Substance

Substance Name and CAS #	Ammonia and CAS # 7664-41-7
Substances for which other plans have been prepared	Particulate Matter (PM10 and PM2.5), NOx, Carbon Monoxide, Ammonia, Nitric Acid, Nitrate Ion, n-Hexane, Propane, Butane, Pentane, Formaldehyde, Methanol, Copper, Hexavalent Chromium, Zinc, Sulphuric Acid, Chlorine, Asbestos
Beneficial Uses at Facility	key product manufactured on site
Reasons for Use	Other
Reasons for use - summary statement (mandatory)	Substance is a component of the process water influent
Reasons for Creation	For on-site use/processingFor sale/distribution
Reasons for creation - summary statement (mandatory)	Ammonia is both a key process intermediate and key component of final products at the facility.

Facility Information

Company Name	Terra International (Canada) Inc.
Facility Name	CF Industries Courtright Nitrogen Complex
Facility Physical Address	161 Bickford Line, Courtright, ON, Canada, N0N 1H0
Facility Mailing Address	Same as physical address
Spatial Coordinates of Facility	381104 Easting; 4735453 Northing
Number of Employees	158
NPRI ID	2233
Ontario MOE (R.127)ID Number	if assigned
2 Digit NAICS Code	31-33
4 Digit NAICS Code	3253
6 Digit NAICS Code	325313

Parent Company Information

Parent Company Name	CF Industries Holdings Inc.
Address	Suite 400 - 4 Parkway North, Deerfield, IL, USA, 60015-2590
Percent Ownership (if available)	100%

Facility Contact

Public Contact	Tom Croskery
Position	Supervisor Quality & Environment
Address	161 Bickford Line, Courtright, ON, Canada, N0N 1H0
email	TCroskery@cfindustries.com
Phone	519-867-2739 x1292
Fax	519-867-3173

Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex is committed to playing a leadership role in protecting the environment. For the purposes of the Toxics Reduction Act, CF Industries Courtright Nitrogen Complex will not be implementing any options to reduce the use or creation of ammonia in its operations because it is a component of process water influent as well as a key product and intermediate of the manufacturing processes at the site. Whenever feasible, we will eliminate, or reduce the discharge of ammonia in full compliance with all Federal and Provincial Regulations.

Plan Objectives

While CF Industries Courtright Nitrogen Complex does not intend to reduce the use or creation of ammonia, the plan was developed with the following objectives:

- we will continue to operate in full compliance with all applicable environmental regulations; and
- we will continue to manage and prevent releases of ammonia through current and future pollution prevention and best management practices.

Description of Substance (Reason for Use and/or Creation)

Ammonia is in use as a component of the process water influent and created as a key product and process intermediate at the facility.

Toxic Substance Reduction Option(s) To Be Implemented

For the purposes of the Toxics Reduction Act, CF Industries Courtright Nitrogen Complex will not be implementing any options to reduce the use or creation of ammonia in its operations because it is a component of process water influent as well as a key product and intermediate of the manufacturing processes at the site. In the past, CF Industries Courtright Nitrogen Complex has implemented multiple programs that minimize losses of ammonia. There were no further feasible reduction options identified.

Description of Previously Implemented Reduction Opportunities:

- Specific training for operations handling of materials to prevent upset/spills/losses.
- The process and equipment are continuously monitored and optimized to prevent over use and minimize loss potential (ie, automated dosing and monitoring)
- Spill Prevention and Contingency Plan (SPCP) established, tanks/totes/drums have secondary containment
- Optimized usage by monitoring with Totally Distributed Control (TDC) system
- Engineering standards for pipe seal design etc. has been continuously improved to reduce leaks
- Mandated/scheduled operator rounds (visual inspection etc.)
- LEL detection and alarming
- Incident Investigation process continuous improvement
- Safeguarding Reviews and Pressured Equipment Integrity Programs in place

Plan Summary Statement

This plan summary accurately reflects the content of the toxic substance reduction plan for ammonia, prepared by Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex, dated December 15, 2013.

As of December 15, 2013, I, Robb Aultman, 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.

Toxic Substance: Ammonia

Robb Aultman Plant Leader

Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex

Certification by Licensed Planner

As of December 15, 2013, I, Melanie Hockin certify that I am familiar with the processes at Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex that use or create the toxic substance 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 plan dated December 15, 2013 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

Toxic Substance: Ammonia

Melanie Hockin

Toxic Substance Reduction Planner

License Number: TSRP0140

Substance

Substance Name and CAS #	Butane and CAS # 106-97-8
Substances for which other plans have been prepared	Particulate Matter (PM10 and PM2.5), NOx, Carbon Monoxide, Ammonia, Nitric acid, Nitrate Ion, n-Hexane, Propane, Butane, Pentane, Formaldehyde, Methanol, Copper, Hexavalent Chromium, Zinc, Sulphuric Acid, Chlorine, Asbestos
Beneficial Uses at Facility	none
Reasons for Use	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 processes at the site.

Facility Information

Company Name	Terra International (Canada) Inc.
Facility Name	CF Industries Courtright Nitrogen Complex
Facility Physical Address	161 Bickford Line, Courtright, ON, Canada, N0N 1H0
Facility Mailing Address	Same as physical address
Spatial Coordinates of Facility	381104 Easting; 4735453 Northing
Number of Employees	158
NPRI ID	2233
Ontario MOE (R.127)ID Number	if assigned
2 Digit NAICS Code	31-33
4 Digit NAICS Code	3253
6 Digit NAICS Code	325313

Parent Company Information

Parent Company Name	CF Industries Holdings Inc.
Address	Suite 400 - 4 Parkway North, Deerfield, IL, USA, 60015-2590
Percent Ownership (if available)	100%

Facility Contact

Public Contact	Tom Croskery
Position	Supervisor Quality & Environment
Address	161 Bickford Line, Courtright, ON, Canada, N0N 1H0
email	TCroskery@cfindustries.com
Phone	519-867-2739 x1292
Fax	519-867-3173

Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex is committed to playing a leadership role in protecting the environment. For the purposes of the Toxics Reduction Act, CF Industries Courtright Nitrogen Complex will not be implementing any options to reduce the creation of butane in its operations because it is a by-product of key reactions within the current processes at the site. Whenever feasible, we will eliminate, or reduce the discharge of butane in full compliance with all Federal and Provincial Regulations.

Plan Objectives

While CF Industries Courtright Nitrogen Complex does not intend to reduce the creation of butane, the plan was developed with the following objectives:

- we will continue to operate in full compliance with all applicable environmental regulations;
 and
- we will continue to manage and prevent releases of butane through current and future pollution prevention and best management practices.

Description of Substance (Reason for Use and/or Creation)

Butane is created as a by-product in the processes associated with the manufacture of nitrogen products.

Toxic Substance Reduction Option(s) To Be Implemented

For the purposes of the Toxics Reduction Act, CF Industries Courtright Nitrogen Complex will not be implementing any options to reduce the creation of butane in its operations because product of key reactions within the current processes at the site. In the past, CF Industries Courtright Nitrogen Complex has implemented multiple programs that minimize losses of butane. There were no further feasible reduction options identified.

Description of Previously Implemented Reduction Opportunities:

- The process and equipment are continuously monitored and optimized to prevent and minimize loss potential
- Engineering standards for pipe seal design etc. has been continuously improved to reduce leaks
- Mandated/scheduled operator rounds (visual inspection etc.)
- · LEL detection and alarming
- Incident Investigation process continuous improvement
- Safeguarding Reviews and Pressured Equipment Integrity Programs in place

Plan Summary Statement

This plan summary accurately reflects the content of the toxic substance reduction plan for butane, prepared by Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex, dated December 15, 2013.

As of December 15, 2013, I, Robb Aultman, 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.

Toxic Substance: Butane

Robb Aultman Plant Leader

Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex

Certification by Licensed Planner

As of December 15, 2013, I, Melanie Hockin certify that I am familiar with the processes at Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex that use or create the toxic substance 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 plan dated December 15, 2013 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

Toxic Substance: Butane

Melanie Hockin

Toxic Substance Reduction Planner

License Number: TSRP0140

Substance

Substance Name and CAS #	Carbon Monoxide and CAS # 630-08-0
Substances for which other plans have been prepared	Particulate Matter (PM10 and PM2.5), NOx, Carbon Monoxide, Ammonia, Nitric acid, Nitrate Ion, n-Hexane, Propane, Butane, Pentane, Formaldehyde, Methanol, Copper, Hexavalent Chromium, Zinc, Sulphuric Acid, Chlorine, Asbestos
Beneficial Uses at Facility	none
Reasons for Use	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 processes at the site.

Facility Information

Company Name	Terra International (Canada) Inc.
Facility Name	CF Industries Courtright Nitrogen Complex
Facility Physical Address	161 Bickford Line, Courtright, ON, Canada, N0N 1H0
Facility Mailing Address	Same as physical address
Spatial Coordinates of Facility	381104 Easting; 4735453 Northing
Number of Employees	158
NPRI ID	2233
Ontario MOE (R.127)ID Number	if assigned
2 Digit NAICS Code	31-33
4 Digit NAICS Code	3253
6 Digit NAICS Code	325313

Parent Company Information

Parent Company Name	CF Industries Holdings Inc.
Address	Suite 400 - 4 Parkway North, Deerfield, IL, USA, 60015-2590
Percent Ownership (if available)	100%

Facility Contact

Public Contact	Tom Croskery
Position	Supervisor Quality & Environment
Address	161 Bickford Line, Courtright, ON, Canada, N0N 1H0
email	TCroskery@cfindustries.com
Phone	519-867-2739 x1292
Fax	519-867-3173

Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex is committed to playing a leadership role in protecting the environment. For the purposes of the Toxics Reduction Act, CF Industries Courtright Nitrogen Complex will not be implementing any options to reduce the creation of carbon monoxide in its operations because it is a by-product of key reactions within the current processes at the site. Whenever feasible, we will eliminate, or reduce the discharge of carbon monoxide in full compliance with all Federal and Provincial Regulations.

Plan Objectives

While CF Industries Courtright Nitrogen Complex does not intend to reduce the creation of carbon monoxide, the plan was developed with the following objectives:

- we will continue to operate in full compliance with all applicable environmental regulations;
 and
- we will continue to manage and prevent releases of carbon monoxide through current and future pollution prevention and best management practices.

Description of Substance (Reason for Use and/or Creation)

Carbon Monoxide is created as a by-product in the processes associated with the manufacture of nitrogen products.

Toxic Substance Reduction Option(s) To Be Implemented

For the purposes of the Toxics Reduction Act, CF Industries Courtright Nitrogen Complex will not be implementing any options to reduce the creation of carbon monoxide in its operations because product of key reactions within the current processes at the site. In the past, CF Industries Courtright Nitrogen Complex has implemented multiple programs that minimize losses of carbon monoxide. There were no further feasible reduction options identified.

Description of Previously Implemented Reduction Opportunities:

- The process and equipment are continuously monitored and optimized to prevent and minimize loss potential
- Engineering standards for pipe seal design etc. has been continuously improved to reduce leaks
- Mandated/scheduled operator rounds (visual inspection etc.)
- LEL detection and alarming
- Incident Investigation process continuous improvement
- Safeguarding Reviews and Pressured Equipment Integrity Programs in place

Plan Summary Statement

This plan summary accurately reflects the content of the toxic substance reduction plan for carbon monoxide, prepared by Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex, dated December 15, 2013.

As of December 15, 2013, I, Robb Aultman, 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.

Toxic Substance: Carbon Monoxide

Robb Aultman Plant Leader

Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex

Certification by Licensed Planner

As of December 15, 2013, I, Melanie Hockin certify that I am familiar with the processes at Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex that use or create the toxic substance 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 plan dated December 15, 2013 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

Toxic Substance: Carbon Monoxide

Melanie Hockin

Toxic Substance Reduction Planner

License Number: TSRP0140

Substance

Substance Name and CAS #	n-Hexane and CAS # 110-54-3
Substances for which other plans have been prepared	Particulate Matter (PM10 and PM2.5), NOx, Carbon Monoxide, Ammonia, Nitric acid, Nitrate Ion, n-Hexane, Propane, Butane, Pentane, Formaldehyde, Methanol, Copper, Hexavalent Chromium, Zinc, Sulphuric Acid, Chlorine, Asbestos
Beneficial Uses at Facility	none
Reasons for Use	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 processes at the site.

Facility Information

Company Name	Terra International (Canada) Inc.
Facility Name	CF Industries Courtright Nitrogen Complex
Facility Physical Address	161 Bickford Line, Courtright, ON, Canada, N0N 1H0
Facility Mailing Address	Same as physical address
Spatial Coordinates of Facility	381104 Easting; 4735453 Northing
Number of Employees	158
NPRI ID	2233
Ontario MOE (R.127)ID Number	if assigned
2 Digit NAICS Code	31-33
4 Digit NAICS Code	3253
6 Digit NAICS Code	325313

Parent Company Information

Parent Company Name	CF Industries Holdings Inc.
Address	Suite 400 - 4 Parkway North, Deerfield, IL, USA, 60015-2590
Percent Ownership (if available)	100%

Facility Contact

Public Contact	Tom Croskery
Position	Supervisor Quality & Environment
Address	161 Bickford Line, Courtright, ON, Canada, N0N 1H0
email	TCroskery@cfindustries.com
Phone	519-867-2739 x1292
Fax	519-867-3173

Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex is committed to playing a leadership role in protecting the environment. For the purposes of the Toxics Reduction Act, CF Industries Courtright Nitrogen Complex will not be implementing any options to reduce the creation of n-hexane in its operations because it is a by-product of key reactions within the current processes at the site. Whenever feasible, we will eliminate, or reduce the discharge of n-hexane in full compliance with all Federal and Provincial Regulations.

Plan Objectives

While CF Industries Courtright Nitrogen Complex does not intend to reduce the creation of n-hexane, the plan was developed with the following objectives:

- we will continue to operate in full compliance with all applicable environmental regulations;
 and
- we will continue to manage and prevent releases of n-hexane through current and future pollution prevention and best management practices.

Description of Substance (Reason for Use and/or Creation)

N-Hexane is created as a by-product in the processes associated with the manufacture of nitrogen products.

Toxic Substance Reduction Option(s) To Be Implemented

For the purposes of the Toxics Reduction Act, CF Industries Courtright Nitrogen Complex will not be implementing any options to reduce the creation of n-hexane in its operations because product of key reactions within the current processes at the site. In the past, CF Industries Courtright Nitrogen Complex has implemented multiple programs that minimize losses of n-hexane. There were no further feasible reduction options identified.

Description of Previously Implemented Reduction Opportunities:

- The process and equipment are continuously monitored and optimized to prevent and minimize loss potential
- Engineering standards for pipe seal design etc. has been continuously improved to reduce leaks
- Mandated/scheduled operator rounds (visual inspection etc.)
- LEL detection and alarming
- Incident Investigation process continuous improvement
- Safeguarding Reviews and Pressured Equipment Integrity Programs in place

Plan Summary Statement

This plan summary accurately reflects the content of the toxic substance reduction plan for n-hexane, prepared by Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex, dated December 15, 2013.

As of December 15, 2013, I, Robb Aultman, 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.

Toxic Substance: N-Hexane

Robb Aultman Plant Leader

Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex

Certification by Licensed Planner

As of December 15, 2013, I, Melanie Hockin certify that I am familiar with the processes at Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex that use or create the toxic substance 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 plan dated December 15, 2013 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

Toxic Substance: N-Hexane

Melanie Hockin

Toxic Substance Reduction Planner

License Number: TSRP0140

Substance

Substance Name and CAS #	Nitrate Ion and CAS # N/A
Substances for which other plans have been prepared	Particulate Matter (PM10 and PM2.5), NOx, Carbon Monoxide, Ammonia, Nitric Acid, Nitrate Ion, n-Hexane, Propane, Butane, Pentane, Formaldehyde, Methanol, Copper, Hexavalent Chromium, Zinc, Sulphuric Acid, Chlorine, Asbestos
Beneficial Uses at Facility	key product manufactured on site
Reasons for Use	Other
Reasons for use - summary statement (mandatory)	Substance is a component of the process water influent
Reasons for Creation	For on-site use/processingFor sale/distribution
Reasons for creation - summary statement (mandatory)	Nitrate Ion is both a key process intermediate and key component of final products at the facility.

Facility Information

Company Name	Terra International (Canada) Inc.
Facility Name	CF Industries Courtright Nitrogen Complex
Facility Physical Address	161 Bickford Line, Courtright, ON, Canada, N0N 1H0
Facility Mailing Address	Same as physical address
Spatial Coordinates of Facility	381104 Easting; 4735453 Northing
Number of Employees	158
NPRI ID	2233
Ontario MOE (R.127)ID Number	if assigned
2 Digit NAICS Code	31-33
4 Digit NAICS Code	3253
6 Digit NAICS Code	325313

Parent Company Information

Parent Company Name	CF Industries Holdings Inc.
Address	Suite 400 - 4 Parkway North, Deerfield, IL, USA, 60015-2590
Percent Ownership (if available)	100%

Facility Contact

Public Contact	Tom Croskery
Position	Supervisor Quality & Environment
Address	161 Bickford Line, Courtright, ON, Canada, N0N 1H0
email	TCroskery@cfindustries.com
Phone	519-867-2739 x1292
Fax	519-867-3173

Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex is committed to playing a leadership role in protecting the environment. For the purposes of the Toxics Reduction Act, CF Industries Courtright Nitrogen Complex will not be implementing any options to reduce the use or creation of nitrate ion in its operations because it is a component of process water influent as well as a key product and intermediate of the manufacturing processes at the site. Whenever feasible, we will eliminate, or reduce the discharge of nitrate ion in full compliance with all Federal and Provincial Regulations.

Plan Objectives

While CF Industries Courtright Nitrogen Complex does not intend to reduce the use or creation of nitrate ion, the plan was developed with the following objectives:

- we will continue to operate in full compliance with all applicable environmental regulations;
 and
- we will continue to manage and prevent releases of nitrate ion through current and future pollution prevention and best management practices.

Description of Substance (Reason for Use and/or Creation)

Nitrate Ion is in use as a component of the process water influent and created as a key product and process intermediate at the facility.

Toxic Substance Reduction Option(s) To Be Implemented

For the purposes of the Toxics Reduction Act, CF Industries Courtright Nitrogen Complex will not be implementing any options to reduce the use or creation of nitrate ion in its operations because it is a component of process water influent as well as a key product and intermediate of the manufacturing processes at the site. In the past, CF Industries Courtright Nitrogen Complex has implemented multiple programs that minimize losses of nitrate ion. There were no further feasible reduction options identified.

Description of Previously Implemented Reduction Opportunities:

- Specific training for operations handling of materials to prevent upset/spills/losses.
- The process and equipment are continuously monitored and optimized to prevent over use and minimize loss potential (ie, automated dosing and monitoring)
- Spill Prevention and Contingency Plan (SPCP) established, tanks/totes/drums have secondary containment
- Optimized usage by monitoring with Totally Distributed Control (TDC) system
- Engineering standards for pipe seal design etc. has been continuously improved to reduce leaks
- Mandated/scheduled operator rounds (visual inspection etc.)
- Incident Investigation process continuous improvement
- Safeguarding Reviews and Pressured Equipment Integrity Programs in place

Plan Summary Statement

This plan summary accurately reflects the content of the toxic substance reduction plan for nitrate ion, prepared by Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex, dated December 15, 2013.

As of December 15, 2013, I, Robb Aultman, 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.

Toxic Substance: Nitrate Ion

Robb Aultman
Plant Leader

Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex

Certification by Licensed Planner

As of December 15, 2013, I, Melanie Hockin certify that I am familiar with the processes at Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex that use or create the toxic substance 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 plan dated December 15, 2013 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

Toxic Substance: Nitrate Ion

Melanie Hockin

Toxic Substance Reduction Planner

License Number: TSRP0140

Substance

Substance Name and CAS #	Nitric Acid and CAS # 7697-37-2
Substances for which other plans have been prepared	Particulate Matter (PM10 and PM2.5), NOx, Carbon Monoxide, Ammonia, Nitric Acid, Nitrate Ion, n-Hexane, Propane, Butane, Pentane, Formaldehyde, Methanol, Copper, Hexavalent Chromium, Zinc, Sulphuric Acid, Chlorine, Asbestos
Beneficial Uses at Facility	key product manufactured and used on site
Reasons for Use	Substance is not used at the facility
Reasons for use - summary statement (mandatory)	N/A
Reasons for Creation	For on-site use/processingFor sale/distribution
Reasons for creation - summary statement (mandatory)	Nitric Acid is both a key process intermediate and key component of final products at the facility.

Facility Information

Company Name	Terra International (Canada) Inc.
Facility Name	CF Industries Courtright Nitrogen Complex
Facility Physical Address	161 Bickford Line, Courtright, ON, Canada, N0N 1H0
Facility Mailing Address	Same as physical address
Spatial Coordinates of Facility	381104 Easting; 4735453 Northing
Number of Employees	158
NPRI ID	2233
Ontario MOE (R.127)ID Number	if assigned
2 Digit NAICS Code	31-33
4 Digit NAICS Code	3253
6 Digit NAICS Code	325313

Parent Company Information

Parent Company Name	CF Industries Holdings Inc.
Address	Suite 400 - 4 Parkway North, Deerfield, IL, USA, 60015-2590
Percent Ownership (if available)	100%

Facility Contact

Public Contact	Tom Croskery
Position	Supervisor Quality & Environment
Address	161 Bickford Line, Courtright, ON, Canada, N0N 1H0
email	TCroskery@cfindustries.com
Phone	519-867-2739 x1292
Fax	519-867-3173

Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex is committed to playing a leadership role in protecting the environment. For the purposes of the Toxics Reduction Act, CF Industries Courtright Nitrogen Complex will not be implementing any options to reduce the creation of nitric acid in its operations because it is a key product and intermediate. Whenever feasible, we will eliminate, or reduce the discharge of nitric acid in full compliance with all Federal and Provincial Regulations.

Plan Objectives

While CF Industries Courtright Nitrogen Complex does not intend to reduce the creation of nitric acid, the plan was developed with the following objectives:

- we will continue to operate in full compliance with all applicable environmental regulations;
 and
- we will continue to manage and prevent releases of nitric acid through current and future pollution prevention and best management practices.

Description of Substance (Reason for Use and/or Creation)

Nitric Acid is created as a key product, process intermediate and reactant at the facility.

Toxic Substance Reduction Option(s) To Be Implemented

For the purposes of the Toxics Reduction Act, CF Industries Courtright Nitrogen Complex will not be implementing any options to reduce the creation of nitric acid in its operations because it is a key product, process intermediate and reactant at the facility. In the past, CF Industries Courtright Nitrogen Complex has implemented multiple programs that minimize losses of nitric acid. There were no further feasible reduction options identified.

Description of Previously Implemented Reduction Opportunities:

- Specific training for operations handling of materials to prevent upset/spills/losses.
- The process and equipment are continuously monitored and optimized to prevent over use and minimize loss potential (ie, automated dosing and monitoring)
- Spill Prevention and Contingency Plan (SPCP) established, tanks/totes/drums have secondary containment
- Optimized usage by monitoring with Totally Distributed Control (TDC) system
- Engineering standards for pipe seal design etc. has been continuously improved to reduce leaks
- Mandated/scheduled operator rounds (visual inspection etc.)
- Incident Investigation process continuous improvement
- Safeguarding Reviews and Pressured Equipment Integrity Programs in place

Plan Summary Statement

This plan summary accurately reflects the content of the toxic substance reduction plan for nitric acid, prepared by Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex, dated December 15, 2013.

As of December 15, 2013, I, Robb Aultman, 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.

Toxic Substance: Nitric Acid

Robb Aultman Plant Leader

Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex

Certification by Licensed Planner

As of December 15, 2013, I, Melanie Hockin certify that I am familiar with the processes at Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex that use or create the toxic substance 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 plan dated December 15, 2013 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

Toxic Substance: Nitric Acid

Melanie Hockin

Toxic Substance Reduction Planner

License Number: TSRP0140

Substance

Substance Name and CAS #	Nitrogen Oxides and CAS # 10102-44-0
Substances for which other plans have been prepared	Particulate Matter (PM10 and PM2.5), NOx, Carbon Monoxide, Ammonia, Nitric acid, Nitrate Ion, n-Hexane, Propane, Butane, Pentane, Formaldehyde, Methanol, Copper, Hexavalent Chromium, Zinc, Sulphuric Acid, Chlorine, Asbestos
Beneficial Uses at Facility	none
Reasons for Use	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 processes at the site.

Facility Information

Company Name	Terra International (Canada) Inc.
Facility Name	CF Industries Courtright Nitrogen Complex
Facility Physical Address	161 Bickford Line, Courtright, ON, Canada, N0N 1H0
Facility Mailing Address	Same as physical address
Spatial Coordinates of Facility	381104 Easting; 4735453 Northing
Number of Employees	158
NPRI ID	2233
Ontario MOE (R.127)ID Number	if assigned
2 Digit NAICS Code	31-33
4 Digit NAICS Code	3253
6 Digit NAICS Code	325313

Parent Company Information

Parent Company Name	CF Industries Holdings Inc.
Address	Suite 400 - 4 Parkway North, Deerfield, IL, USA, 60015-2590
Percent Ownership (if available)	100%

Facility Contact

Public Contact	Tom Croskery
Position	Supervisor Quality & Environment
Address	161 Bickford Line, Courtright, ON, Canada, N0N 1H0
email	TCroskery@cfindustries.com
Phone	519-867-2739 x1292
Fax	519-867-3173

Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex is committed to playing a leadership role in protecting the environment. For the purposes of the Toxics Reduction Act, CF Industries Courtright Nitrogen Complex will not be implementing any options to reduce the creation of nitrogen oxides in its operations because it is a by-product of key reactions within the current processes at the site. Whenever feasible, we will eliminate, or reduce the discharge of nitrogen oxides in full compliance with all Federal and Provincial Regulations.

Plan Objectives

While CF Industries Courtright Nitrogen Complex does not intend to reduce the creation of nitrogen oxides, the plan was developed with the following objectives:

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

Description of Substance (Reason for Use and/or Creation)

Nitrogen Oxides is created as a by-product in the processes associated with the manufacture of nitrogen products.

Toxic Substance Reduction Option(s) To Be Implemented

For the purposes of the Toxics Reduction Act, CF Industries Courtright Nitrogen Complex will not be implementing any options to reduce the creation of nitrogen oxides in its operations because product of key reactions within the current processes at the site. In the past, CF Industries Courtright Nitrogen Complex has implemented multiple programs that minimize losses of nitrogen oxides. There were no further feasible reduction options identified.

Description of Previously Implemented Reduction Opportunities:

- NCSR technology in place which is industry and government preferred technology for process
- The process and control equipment are continuously monitored and optimized to prevent and minimize loss potential
- Engineering standards for pipe seal design etc. has been continuously improved to reduce leaks
- Mandated/scheduled operator rounds (visual inspection etc.)
- Incident Investigation process continuous improvement
- Safeguarding Reviews and Pressured Equipment Integrity Programs in place

Plan Summary Statement

This plan summary accurately reflects the content of the toxic substance reduction plan for nitrogen oxides, prepared by Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex, dated December 15, 2013.

As of December 15, 2013, I, Robb Aultman, 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.

Toxic Substance: Nitrogen Oxides

Robb Aultman Plant Leader

Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex

Certification by Licensed Planner

As of December 15, 2013, I, Melanie Hockin certify that I am familiar with the processes at Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex that use or create the toxic substance 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 plan dated December 15, 2013 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

Toxic Substance: Nitrogen Oxides

Melanie Hockin

Toxic Substance Reduction Planner

License Number: TSRP0140

Substance

Substance Name and CAS #	Pentane and CAS # 109-66-0
Substances for which other plans have been prepared	Particulate Matter (PM10 and PM2.5), NOx, Carbon Monoxide, Ammonia, Nitric acid, Nitrate Ion, n-Hexane, Propane, Butane, Pentane, Formaldehyde, Methanol, Copper, Hexavalent Chromium, Zinc, Sulphuric Acid, Chlorine, Asbestos
Beneficial Uses at Facility	none
Reasons for Use	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 processes at the site.

Facility Information

Company Name	Terra International (Canada) Inc.
Facility Name	CF Industries Courtright Nitrogen Complex
Facility Physical Address	161 Bickford Line, Courtright, ON, Canada, N0N 1H0
Facility Mailing Address	Same as physical address
Spatial Coordinates of Facility	381104 Easting; 4735453 Northing
Number of Employees	158
NPRI ID	2233
Ontario MOE (R.127)ID Number	if assigned
2 Digit NAICS Code	31-33
4 Digit NAICS Code	3253
6 Digit NAICS Code	325313

Parent Company Information

Parent Company Name	CF Industries Holdings Inc.
Address	Suite 400 - 4 Parkway North, Deerfield, IL, USA, 60015-2590
Percent Ownership (if available)	100%

Facility Contact

Public Contact	Tom Croskery
Position	Supervisor Quality & Environment
Address	161 Bickford Line, Courtright, ON, Canada, N0N 1H0
email	TCroskery@cfindustries.com
Phone	519-867-2739 x1292
Fax	519-867-3173

Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex is committed to playing a leadership role in protecting the environment. For the purposes of the Toxics Reduction Act, CF Industries Courtright Nitrogen Complex will not be implementing any options to reduce the creation of pentane in its operations because it is a by-product of key reactions within the current processes at the site. Whenever feasible, we will eliminate, or reduce the discharge of pentane in full compliance with all Federal and Provincial Regulations.

Plan Objectives

While CF Industries Courtright Nitrogen Complex does not intend to reduce the creation of pentane, the plan was developed with the following objectives:

- we will continue to operate in full compliance with all applicable environmental regulations;
 and
- we will continue to manage and prevent releases of pentane through current and future pollution prevention and best management practices.

Description of Substance (Reason for Use and/or Creation)

Pentane is created as a by-product in the processes associated with the manufacture of nitrogen products.

Toxic Substance Reduction Option(s) To Be Implemented

For the purposes of the Toxics Reduction Act, CF Industries Courtright Nitrogen Complex will not be implementing any options to reduce the creation of pentane in its operations because product of key reactions within the current processes at the site. In the past, CF Industries Courtright Nitrogen Complex has implemented multiple programs that minimize losses of pentane. There were no further feasible reduction options identified.

Description of Previously Implemented Reduction Opportunities:

- The process and equipment are continuously monitored and optimized to prevent and minimize loss potential
- Engineering standards for pipe seal design etc. has been continuously improved to reduce leaks
- Mandated/scheduled operator rounds (visual inspection etc.)
- · LEL detection and alarming
- Incident Investigation process continuous improvement
- Safeguarding Reviews and Pressured Equipment Integrity Programs in place

Plan Summary Statement

This plan summary accurately reflects the content of the toxic substance reduction plan for pentane, prepared by Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex, dated December 15, 2013.

As of December 15, 2013, I, Robb Aultman, 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.

Toxic Substance: Pentane

Robb Aultman Plant Leader

Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex

Certification by Licensed Planner

As of December 15, 2013, I, Melanie Hockin certify that I am familiar with the processes at Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex that use or create the toxic substance 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 plan dated December 15, 2013 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

Toxic Substance: Pentane

Melanie Hockin

Toxic Substance Reduction Planner

License Number: TSRP0140

Substance

Substance Name and CAS #	Particulate Matter (PM10 & PM2.5) and CAS # N/A
Substances for which other plans have been prepared	Particulate Matter (PM10 and PM2.5), NOx, Carbon Monoxide, Ammonia, Nitric Acid, Nitrate Ion, n-Hexane, Propane, Butane, Pentane, Formaldehyde, Methanol, Copper, Hexavalent Chromium, Zinc, Sulphuric Acid, Chlorine, Asbestos
Beneficial Uses at Facility	none
Reasons for Use	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 processes at the site.

Facility Information

Company Name	Terra International (Canada) Inc.
Facility Name	CF Industries Courtright Nitrogen Complex
Facility Physical Address	161 Bickford Line, Courtright, ON, Canada, N0N 1H0
Facility Mailing Address	Same as physical address
Spatial Coordinates of Facility	381104 Easting; 4735453 Northing
Number of Employees	158
NPRI ID	2233
Ontario MOE (R.127)ID Number	if assigned
2 Digit NAICS Code	31-33
4 Digit NAICS Code	3253
6 Digit NAICS Code	325313

Parent Company Information

Parent Company Name	CF Industries Holdings Inc.
Address	Suite 400 - 4 Parkway North, Deerfield, IL, USA, 60015-2590
Percent Ownership (if available)	100%

Facility Contact

Public Contact	Tom Croskery
Position	Supervisor Quality & Environment
Address	161 Bickford Line, Courtright, ON, Canada, N0N 1H0
email	TCroskery@cfindustries.com
Phone	519-867-2739 x1292
Fax	519-867-3173

Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex is committed to playing a leadership role in protecting the environment. For the purposes of the Toxics Reduction Act, CF Industries Courtright Nitrogen Complex will not be implementing any options to reduce the creation of particulate matter in its operations because it is a by-product of key reactions within the current processes at the site. Whenever feasible, we will eliminate, or reduce the discharge of particulate matter in full compliance with all Federal and Provincial Regulations.

Plan Objectives

While CF Industries Courtright Nitrogen Complex does not intend to reduce the creation of particulate matter, the plan was developed with the following objectives:

- we will continue to operate in full compliance with all applicable environmental regulations;
 and
- we will continue to manage and prevent releases of particulate matter through current and future pollution prevention and best management practices.

Description of Substance (Reason for Use and/or Creation)

Particulate Matter is created as a by-product in the processes associated with the manufacture of nitrogen products.

Toxic Substance Reduction Option(s) To Be Implemented

For the purposes of the Toxics Reduction Act, CF Industries Courtright Nitrogen Complex will not be implementing any options to reduce the creation of particulate matter in its operations because product of key reactions within the current processes at the site. In the past, CF Industries Courtright Nitrogen Complex has implemented multiple programs that minimize losses of particulate matter. There were no further feasible reduction options identified.

Description of Previously Implemented Reduction Opportunities:

- The process and equipment are continuously monitored and optimized to prevent and minimize loss potential
- Specific training for operations handling of materials to prevent upset/spills/losses
- Engineering standards for pipe seal design etc. has been continuously improved to reduce leaks
- Mandated/scheduled operator rounds (visual inspection etc.)
- Incident Investigation process continuous improvement
- Safeguarding Reviews and Pressured Equipment Integrity Programs in place

Plan Summary Statement

This plan summary accurately reflects the content of the toxic substance reduction plan for particulate matter, prepared by Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex, dated December 15, 2013.

As of December 15, 2013, I, Robb Aultman, 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.

Toxic Substance: Particulate Matter (PM10 and PM2.5)

Robb Aultman

Plant Leader

Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex

Certification by Licensed Planner

As of December 15, 2013, I, Melanie Hockin certify that I am familiar with the processes at Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex that use or create the toxic substance 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 plan dated December 15, 2013 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

Toxic Substance: Particulate Matter (PM10 and PM2.5)

Melánie Hockin

Toxic Substance Reduction Planner

License Number: TSRP0140

Substance

Substance Name and CAS #	Propane and CAS # 74-98-6
Substances for which other plans have been prepared	Particulate Matter (PM10 and PM2.5), NOx, Carbon Monoxide, Ammonia, Nitric acid, Nitrate Ion, n-Hexane, Propane, Butane, Pentane, Formaldehyde, Methanol, Copper, Hexavalent Chromium, Zinc, Sulphuric Acid, Chlorine, Asbestos
Beneficial Uses at Facility	none
Reasons for Use	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 processes at the site.

Facility Information

Company Name	Terra International (Canada) Inc.
Facility Name	CF Industries Courtright Nitrogen Complex
Facility Physical Address	161 Bickford Line, Courtright, ON, Canada, N0N 1H0
Facility Mailing Address	Same as physical address
Spatial Coordinates of Facility	381104 Easting; 4735453 Northing
Number of Employees	158
NPRI ID	2233
Ontario MOE (R.127)ID Number	if assigned
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6 Digit NAICS Code	325313

Parent Company Information

Parent Company Name	CF Industries Holdings Inc.
Address	Suite 400 - 4 Parkway North, Deerfield, IL, USA, 60015-2590
Percent Ownership (if available)	100%

Facility Contact

Public Contact	Tom Croskery
Position	Supervisor Quality & Environment
Address	161 Bickford Line, Courtright, ON, Canada, N0N 1H0
email	TCroskery@cfindustries.com
Phone	519-867-2739 x1292
Fax	519-867-3173

Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex is committed to playing a leadership role in protecting the environment. For the purposes of the Toxics Reduction Act, CF Industries Courtright Nitrogen Complex will not be implementing any options to reduce the creation of propane in its operations because it is a by-product of key reactions within the current processes at the site. Whenever feasible, we will eliminate, or reduce the discharge of propane in full compliance with all Federal and Provincial Regulations.

Plan Objectives

While CF Industries Courtright Nitrogen Complex does not intend to reduce the creation of propane, the plan was developed with the following objectives:

- we will continue to operate in full compliance with all applicable environmental regulations;
 and
- we will continue to manage and prevent releases of propane through current and future pollution prevention and best management practices.

Description of Substance (Reason for Use and/or Creation)

Propane is created as a by-product in the processes associated with the manufacture of nitrogen products.

Toxic Substance Reduction Option(s) To Be Implemented

For the purposes of the Toxics Reduction Act, CF Industries Courtright Nitrogen Complex will not be implementing any options to reduce the creation of propane in its operations because product of key reactions within the current processes at the site. In the past, CF Industries Courtright Nitrogen Complex has implemented multiple programs that minimize losses of propane. There were no further feasible reduction options identified.

Description of Previously Implemented Reduction Opportunities:

- The process and equipment are continuously monitored and optimized to prevent and minimize loss potential
- Engineering standards for pipe seal design etc. has been continuously improved to reduce leaks
- Mandated/scheduled operator rounds (visual inspection etc.)
- · LEL detection and alarming
- Incident Investigation process continuous improvement
- Safeguarding Reviews and Pressured Equipment Integrity Programs in place

Plan Summary Statement

This plan summary accurately reflects the content of the toxic substance reduction plan for propane, prepared by Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex, dated December 15, 2013.

As of December 15, 2013, I, Robb Aultman, 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.

Toxic Substance: Propane

Robb Aultman Plant Leader

Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex

Certification by Licensed Planner

As of December 15, 2013, I, Melanie Hockin certify that I am familiar with the processes at Terra International (Canada) Inc. - CF Industries Courtright Nitrogen Complex that use or create the toxic substance 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 plan dated December 15, 2013 and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

Toxic Substance: Propane

Melanie Hockin'

Toxic Substance Reduction Planner

License Number: TSRP0140