



2012 TOXIC SUBSTANCE REDUCTION PLANS SUMMARY

Based on 2012 Toxic Substance Reporting
Espanola Mill,
Prepared under the Toxics Reduction Act & O. Reg. 4556/09

COPY OF CERTIFICATION BY HIGHEST RANKING EMPLOYEE

As of May 30, 2014, I, Scott Mosher, certify that I have read the toxic substance reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the Toxics Reduction Act, 2009 and Ontario Regulation 455/09 (General) made under that Act. The regulatory deadline of December 31, 2013 was not met for these substances due to the availability of resources to prepare the plan.

- Particulate Matter less than 10 microns (PM10)
- Particulate Matter less than 2.5 microns (PM2.5)
- Total Particulate Matter, PM
- Ammonia (total)
- Carbon Monoxide, cas#630-08-0
- Chlorine Dioxide, cas#10049-04-4
- Hydrogen Sulphide, cas#7783-06-4 and
- Nitrate Ion (pH>6.0)
- Nitrogen Oxide, cas#11104-93-1
- Phosphorous (total)
- Sulphur Dioxide, cas#7446-09-5
- Total Reduced Sulphur (total)
- Volatile Organic Compound (alpha-Pinene, cas#80-56-8)
- Volatile Organic Compound (Beta-Pinene, cas#127-91-3)
- Volatile Organic Compound (DLimonene, cas#5989-27-5)
- Volatile Organic Compound (Ethyl Alcohol, cas#64-17-5)
- Volatile Organic Compound (Formaldehyde, cas#50-00-0)
- Volatile Organic Compound (Isopropyl Alcohol, cas#67-63-0)
- Volatile Organic Compound (Methyl Ethyl Ketone, cas#78-93-3)
- Volatile Organic Compound (Methyl Isobutyl Ketone, cas#108-10-1)
- Acetone (O.Reg 127/01), cas#67-64-1

Original signed copy on file at the facility

Scott Mosher, General Manager
Domtar Espanola (Domtar)

COPY OF CERTIFICATION BY TOXIC SUBSTANCE REDUCTION PLANNER

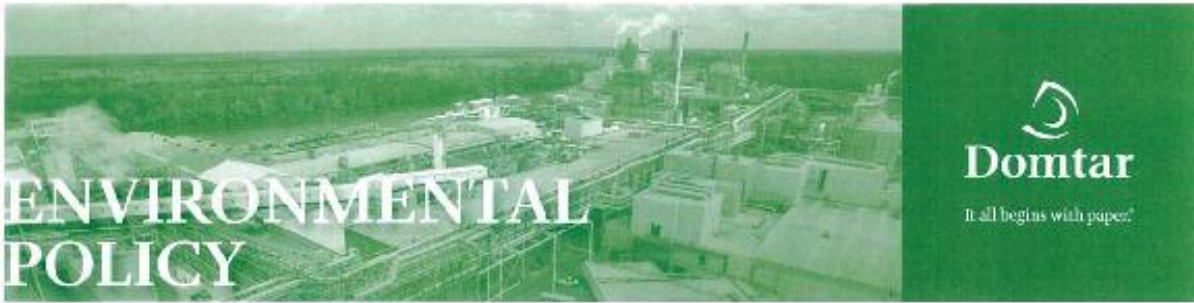
As of May 30, 2014, I, Scott Manser certify that I am familiar with the processes at Domtar that use or create the toxic substances referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the Toxics Reduction Act, 2009 that are set out in the plans and that the plan complies with that Act and that the plans, with the exception of the regulatory deadline, complies with that Act and Ontario Regulation 455/09 (General) made under that Act:

- Particulate Matter less than 10 microns (PM10)
- Particulate Matter less than 2.5 microns (PM2.5)
- Total Particulate Matter, PM
- Ammonia (total)
- Carbon Monoxide, cas#630-08-0
- Chlorine Dioxide, cas#10049-04-4
- Hydrogen Sulphide, cas#7783-06-4 and
- Nitrate Ion (pH>6.0)
- Nitrogen Oxide, cas#11104-93-1
- Phosphorous (total)
- Sulphur Dioxide, cas#7446-09-5
- Total Reduced Sulphur (total)
- Volatile Organic Compound (alpha-Pinene, cas#80-56-8)
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- Volatile Organic Compound (Methyl Isobutyl Ketone, cas#108-10-1)
- Acetone (O.Reg 127/01), cas#67-64-1

Original signed copy on file at the facility

Scott Manser, Senior Project Manager
Toxic Substance Reduction Planner
License No. TSRP0071

DOMTAR ENVIRONMENTAL POLICY



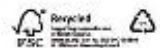
WE WILL CONDUCT BUSINESS IN A MANNER THAT CONSERVES RESOURCES AND CONSTANTLY REDUCES OUR ENVIRONMENTAL FOOTPRINT. WE SEEK CONTINUAL IMPROVEMENT IN OUR ENVIRONMENTAL PERFORMANCE BY SETTING, REVIEWING AND UPDATING ENVIRONMENTAL GOALS.

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.

John D. Williams
President and CEO



BASIC FACILITY INFORMATION

Legal and trade names of the owner and operator of the facility, the street and mailing address	Domtar Inc. 1 Station Road Espanola, Ontario P5E 1R6
Facility NPRI identification number	3185
O. Reg 127 identification number	5114
No. of full time employees	
UTM coordinates	x
	y
UTM zone	14
Datum	NAD 83
Legal name of Canadian Parent company, the street and mailing address	Domtar Inc. 395 Maisonneuve Blvd. Ouest Montréal, QC H3A 1L6
Percent ownership	100%
NAICS codes	31-33 3221 322121
Facility Public Contact	Lynne Gibson Safety and Communications Coordinator (705)869-2020

TOTAL PARTICULATE MATTER, PM

Statement of Intent:

The Domtar Inc. – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill intends to reduce its creation of Total Particulate Matter through Improved Operating Practices. Total Particulate Matter, in the airborne form, is not used at the Mill thus this plan does not address its use.

Objective:

The Domtar Inc. – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill intends to reduce its creation of Total Particulate Matter.

Description of Why Toxic Substance is Used or Created

Total Particulate Matter is created on-site within the various processes resulting from material handling, combustion activities and vehicular traffic. Total Particulate Matter is not found within material feedstock used by the Kraft pulp manufacturing operation.

Options to be Implemented

Domtar intends to install a CO monitor on their Bark Boiler to reduce emissions including Total Particulate Matter.

Estimated Reductions for Options to be Implemented

Estimated reductions are at least 1% of creation and discharge to air of Total Particulate Matter.

Timelines for Achieving Estimated Reductions

Implementation Timeline for Option #4 : Install CO Monitor		
Step	Description	Estimated Timeline
1	Monitor Option Review	Q2 2014
2	Final Monitor Selection	Q2 2014
3	MOE Approval	Q3 2014
4	Installation	Q4 2014

PARTICULATE MATTER, LESS THAN 10 MICRONS (PM10)

Statement of Intent:

Domtar Incorporated – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill intends to reduce its creation of PM10 through Improved Operating Practices. PM10, in the airborne form, is not used at the Mill thus this plan does not address its use.

Objective:

Domtar Incorporated – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill intends to reduce its creation of PM10.

Description of Why Toxic Substance is Used or Created

PM10 is created on-site within the various processes resulting from material handling, combustion activities and vehicular traffic. PM10 is not found within material feedstock used by the Kraft pulp manufacturing operation.

Options to be Implemented

Domtar intends to install a CO monitor on their Bark Boiler to reduce emissions including PM10.

Estimated Reductions for Options to be Implemented

Estimated reductions are at least 1% of creation and discharge to air of PM10.

Timelines for Achieving Estimated Reductions

Implementation Timeline for Option #4 : Install CO Monitor		
Step	Description	Estimated Timeline
1	Monitor Option Review	Q2 2014
2	Final Monitor Selection	Q2 2014
3	MOE Approval	Q3 2014
4	Installation	Q4 2014

PARTICULATE MATTER, LESS THAN 2.5 MICRONS (PM2.5)

Statement of Intent:

Domtar Incorporated – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill does not intend to reduce its creation of PM2.5 as no viable reduction option was identified. PM2.5, in the airborne form, is not used at the Mill thus this plan does not address its use.

Objective:

Domtar Incorporated – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill does intend to reduce its creation of PM2.5.

Description of Why Toxic Substance is Used or Created

PM2.5 is created on-site within the various processes resulting from material handling, combustion activities and vehicular traffic. PM2.5 is not found within material feedstock used by the Kraft pulp manufacturing operation.

Options to be Implemented

Domtar intends to install a CO monitor on their Bark Boiler to reduce emissions including PM2.5.

Estimated Reductions for Options to be Implemented

Estimated reductions are at least 1% of creation and discharge to air of PM2.5.

Timelines for Achieving Estimated Reductions

Implementation Timeline for Option #4 : Install CO Monitor		
Step	Description	Estimated Timeline
1	Monitor Option Review	Q2 2014
2	Final Monitor Selection	Q2 2014
3	MOE Approval	Q3 2014
4	Installation	Q4 2014

FORMALDEHYDE

Statement of Intent:

The Domtar Incorporated – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill intends to reduce its creation of Formaldehyde through Improved Operating Practices. Formaldehyde is not used at the Mill thus this plan does not address its use.

Objective:

The Domtar Incorporated – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill intends to reduce its creation of Formaldehyde. Based on the information gathered in this report, the amount of Formaldehyde created is not expected to significantly increase.

Description of Why Toxic Substance is Used or Created

Formaldehyde is an undesirable trace by-product created during the Kraft pulp making process. Formaldehyde is not used by the Kraft pulp manufacturing operation.

Options to be Implemented

Domtar intends to install a CO monitor on its Bark Boiler to reduce emissions including Formaldehyde.

Estimated Reductions for Options to be Implemented

Estimated reductions are at least 1% of creation and discharge to air of this VOC.

Timelines for Achieving Estimated Reductions

Implementation Timeline for Option #4 : Install CO Monitor		
Step	Description	Estimated Timeline
1	Monitor Option Review	Q2 2014
2	Final Monitor Selection	Q2 2014
3	MOE Approval	Q3 2014
4	Installation	Q4 2014

ETHYL ALCHOL

Statement of Intent:

The Domtar Incorporated – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill intends to reduce its creation of Ethyl Alcohol through Improved Operating Practices. Ethyl Alcohol is not used at the Mill thus this plan does not address its use.

Objective:

The Domtar Incorporated – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill intends to reduce its creation of Ethyl Alcohol. Based on the information gathered in this report, the amount of Ethyl alcohol created is not expected to significantly increase.

Description of Why Toxic Substance is Used or Created

Ethyl Alcohol is an undesirable trace by-product created during the Kraft pulp making process. Ethyl Alcohol is not used by the Kraft pulp manufacturing operation.

Options to be Implemented

Domtar intends to install a CO monitor on its Bark Boiler to reduce emissions including Ethyl Alcohol.

Estimated Reductions for Options to be Implemented

Estimated reductions are at least 1% of creation and discharge to air of this VOC.

Timelines for Achieving Estimated Reductions

Implementation Timeline for Option #4 : Install CO Monitor		
Step	Description	Estimated Timeline
1	Monitor Option Review	Q2 2014
2	Final Monitor Selection	Q2 2014
3	MOE Approval	Q3 2014
4	Installation	Q4 2014

ISOPROPYL ALCHOL

Statement of Intent:

The Domtar Incorporated – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill intends to reduce its creation of Isopropyl Alcohol through Improved Operating Practices. Isopropyl Alcohol is not used at the Mill thus this plan does not address its use.

Objective:

The Domtar Incorporated – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill intends to reduce its creation of Isopropyl Alcohol. Based on the information gathered in this report, the amount of Isopropyl alcohol created is not expected to significantly increase.

Description of Why Toxic Substance is Used or Created

Isopropyl Alcohol is an undesirable trace by-product created during the Kraft pulp making process. Isopropyl Alcohol is not used by the Kraft pulp manufacturing operation.

Options to be Implemented

Domtar intends to install a CO monitor on its bark boiler to reduce emissions including Isopropyl Alcohol.

Estimated Reductions for Options to be Implemented

Estimated reductions are at least 1% of creation and discharge to air of this VOC.

Timelines for Achieving Estimated Reductions

Implementation Timeline for Option #4 : Install CO Monitor		
Step	Description	Estimated Timeline
1	Monitor Option Review	Q2 2014
2	Final Monitor Selection	Q2 2014
3	MOE Approval	Q3 2014
4	Installation	Q4 2014

METHYL ETHYL KETONE

Statement of Intent:

Domtar Incorporated – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill intends to reduce its creation of Methyl Ethyl Ketone through Improve4d Operating Practices. Methyl Ethyl Ketone is not used at the Mill thus this plan does not address its use.

Objective:

Domtar Incorporated – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill intends to reduce its creation of Methyl Ethyl Ketone. Based on the information gathered in this report, the amount of Methyl Ethyl Ketone created is not expected to significantly increase. Incorporated

Description of Why Toxic Substance is Used or Created

Methyl Ethyl Ketone is an undesirable trace by-product created during the Kraft pulp making process. Methyl Ethyl Ketone is not used by the Kraft pulp manufacturing operation.

Options to be Implemented

Domtar intends to install a CO monitor on its Bark Boiler to reduce emissions including Methyl Ethyl Ketone.

Estimated Reductions for Options to be Implemented

Estimated reductions are at least 1% of creation and discharge to air of this VOC.

Timelines for Achieving Estimated Reductions

Implementation Timeline for Option #4 : Install CO Monitor		
Step	Description	Estimated Timeline
1	Monitor Option Review	Q2 2014
2	Final Monitor Selection	Q2 2014
3	MOE Approval	Q3 2014
4	Installation	Q4 2014

METHYL ISOBUTYL KETONE

Statement of Intent:

The Domtar Incorporated – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill intends to reduce its creation of Methyl Isobutyl Ketone through Improved Operating Practices. Methyl Isobutyl Ketone is not used at the Mill thus this plan does not address its use.

Objective:

The Domtar Incorporated – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill intends to reduce its creation of Methyl Isobutyl Ketone. Based on the information gathered in this report, the amount of Methyl Isobutyl Ketone created is not expected to significantly increase.

Description of Why Toxic Substance is Used or Created

Methyl Isobutyl Ketone is an undesirable trace by-product created during the Kraft pulp making process. Methyl Isobutyl Ketone is not used by the Kraft pulp manufacturing operation.

Options to be Implemented

Domtar intends to install a CO monitor on its Bark Boiler to reduce emissions including Methyl Isobutyl Ketone.

Estimated Reductions for Options to be Implemented

Estimated reductions are at least 1% of creation and discharge to air of this VOC.

Timelines for Achieving Estimated Reductions

Implementation Timeline for Option #4 : Install CO Monitor		
Step	Description	Estimated Timeline
1	Monitor Option Review	Q2 2014
2	Final Monitor Selection	Q2 2014
3	MOE Approval	Q3 2014
4	Installation	Q4 2014

ACETONE

Statement of Intent:

Domtar Incorporated – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill intends to reduce its creation of Acetone through Improved Operating Practices. Acetone is not used at the Mill thus this plan does not address its use.

Objective:

Domtar Incorporated – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill intends to reduce its creation of Acetone. Based on the information gathered in this report, the amount of Acetone created is not expected to significantly increase.

Description of Why Toxic Substance is Used or Created

Acetone is an undesirable trace by-product created during the Kraft pulp making process. Acetone is not used by the Kraft pulp manufacturing operation.

Options to be Implemented

Domtar intends to install a CO monitor on its Bark Boiler to reduce emissions including Acetone.

Estimated Reductions for Options to be Implemented

Estimated reductions are at least 1% of creation and discharge to air of this VOC.

Timelines for Achieving Estimated Reductions

Implementation Timeline for Option #4 : Install CO Monitor		
Step	Description	Estimated Timeline
1	Monitor Option Review	Q2 2014
2	Final Monitor Selection	Q2 2014
3	MOE Approval	Q3 2014
4	Installation	Q4 2014

ALPHA-PINENE

Statement of Intent:

The Domtar Inc. – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill does not intend to reduce its use of Alpha-Pinene because it is an undesirable trace contaminant in raw materials (softwood chips) for which there is no viable alternative. Alpha-Pinene is not created at the Mill thus this plan does not address its creation.

Objective:

The Domtar Inc. – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill does not intend to reduce its use of Alpha-Pinene because it is an undesirable trace contaminant in raw materials (softwood chips) for which there is no viable alternative. Based on the information gathered in this report, the amount of Alpha-Pinene used is expected to increase due to increased softwood pulp production.

Description of Why Toxic Substance is Used or Created

Alpha-Pinene is an undesirable trace contaminant present in softwood chips. Alpha-Pinene 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 Alpha-Pinene.

Estimated Reductions for Options to be Implemented

Not applicable.

Timelines for Achieving Estimated Reductions

Not applicable.

BETA-PINENE

Statement of Intent:

The Domtar Inc. – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy Domtar Incorporated – Espanola Mill does not intend to reduce its use of Beta-Pinene because it is an undesirable trace contaminant in raw materials (softwood chips) for which there is no viable alternative. Beta-Pinene is not created at the Mill thus this plan does not address its creation.

Objective:

The Domtar Inc. – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy Domtar Incorporated – Espanola Mill does not intend to reduce its use of Beta-Pinene because it is an undesirable trace contaminant in raw materials (softwood chips) for which there is no viable alternative. Based on the information gathered in this report, the amount of Beta-Pinene used is expected to increase due to increased softwood pulp production.

Description of Why Toxic Substance is Used or Created

Beta-Pinene is an undesirable trace contaminant present in softwood chips. Beta-Pinene 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 Beta-Pinene.

Estimated Reductions for Options to be Implemented

Not applicable.

Timelines for Achieving Estimated Reductions

Not applicable.

D-LIMONENE

Statement of Intent:

The Domtar Inc. – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy Domtar Incorporated – Espanola Mill does not intend to reduce its use of D-Limonene because it is an undesirable trace contaminant in raw materials (softwood chips) for which there is no viable alternative. D-Limonene is not created at the Mill thus this plan does not address its creation.

Objective:

The Domtar Inc. – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill does not intend to reduce its use of D-Limonene because it is an undesirable trace contaminant in raw materials (softwood chips) for which there is no viable alternative. Based on the information gathered in this report, the amount of D-Limonene used is expected to increase due to increased softwood pulp production.

Description of Why Toxic Substance is Used or Created

D-Limonene is an undesirable trace contaminant present in softwood chips. D-Limonene 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 D-Limonene.

Estimated Reductions for Options to be Implemented

Not applicable.

Timelines for Achieving Estimated Reductions

Not applicable.

CARBON MONOXIDE

Statement of Intent:

The Domtar Inc. – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill intends to reduce its creation of Carbon Monoxide through Improved Operating Practices. Carbon Monoxide is not used at the Mill thus this plan does not address its use.

Objective:

The Domtar Inc. – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill intends to reduce its creation of Carbon Monoxide.

Description of Why Toxic Substance is Used or Created

Carbon Monoxide is created and released on-site through the combustion of various fuels for Chemical Recovery, Power Generation and Ancillary processes such as building heating requirements. In Kraft pulp mills and pulp mills that practice either oxygen delignification or pulp bleaching with chlorine dioxide (ClO₂), CO is also formed during these delignification processes and released to the atmosphere. Carbon Monoxide is not found within material feedstock used by the Kraft pulp manufacturing operation.

Options to be Implemented

One option was identified to be technically or economically feasible (Improved Operating Practices – Install CO Monitor).

Estimated Reductions for Options to be Implemented

Estimated reductions are at least 3% of creation and discharge to air of this substance.

Timelines for Achieving Estimated Reductions

Implementation Timeline for Option #4 : Install CO Monitor		
Step	Description	Estimated Timeline
1	Monitor Option Review	Q2 2014
2	Final Monitor Selection	Q2 2014
3	MOE Approval	Q3 2014
4	Installation	Q4 2014

NITROGEN OXIDES

Statement of Intent:

The Domtar Inc. – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill does not intend to reduce its creation of Nitrogen Oxides as no viable reduction option was identified. Nitrogen Oxides are not used at the Mill thus this plan does not address its use.

Objective:

The Domtar Inc. – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Domtar Incorporated – Espanola Mill does not intend to reduce its creation of Nitrogen Oxides as no viable alternative was identified.

Description of Why Toxic Substance is Used or Created

Nitrogen Oxides is created and released on-site through the combustion of various fuels for Chemical Recovery, Power Generation and Ancillary processes such as building heating requirements. Nitrogen Oxides are not found within material feedstock used 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 creation of Nitrogen Oxides.

Estimated Reductions for Options to be Implemented

Not applicable.

Timelines for Achieving Estimated Reductions

Not applicable.

SULPHUR DIOXIDE

Statement of Intent:

Domtar Incorporated – Espanola Mill intends to reduce its creation of Sulphur Dioxide through Improved Operating Practices. Domtar Incorporated – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Sulphur Dioxide is not used at the Mill thus this plan does not address its use.

Objective:

Domtar Incorporated – Espanola Mill intends to reduce its creation of Sulphur Dioxide from the Recovery Boiler. Domtar Incorporated – Espanola 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

Sulphur Dioxide is created and released on-site through the combustion of various fuels for Chemical Recovery, Power Generation and Ancillary processes such as building heating requirements. Sulphur Dioxide is not found within material feedstock used by the Kraft pulp manufacturing operation.

Options to be Implemented

Improved Operating Practices consisting of; Liquor Sulphidity target will be lowered and Recovery Boiler liquor temperature and bed temperature will be optimized. These options will reduce the creation of Sulphur Dioxide from the Recovery boiler.

Estimated Reductions for Options to be Implemented

Reductions from implementing the options are believed to reduce Sulphur dioxide emissions by 1,500 tonnes.

Timelines for Achieving Estimated Reductions

Liquor Sulphidity targets are to be lowered in May 2013. Recovery boiler liquor and bed temperature optimization is to occur in the first quarter of 2013.

PHOSPHOROUS (total)

Statement of Intent:

The Domtar Inc. – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Phosphorous is not created at the Mill and thus this plan does not address its creation. The Mill does not intend to reduce its use of Phosphorous (total) because it is an undesirable trace contaminant in raw materials (wood chips, bark, and chemicals) for which there is no viable alternative, and it is used within the Wastewater Treatment process to promote wastewater treatment for which there is no viable alternative.

Objective:

The Domtar Inc. – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. The Mill does not intend to reduce its use of Phosphorous because it is an undesirable trace contaminant in raw materials (wood chips, bark, and chemicals) for which there is no viable alternative and used within the Wastewater Treatment process to promote wastewater treatment for which there is no viable alternative. Based on the information gathered in this report, the amount of Phosphorous in the feedstock is not expected to significantly increase. Phosphorous used at the wastewater treatment plant is expected to increase as a result of studies indicating a phosphorous deficiency.

Description of Why Toxic Substance is Used or Created

Phosphorous is an undesirable trace contaminant present in wood chips, bark, and is used in the Wastewater Treatment process to promote wastewater treatment. Phosphorous 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 Phosphorous (total).

Estimated Reductions for Options to be Implemented

Not applicable.

Timelines for Achieving Estimated Reductions

Not applicable.

HYDROGEN SULPHIDE

Statement of Intent:

Domtar Inc. – Espanola Mill intends to reduce its creation of Hydrogen Sulphide. Domtar Inc. – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Hydrogen Sulphide is not used at the facility thus this plan does not address its use.

Objective:

Domtar Inc. – Espanola Mill will be reducing its creation of Hydrogen Sulphide through the addition of six more aerators in the Wastewater Treatment Process. Domtar Inc. – Espanola 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

Hydrogen Sulphide is created on-site within the pulp mill as sodium sulphide and naturally occurring sulphur based substances found in the feedstock are converted in the pulp making process. Hydrogen Sulphide is not found within material feedstock used by the Kraft pulp manufacturing operation.

Options to be Implemented

Six additional aerators will be installed in the effluent treatment system. This will improve oxygenation of the effluent, and reduce Hydrogen Sulphide formation. Liquor Sulphidity target has been lowered to 30%. This may reduce overall TRS and H₂S formation in the Pulping, Chemical Recovery, and Wastewater Treatment processes.

Estimated Reductions for Options to be Implemented

No estimate for reduction is available. Emission factors are used to determine Hydrogen Sulphide; the installation of the aerators and lowering of liquor Sulphidity will have no impact on emission factors.

Timelines for Achieving Estimated Reductions

Aerators will be installed during the winter of 2013/2014.

TOTAL REDUCED SULPHUR

Statement of Intent:

Domtar Inc. – Espanola Mill intends to reduce its creation of Total Reduced Sulphur. Domtar Inc. – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Total Reduced Sulphur is not used at the facility thus this plan does not address its use.

Objective:

Domtar Inc. – Espanola Mill will be reducing its creation of Total Reduced Sulphur through the addition of six more aerators in the Wastewater Treatment Process. Domtar Inc. – Espanola 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

Total Reduced Sulphur is created on-site within the pulp mill as sodium sulphide and naturally occurring sulphur based substances found in the feedstock are converted in the pulp making process. Total Reduced Sulphur is not found within material feedstock used by the Kraft pulp manufacturing operation.

Options to be Implemented

Six additional aerators will be installed in the effluent treatment system. This will improve oxygenation of the effluent, and reduce TRS (H₂S specifically) formation. Liquor Sulphidity target has been lowered to 30%. This may reduce overall TRS and H₂S formation in the Pulping, Chemical Recovery, and Wastewater Treatment processes.

Estimated Reductions for Options to be Implemented

No estimate for reduction is available. Emission factors are used to determine TRS quantities; the installation of the aerators and lowering of liquor Sulphidity will have no impact on emission factors.

Timelines for Achieving Estimated Reductions

Aerators will be installed during the winter of 2013/2014.

CHLORINE DIOXIDE

Statement of Intent:

Domtar Inc. – Espanola Mill does not intend to reduce its use or creation of Chlorine Dioxide as no viable reduction option was identified. Domtar Inc. – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

Objective:

Domtar Inc. – Espanola Mill does not intend to reduce its creation of Chlorine Dioxide because it is a required bleaching agent in the pulp making process for which there is no viable alternative. Domtar Inc. – Espanola 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 Dioxide is created on-site and is a required bleaching agent within the pulp making process for bleached pulp. Chlorine Dioxide is not found within material feedstock used 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 creation of Chlorine Dioxide.

Estimated Reductions for Options to be Implemented

Not applicable.

Timelines for Achieving Estimated Reductions

Not applicable.

NITRATE ION

Statement of Intent:

Domtar Inc. – Espanola Mill does not intend to reduce its use of Nitrate Ion because it is a desirable substance within the Wastewater Treatment process and no viable alternative was identified. Nitrate Ion is created within the Wastewater Treatment process as a natural by-product of the Nitrogen cycle for which there is no viable alternative. Domtar Inc. – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy.

Objective:

Domtar Inc. – Espanola Mill does not intend to reduce its use of Nitrate Ion because it is a desirable substance within the Wastewater Treatment process and no viable alternative was identified. Nitrate Ion is created within the Wastewater Treatment process as a natural by-product of the Nitrogen cycle for which there is no viable alternative. Domtar Inc. – Espanola 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

Nitrate Ion is a desirable substance used within the Wastewater Treatment process as an odour reducing agent. Nitrate Ion is created within the Wastewater Treatment process as a natural by-product of the Nitrogen cycle.

Description of Why Toxic Substance is Used or Created

Nitrate Ion is a desirable substance used within the Wastewater Treatment process as a nutrient to assist in sustaining the biological treatment operations. Nitrate Ion is created within the Wastewater Treatment process as an intermediate step in the destruction of nitrogen based compounds and is wholly destroyed / consumed within this same process under normal operations.

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 Nitrate Ion.

Estimated Reductions for Options to be Implemented

Not applicable.

Timelines for Achieving Estimated Reductions

Not applicable.

AMMONIA

Statement of Intent:

Domtar Inc. – Espanola Mill does not intend to reduce its creation of Ammonia because it is an undesirable trace contaminant created as a by-product within the pulping, chemical recovery, and wastewater treatment processes for which there is no viable alternative. Domtar Inc. – Espanola Mill is committed to developing and implementing measures to ensure sustainable use of materials, resources and energy. Ammonia not used at the facility thus this plan does not address its use.

Objective:

Domtar Inc. – Espanola Mill does not intend to reduce its creation of Ammonia because it is an undesirable trace contaminant created as a by-product within the pulping, chemical recovery, and wastewater treatment processes for which there is no viable alternative. Domtar Inc. – Espanola 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

Ammonia is an undesirable contaminant created during the pulping, chemical recovery, and wastewater treatment processes as nitrogen based compounds, including those found within the feedstock, are converted to ammonia. Ammonia is not used by the Mill.

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 Ammonia.

Estimated Reductions for Options to be Implemented

Not applicable.

Timelines for Achieving Estimated Reductions

Not applicable.