee) and Ms. Jennifer Main (Certified Toxic Substance Reduction Planner)

### **Statement of Intent**

Domtar Inc. – Dryden Mill does not intend to reduce its use of selenium (and its compounds) because it is an undesirable trace contaminant in raw materials (wood chips and hog fuel) for which there is no viable alternative. Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

### **Objectives**

Domtar Inc. – Dryden Mill does not intend to reduce its use of selenium (and its compounds) because it is a undesirable trace contaminant in raw materials (wood chips and hog fuel) for which there is no viable alternative. Based on the information gathered in this report, the amount of selenium (and its compounds) used is not expected to significantly increase. Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

### **Description of Why Toxic Substance is Used or Created**

Selenium (and its compounds) is an undesirable trace contaminant present in wood chips and hog fuel for which there is no viable alternative.

Selenium (and its compounds) is not created by the Kraft pulp manufacturing operation.

### **Options to be Implemented**

No options were identified to be technically or economically feasible. Therefore, no option will be implemented for the reduction of the use of selenium (and its compounds).

### **Estimated Reductions for Options to be Implemented**

Not applicable.

### **Timelines for Achieving Estimated Reductions**

Not applicable.

**Projection of Effectiveness of Toxic Substance Reduction Plan**

As no options were identified for implementation and there has not been a significant increase in the production of Kraft pulp at the facility, the amount of selenium (and its compounds) used is not expected to significantly increase.

## **SULPHURIC ACID**

CAS # 7664-93-9

### **Plan Summary Statement**

This toxic substance plan summary accurately reflects the version of the plan that was certified on December 19, 2012 by Mr. James Blight (Highest Ranking Employee) and Ms. Jennifer Main (Certified Toxic Substance Reduction Planner)

### **Statement of Intent**

Domtar Inc. – Dryden Mill does intend to reduce its use of sulphuric acid as there are economically and technically feasible options to do so. Domtar Inc. – Dryden Mill does not intend to reduce its creation of sulphuric acid because it is an unintentional by-product of black liquor combustion, stripper off gas incineration, non condensable gas incineration and lime generation all of which are integral processes to maintaining an efficient, economical Kraft pulp manufacturing operation. Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

### **Objectives**

Domtar Inc. – Dryden Mill does intend to reduce its use of sulphuric acid as there are economically and technically feasible options to do so. Domtar Inc. – Dryden Mill expects to reduce its use by an estimated 5% in 2012. Domtar Inc. – Dryden Mill does not intend to reduce its creation of sulphuric acid because it is an unintentional by-product of black liquor combustion, stripper off gas incineration, non condensable gas incineration and lime generation all of which are integral processes to maintaining an efficient, economical Kraft pulp manufacturing operation. Based on the information gathered in this report, the amount of sulphuric acid created is not expected to significantly increase. Domtar Inc. – Dryden Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

### **Description of Why Toxic Substance is Used or Created**

Sulphuric acid is used for pH control in the bleaching and effluent treatment processes, as a reactant in the chlorine dioxide generation process, as a drainage aid in the pulp machine and as a regenerant in the boiler feedwater process.

Sulphuric acid is an unintentional by-product created by the combustion of sulphur containing compounds.

### **Options to be Implemented**

The following options will be implemented:

- Installation of Microfiltration and Reverse Osmosis units (MF/RO system)
- Eliminate use of white liquor in wash circulation
- Increase pulp machine wire pit pH from 5 to 6



**Estimated Reductions for Options to be Implemented**

Option(s)	Used	Created	On-Site Releases			Disposal		Transfer Off-site for Recycling	Contained in Product
			Air	Land	Water	On-Site	Off-Site		
Installation of new MF/RO system	563.500 t 4.6%	0.000 t 0%	0.000 t 0%	0.000 t 0%	0.000 t 0%	0.000 t 0%	0.000 t 0%	0.000t 0%	
Eliminate use of white liquor in wash circulation of the digester	614.926 t 5.0%	0.000 t 0%	0.000 t 0%	0.000 t 0%	0.000 t 0%	0.000 t 0%	0.000 t 0%	0.000 t 0%	
Increase of pulp machine wire pit pH from 5 to 6	211.800 t 1.7%	0.000 t 0%	0.000 t 0%	0.000 t 0%	0.000 t 0%	0.000 t 0%	0.000 t 0%	0.000 t 0%	

## Timelines for Achieving Estimated Reductions

<b>Description and Timetable for Implementation of Steps for Installation of MF/RO system</b>		
<b>Step</b>	<b>Description</b>	<b>Estimated Timeline</b>
1	Capital Approval & Purchase of MF/RO system	June 2010
2	Installation of MF/RO system	Summer 2011
3	Initiate operation of MF/RO system	Winter 2011/12

Eliminating the use of white liquor in the wash circulation of the digester requires no capital or installation of equipment. The process change was trialed in November 2011 and was implemented in January 2012.

Increasing the pulp machine wire pit pH from 5 to 6 requires no capital or installation of equipment. The process change was trialed in winter 2012. Trials were successful and process change was implemented in summer 2012.

### **Projection of Effectiveness of Toxic Substance Reduction Plan**

As the options identified in the plan have been implemented in 2012, it is expected that the target of 5% reduction in 2012 should be met.