

Toxic Reduction Plan Summary

Substance

Substance Name and CAS #	Nitrogen Oxides (NOx) and CAS # 10102-44-0
Substances for which other plans have been prepared	PM10, PM2.5 and Sulphur Dioxide
Beneficial Uses at Facility	There is no beneficial use for nitrogen oxides at this site
Reasons for Use	This substance is not used at the facility
Reasons for Use - summary statement (mandatory)	N/A
Reasons for Creation	As a by-product
Reasons for creation - summary statement (mandatory)	The substance is a by-product of key reactions within the manufacturing processes at the site.

Facility Information

Company Name	Owens Corning Composite Materials Canada LP
Facility Name	Guelph Glass Plant
Facility Physical Address	247 York Road, Guelph, ON N1H 6P6
Facility Mailing Address	Same as physical address
Spatial Coordinates of Facility	562054 Easting; 4821622 Northing
Number of Employees	210
NPRI ID	3287
Ontario MOE (R.127)ID Number	None assigned
2 Digit NAICS Code	32
4 Digit NAICS Code	3272
6 Digit NAICS Code	327214

Parent Company Information

Parent Company Name	OC Canada Holding Company
Address	3450 McNicoll Ave, Scarborough ON, CANADA, M1V 1Z5
Percent Ownership (if available)	99.99%
Business Number	101790921

Parent Company Information

Parent Company Name	Owens Corning Composite Materials Canada GP Inc.
Address	900-400 St. Mary Avenue, Winnipeg, Manitoba, CANADA, R3C 4K5
Percent Ownership (if available)	0.01%
Business Number	842450363

Date of Plan: December 18, 2013

Facility Contact

Public Contact	Rob Nixon
Position	Maintenance & Engineering Leader
Address	247 York Street, Guelph, ON, CANADA, N1E 3G4
email	Robert.D.Nixon@owenscorning.com
Phone	519-823-7219
Fax	519-823-7204

Date of Plan: December 18, 2013

Statement of Intent

Owens Corning Composite Materials Canada LP - Guelph Glass Plant is committed to playing a leadership role in protecting the environment. For the purposes of the Toxics Reduction Act, the facility does not intend to further reduce the creation of nitrogen oxides (NOx) because of the success of previously implemented reduction efforts. Whenever feasible, we will eliminate, or reduce the creation and discharge of nitrogen oxides in full compliance with all Federal and Provincial Regulations.

Plan Objectives

While Owens Corning Composite Materials Canada LP - Guelph Glass Plant does not intend to reduce the creation of nitrogen oxides at the facility, the plan was developed with the following objectives:

- We will continue to operate in full compliance with all environmental regulations; and
- We will continue to manage releases of nitrogen oxides through current and future pollution prevention and best management practices.

Description of Substance

Nitrogen oxides are created as a by-product of processes associated with the manufacture of glass and glass fiber products.

Toxic Substance Reduction Option(s) to be Implemented

For the purposes of the Toxics Reduction Act, the Owens Corning Composite Materials Canada LP Guelph Glass Facility will not be implementing any options to reduce the creation of nitrogen oxides because it is a by-product of key reactions within the current manufacturing processes and natural gas combustion at the site. The facility has already implemented multiple programs to prevent and limit discharges. There were no further feasible (technical and economic) reduction options identified.

Description of Previously Implemented Reduction Opportunities:

- 40% decrease in natural gas consumption in 2000/2001 due to conversion to oxygen firing
- Electric boost added to the melter to reduce natural gas usage
- Preventative maintenance programs and procedures already in place
- Combustion control system in place to minimize/optimize natural gas usage
- Removal of niter from batch materials reduced the generation of NOx

Plan Summary Statement

This plan summary accurately reflects the content of the Toxic Substance Reduction Plan for nitrogen oxides, prepared by Owens Corning Composite Materials Canada LP - Guelph Glass Plant, dated December 18, 2013.

Certification by Highest Ranking Employee

As of December 18, 2013, I, Charles White, certify that I have read the toxic substance reduction plan for the toxic substance 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.

Toxic Substance: **Nitrogen Oxides (NOx)**

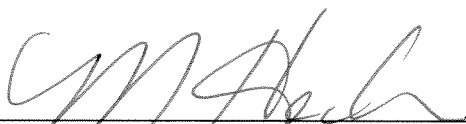


Charles White
Plant Manager
Owens Corning Composite Materials Canada LP - Guelph Glass Plant

Certification by Licensed Planner

As of December 18, 2013, I, Melanie Hockin certify that I am familiar with the processes at Owens Corning Composite Materials Canada LP - Guelph Glass Plant that use or create the toxic substance, 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 plan dated December 20, 2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

Toxic Substance: **Nitrogen Oxides (NOx)**



Melanie Hockin
Toxic Substance Reduction Planner
License Number: TSRP0140
LEHDER Environmental Services Limited

Date of Plan: December 18, 2013

Toxic Reduction Plan Summary

Substance

Substance Name and CAS #	PM10 and PM2.5 and CAS # N/A
Substances for which other plans have been prepared	Nitrogen Oxides and Sulphur Dioxide
Beneficial Uses at Facility	There is no beneficial use for Particulate Matter Size Fractions (PM10, PM2.5) at this site
Reasons for Use	This substance is not used at the facility
Reasons for use - summary statement (mandatory)	N/A
Reasons for Creation	As a by-product
Reasons for creation - summary statement (mandatory)	The substance is a by-product of key reactions within the manufacturing processes at the site.

Facility Information

Company Name	Owens Corning Composite Materials Canada LP
Facility Name	Guelph Glass Plant
Facility Physical Address	247 York Road, Guelph, ON N1H 6P6
Facility Mailing Address	Same as physical address
Spatial Coordinates of Facility	562054 Easting; 4821622 Northing
Number of Employees	210
NPRI ID	3287
Ontario MOE (R.127)ID Number	None assigned
2 Digit NAICS Code	32
4 Digit NAICS Code	3272
6 Digit NAICS Code	327214

Parent Company Information

Parent Company Name	OC Canada Holding Company
Address	3450 McNicoll Ave, Scarorough ON, CANADA, M1V 1Z5
Percent Ownership (if available)	99.99%
Business Number	101790921

Parent Company Information

Parent Company Name	Owens Corning Composite Materials Canada GP Inc.
Address	900-400 St. Mary Avenue, Winnipeg, Manitoba, CANADA, R3C 4K5
Percent Ownership (if available)	0.01%
Business Number	842450363

Date of Plan: December 15, 2013

Facility Contact

Public Contact	Rob Nixon
Position	Maintenance & Engineering Leader
Address	247 York Street, Guelph, ON, CANADA, N1E 3G4
email	Robert.D.Nixon@owenscorning.com
Phone	519-823-7219
Fax	519-823-7204

Date of Plan: December 15, 2013

Statement of Intent

Owens Corning Composite Materials Canada LP - Guelph Glass Plant is committed to playing a leadership role in protecting the environment. For the purposes of the Toxics Reduction Act, the facility does not intend to further reduce the creation of PM₁₀ and PM_{2.5} because of the success of previously implemented reduction efforts. Whenever feasible, we will eliminate, or reduce the creation and discharge of particulate material size fractions in full compliance with all Federal and Provincial Regulations.

Plan Objectives

While Owens Corning Composite Materials Canada LP - Guelph Glass Plant does not intend to reduce the creation of particulate matter size fractions (PM₁₀, PM_{2.5}) at the facility, the plan was developed with the following objectives:

- We will continue to operate in full compliance with all environmental regulations; and
- We will continue to manage releases of particulate matter size fractions (PM₁₀, PM_{2.5}) through current and future pollution prevention and best management practices.

Description of Substance

Particulate Matter Size Fractions (PM₁₀, PM_{2.5}) are created as a by-product of material handling and processes associated with the manufacture of glass and glass fiber products.

Toxic Substance Reduction Option(s) to be Implemented

For the purposes of the Toxics Reduction Act, the Owens Corning Composite Materials Canada LP Guelph Glass Facility will not be implementing any options to reduce the creation of particulate matter size fractions (PM₁₀, PM_{2.5}) because it is a by-product of material handling and key reactions within the current manufacturing processes at the site. The facility has already implemented multiple programs to prevent and limit discharges. There were no further feasible (technical and economic) reduction options identified.

Description of Previously Implemented Reduction Opportunities:

- 40% decrease in natural gas consumption in 2000/2001 due to conversion to oxygen firing
- Electric boost added to the melter to reduce natural gas usage
- Preventative maintenance programs and procedures already in place
- Combustion control system in place to minimize/optimize natural gas usage
- Control measures are in place to prevent/limit PM emissions; cyclones, pressure monitors, baghouses with pressure sensors, closed storage and transport systems, filter boxes

Plan Summary Statement

This plan summary accurately reflects the content of the Toxic Substance Reduction Plan for particulate matter size fractions (PM₁₀, PM_{2.5}), prepared by Owens Corning Composite Materials Canada LP - Guelph Glass Plant, dated December 15, 2013.

Certification by Highest Ranking Employee

As of December 18, 2013, I, Charles White, certify that I have read the toxic substance reduction plan for the toxic substance 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.

Toxic Substance: **Particulate Matter Size Fractions (PM10, PM2.5)**



Charles White
Plant Manager
Owens Corning Composite Materials Canada LP - Guelph Glass Plant

Certification by Licensed Planner

As of December 18, 2013, I, Melanie Hockin certify that I am familiar with the processes at Owens Corning Composite Materials Canada LP - Guelph Glass Plant that use or create the toxic substance, 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 plan dated December 20, 2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

Toxic Substance: **Particulate Matter Size Fractions (PM10, PM2.5)**



Melanie Hockin
Toxic Substance Reduction Planner
License Number: TSRP0140
LEHDER Environmental Services Limited

Toxic Reduction Plan Summary

Substance

Substance Name and CAS #	Sulphur Dioxide and CAS # 7446-09-5
Substances for which other plans have been prepared	PM2.5, PM10 and Nitrogen Oxides
Beneficial Uses at Facility	NA
Reasons for Use	This substance is not used at the facility
Reasons for use - summary statement (mandatory)	N/A
Reasons for Creation	As a by-product
Reasons for creation - summary statement (mandatory)	The substance is a by-product of key reactions within the manufacturing processes at the site.

Facility Information

Company Name	Owens Corning Composite Materials Canada LP
Facility Name	Guelph Glass Plant
Facility Physical Address	247 York Road, Guelph, ON N1H 6P6
Facility Mailing Address	Same as physical address
Spatial Coordinates of Facility	562054 Easting; 4821622 Northing
Number of Employees	210
NPRI ID	3287
Ontario MOE (R.127)ID Number	None assigned
2 Digit NAICS Code	32
4 Digit NAICS Code	3272
6 Digit NAICS Code	327214

Parent Company Information

Parent Company Name	OC Canada Holding Company
Address	3450 McNicoll Ave, Scarorough ON, CANADA, M1V 1Z5
Percent Ownership (if available)	99.99%
Business Number	101790921

Parent Company Information

Parent Company Name	Owens Corning Composite Materials Canada GP Inc.
Address	900-400 St. Mary Avenue, Winnipeg, Manitoba, CANADA, R3C 4K5
Percent Ownership (if available)	0.01%
Business Number	842450363

Date of Plan: December 18, 2013

Facility Contact

Public Contact	Rob Nixon
Position	Maintenance & Engineering Leader
Address	247 York Street, Guelph, ON, CANADA, N1E 3G4
email	Robert.D.Nixon@owenscorning.com
Phone	519-823-7219
Fax	519-823-7204

Date of Plan: December 18, 2013

Statement of Intent

Owens Corning Composite Materials Canada LP - Guelph Glass Plant is committed to playing a leadership role in protecting the environment. For the purposes of the Toxics Reduction Act, the facility does not intend to further reduce the creation of sulphur dioxide (SO₂) because of the success of previously implemented reduction efforts. The creation of sulphur dioxide contributes to product quality. Whenever feasible, we will eliminate, or reduce the creation and discharge of sulphur dioxide in full compliance with all Federal and Provincial Regulations.

Plan Objectives

While Owens Corning Composite Materials Canada LP - Guelph Glass Plant does not intend to reduce the creation of sulphur dioxide at the facility because it plays a role in product quality, the plan was developed with the following objectives:

- We will continue to operate in full compliance with all environmental regulations; and
- We will continue to manage releases of sulphur dioxide through current and future pollution prevention and best management practices.

Description of Substance

Sulphur Dioxide is created as a by-product of processes associated with the manufacture of glass and glass fiber products.

Toxic Substance Reduction Option(s) to be Implemented

For the purposes of the Toxics Reduction Act, the Owens Corning Composite Materials Canada LP Guelph Glass Facility will not be implementing any options to reduce the creation of sulphur dioxide because it is a by-product of key reactions within the current manufacturing processes at the site that are necessary for product quality. The facility has already implemented multiple programs to prevent and limit discharges. There were no further feasible (technical and economic) reduction options identified.

Description of Previously Implemented Reduction Opportunities:

- 40% decrease in natural gas consumption in 2000/2001 due to conversion to oxygen firing
- Electric boost added to the melter to reduce natural gas usage
- Preventative maintenance programs and procedures already in place
- Combustion control system in place to minimize/optimize natural gas usage
- Salt cake use has been optimized

Plan Summary Statement

This plan summary accurately reflects the content of the Toxic Substance Reduction Plan for sulphur dioxide, prepared by Owens Corning Composite Materials Canada LP - Guelph Glass Plant, dated December 18, 2013.

Date of Plan: December 18, 2013

Certification by Highest Ranking Employee

As of December 18, 2013, I, Charles White, certify that I have read the toxic substance reduction plan for the toxic substance 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.

Toxic Substance: **Sulphur Dioxide (SO₂)**



Charles White

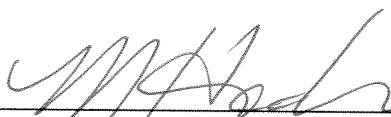
Plant Manager

Owens Corning Composite Materials Canada LP - Guelph Glass Plant

Certification by Licensed Planner

As of December 18, 2013, I, Melanie Hockin certify that I am familiar with the processes at Owens Corning Composite Materials Canada LP - Guelph Glass Plant that use or create the toxic substance, 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 plan dated December 20, 2012 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

Toxic Substance: **Sulphur Dioxide (SO₂)**



Melanie Hockin

Toxic Substance Reduction Planner

License Number: TSRP0140

LEHDER Environmental Services Limited

Date of Plan: December 18, 2013