

Report Preview

Company Details

Name:

Kemira Water Solutions Canada Inc.

Address:

626 Oak Park Road, Brantford (Ontario)

Report Details

Report Status:

Submitted

Reporting Period:

2012

Facility Name:

Brantford Operations

Facility Address:

626 Oak Park Road, Brantford (Ontario)

Update Comments:

Activity Details

Applicable Programs

Environment Canada Programs

NPRI - National Pollutant Release Inventory

Partnering Programs

ON MOE TRA - Ontario Ministry of the Environment for the Toxic Reductions Act

ON MOE Reg. 127/01 - Ontario Ministry of the Environment for the Airborne Contaminant Discharge Monitoring and Reporting Regulation

NERM - Chemistry Industry Association of Canada for the National Emission Reduction Masterplan survey

NFPRER - National Framework for Petroleum Refinery Emission Reductions

Contacts

Facility Contacts

Technical Contact:*

Michael Snider

Certifying Official (or authorized delegate):*

Michael Snider

Highest Ranking Employee:*

Michael Snider

Person who prepared the report:*

Karen Whiteman, Karen Whiteman

Company Coordinator (optional):

Public Contact (optional):

Contractor Contact (optional):

If you are an independent contractor or consultant, please enter your company name in the field below:

Person who coordinated the preparation of the Toxics Reduction Plan (required after a plan summary has been submitted):

Employees and Activities

Employees

Number of Employees*

15

Activities

Activities for Which the 20,000-Hour Employee Threshold Does Not Apply: (check all that apply)*

None of the above

Activities Relevant to Reporting Dioxins, Furans and Hexachlorobenzene: (check all that apply)*

None of the above

Activities Relevant to Reporting of Polycyclic Aromatic Hydrocarbons (PAHs)

Wood preservation using creosote:*

No

General Facility Information

NPRI

Is this the first time the facility is reporting to the NPRI (under current or past ownership)?*

No

Is the facility controlled by another Canadian company or companies?*

Yes

Did the facility report under other environmental regulations or permits?*

Yes

Is the facility required to report one or more NPRI Part 4 substances (Criteria Air Contaminants)?*

No

If 'Yes' to reporting for one or more Part 4 substances: Was the facility shut down for more than one week during the year? **

Operating Schedule - Days of the Week**

Mon	Tue	Wed	Thu	Fri	Sat	Sun
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Operating Schedule - Hours**

Usual Number of Operating Hours per day

Usual Daily Start Time (24h) (hh:mm)

Shutdown Periods**

General Comments for Facility

Comments:

Verify Facility Information

Company Information

Company Details

Company Legal Name

Business Number

Mailing Address

Delivery Mode:

PO Box

Rural Route Number

Address Line 1

City*

Province/Territory**

Postal Code:**

Country*

Parent Companies

Kemira Water Solutions Canada

Parent Company Name

Business Number

DUNS Number

Percentage owned:

Mailing Address

Delivery Mode:

PO Box

Rural Route Number	<input type="text"/>
Address Line 1	<input type="text"/>
City*	<input type="text" value="Brantford"/>
Province/Territory**	<input type="text" value="Ontario"/>
Postal Code:**	<input type="text" value="N3T 5V6"/>
Country*	<input type="text" value="Canada"/>

Facility Information

Facility*	<input type="text" value="Brantford Operations"/>
NAICS Id*	<input type="text" value="325189"/>
NPRI ID*	<input type="text" value="0000003040"/>

Physical Address

Address Line 1	<input type="text" value="626 Oak Park Road"/>
City	<input type="text" value="Brantford"/>
Province/Territory	<input type="text" value="Ontario"/>
Postal Code	<input type="text" value="N3T5L8"/>
Country	<input type="text" value="Canada"/>
Additional Information	<input type="text"/>
Land Survey Description	<input type="text"/>
National Topographical Description	<input type="text"/>

Geographical Address

Latitude	<input type="text" value="43.18020"/>
Longitude	<input type="text" value="-80.34240"/>
UTM Zone	<input type="text" value="17"/>

UTM Easting

UTM Northing

Facility Contacts

Contact Types

Technical Contact

First Name:*

Last Name:*

Position:*

Telephone:*

Ext:

Fax:

Email:*

Mailing Address

Delivery Mode:

PO Box

Rural Route Number

Address Line 1

City*

Province/Territory**

Postal Code:**

Country*

Certifying Official

First Name:*

Last Name:*

Position:*

Telephone:*

Ext:

Fax:

Email:*

Mailing Address

Delivery Mode:

PO Box

Rural Route Number

Address Line 1

City*

Province/Territory**

Postal Code:**

Country*

Highest Ranking Employee

First Name:*

Last Name:*

Position:*

Telephone:*

Ext:

Fax:

Email:*

Mailing Address

Delivery Mode:	<input type="text" value="Post Office Box"/>
PO Box	<input type="text" value="1540"/>
Rural Route Number	<input type="text"/>
Address Line 1	<input type="text"/>
City*	<input type="text" value="Brantford"/>
Province/Territory**	<input type="text" value="Ontario"/>
Postal Code:**	<input type="text" value="N3T5V6"/>
Country*	<input type="text" value="Canada"/>

Person who prepared the report

First Name:*	<input type="text" value="Karen"/>
Last Name:*	<input type="text" value="Whiteman"/>
Position:*	<input type="text" value="IMS and Project Specialist"/>
Telephone:*	<input type="text" value="5197597570"/>
Ext:	<input type="text" value="248"/>
Fax:	<input type="text" value="5197598962"/>
Email:*	<input type="text" value="Karen.Whiteman@kemira.com"/>

Mailing Address

Delivery Mode:	<input type="text" value="Post Office Box"/>
PO Box	<input type="text" value="1540"/>
Rural Route Number	<input type="text"/>
Address Line 1	<input type="text"/>
City*	<input type="text" value="Brantford"/>

Province/Territory**

Postal Code:**

Country*

Person who coordinated the preparation of the Toxics Reduction Plan

First Name:*

Last Name:*

Position:*

Telephone:*

Ext:

Fax:

Email:*

Mailing Address

Delivery Mode:

PO Box

Rural Route Number

Address Line 1

City*

Province/Territory**

Postal Code:**

Country*

Environmental Regulations or Permits

Permits

8676-4K8JEL

Number or Permit Number

8676-4K8JEL

Government Department, Agency, or Program Name

Ontario Certificate of Approval Industrial Sewage

ON0165801

Number or Permit Number

ON0165801

Government Department, Agency, or Program Name

Ontario Generator Registration Report Reg. 347

2367-6ZXKAV

Number or Permit Number

2367-6ZXKAV

Government Department, Agency, or Program Name

Ontario MOE Comprehensive Certificate of Approval Air

Pollution Prevention

Pollution Prevention Plans

Does the facility have a documented facility-wide pollution prevention plan?*

Yes

If 'Yes'

a) Please check all that apply

Plan was required by notice under the Canadian Environmental Protection Act, 1999? Specify name in comment field below.

b) Did the facility update their plan in the current reporting year?

No

c) Does the plan address substances, energy conservation, or water conservation?

Pollution Prevention Plan Comments

Pollution Prevention Activities

Did the facility complete any pollution prevention activities in the current NPRI reporting year?*

No

Selecting "Yes" will initiate the reporting of the specific pollution prevention activities that were completed in the current reporting year on the following screen.

Substance Details

7647-01-0, Hydrochloric acid

7647-01-0, Hydrochloric acid

Substance Reporting Status

Applicable Programs

NPRI Does this substance meet the criteria specified in the Canada Gazette notice? Selecting "No" indicates voluntary reporting of this substance to the NPRI*

ON MOE TRA Does this substance meet the criteria specified in the Ontario Regulation 455/09 under the TRA? Selecting "No" indicates voluntary reporting of this substance to the ON MOE*

Yes

Would you like to create an exit record for this ON MOE TRA substance?*

No

Is this considered the first report for this substance to the ON MOE TRA? (Please select "Help" for further clarification)*

No

Comments

General Information

On-site Releases to the Environment

Indicate if there were On-site Releases, Disposals or Off-site Transfers to the environment by choosing Yes or No from the drop-down boxes beside the questions below.

On-site Releases to the Environment

Was the substance released on-site?*

Yes

If the substance was released on-site and the total quantity released was less than one tonne, select the check-box below:

The substance will be reported as the sum of releases to all media (total of 1 tonne or less).

Disposals and Off-site Transfers for Recycling

Was the substance disposed of (on-site or off-site), or transferred for treatment prior to final disposal?*

No

Is the facility required to report on disposals of tailings and waste rock for the selected reporting period?*

No

Was the substance transferred off-site for recycling?*

Yes

Nature of Activities*

Manufacture the Substance

Process the Substance

As a reactant

Otherwise Use of the Substance

TRA Quantifications

Enters the facility (Use), Creation, Contained in Product for ON MOE TRA

Enters the facility (Use)

The amount of substance that enters a process as the substance itself or part of another substance, rolled up at the facility level.

Quantity (Tonnes)

5580

Do you want to use ranges for public reporting? If "No" is selected you are indicating that any report to the public may contain the exact quantity provided.

Yes

Creation

The amount of substance that is created

Quantity (Tonnes)

0

Do you want to use ranges for public reporting? If "No" is selected you are indicating that any report to the public may contain the exact quantity provided.

Yes

Contained in Product

The amount of substance contained in product

Quantity (Tonnes)

0

Do you want to use ranges for public reporting? If "No" is selected you are indicating that any report to the public may contain the exact quantity provided.

Yes

Change in Method of Quantification

There has been a change in the method or combination of methods used to track and quantify the substance during the previous calendar year

Describe the changes**

Select the reason for change:**

Describe how the change impact tracking and quantification of the substance**

Incidents out of the normal course of events

There have been incidents out of the normal course of events that occurred at the facility during the previous calendar year that affected the results of tracking/quantification of this substance.

Explain how tracking and quantifications were affected**

Significant Process Change

There has been a significant process change at the facility during the previous calendar year.

On-site Releases

Total Quantity Released (All Media)

Releases to All Media

	Basis Of Estimate:	Quantity (Tonnes)
Total Quantity Released	C - Mass Balance	0.25

Breakdown of Annual Releases

Distribute Equally

Quarterly Breakdown*

Jan - Mar %	Apr - Jun %	Jul - Sep %	Oct - Dec %
25	25	25	25

Total %

100

Reasons for Changes in Quantities Released from Previous Year

Select the applicable reason or reasons*

Changes in estimation methods

Comments ? (On-Site Releases)

Calculated using updated stack testing data.

Disposals

Reasons for Changes in Quantities Disposed from Previous Year

Select the applicable reason or reasons.

No significant change (i.e.

Comments? (Disposals)

Recycling

Reasons Why Substance Was Recycled

Select one or more reasons.*

Other

Off-site Transfers for Recycling

Off-site Transfers

	Basis Of Estimate:	Quantity (Tonnes)
Energy Recovery	NA - Not Applicable	
Recovery of Solvents	NA - Not Applicable	
Recovery of Organic Substances (not solvents)	NA - Not Applicable	
Recovery of Metals and Metal Compounds	NA - Not Applicable	
Recovery of Inorganic Materials (not metals)	NA - Not Applicable	
Recovery of Acids and Bases	NA - Not Applicable	
Recovery of Catalysts	NA - Not Applicable	
Recovery of Pollution Abatement Residues	NA - Not Applicable	
Refining of Re-use of Used Oil	NA - Not Applicable	
Other	C - Mass Balance	80.89

Total Quantity Recycled

80.89

Assign Disposals / Transfers to Off-site Facilities

Assign Disposals / Transfers to Off-site Facilities

Basis of Estimate for Off-sites

Enter breakdown values for:

Other

Basis of Estimate

C - Mass Balance

Quantity (Tonnes)

80.89

Off-site

Kingswood Industrial Services Corp.

Off-Site Name

Kingswood Industrial Services Corp.

Quantity (Tonnes)

80.89

Address

155 Glenwood Drive

Prov

ON

City

Brantford

Country

Canada

Total Assigned (must equal total reported)

80.89

Reasons for Changes in Quantities Released from Previous Year

Select the applicable reason or reasons*

No significant change (i.e.

Comments? (Recycling)

Comparison Report: Enters, Creation, Contained in Product

Enters the facility (Use)

Enters the facility (Use)

Quantity (Tonnes)	Last Reported Quantity (Tonnes)	Reporting Period of Last Reported Quantity	Change	
% Change	5580	6090	2011	-510

Creation

Creation

Quantity (Tonnes)	Last Reported Quantity (Tonnes)	Reporting Period of Last Reported Quantity	Change	
% Change	0	0	2011	0

Contained in Product

Contained in Product

Quantity (Tonnes)	Last Reported Quantity (Tonnes)	Reporting Period of Last Reported Quantity	Change	
% Change	0	0	2011	0

Reasons for Change

Reasons for Change

Reason(s) for Change

No reasons - quantities approximately the same

(please specify)

Comparison Report: On-site Releases

Total Quantity Disposed (All Media)

Quantity (Tonnes)	Last Reported Quantity (Tonnes)	Reporting Period of Last Reported Quantity	Change	
% Change	0.25	0.25	2011	0.00

Reasons for Change

Reasons for Change

Reason(s) for Change

No reasons - quantities approximately the same

(please specify)

Comparison Report: Transfers off-site for Recycling

Total off-site Transfers for Recycling

Total off-site Transfers for Recycling

Quantity (Tonnes)	Last Reported Quantity (Tonnes)	Reporting Period of Last Reported Quantity	Change	
% Change	80.89	75.47	2011	5.42

Reasons for Change

Reasons for Change

Reason(s) for Change

No reasons - quantities approximately the same

(please specify)

7664-93-9, Sulphuric acid

7664-93-9, Sulphuric acid

Substance Reporting Status

Applicable Programs

NPRI Does this substance meet the criteria specified in the Canada Gazette notice? Selecting "No" indicates voluntary reporting of this substance to the NPRI*

ON MOE TRA Does this substance meet the criteria specified in the Ontario Regulation 455/09 under the TRA? Selecting "No" indicates voluntary reporting of this substance to the ON MOE*

Would you like to create an exit record for this ON MOE TRA substance?*

Is this considered the first report for this substance to the ON MOE TRA? (Please select "Help" for further clarification)*

Comments

General Information

On-site Releases to the Environment

Indicate if there were On-site Releases, Disposals or Off-site Transfers to the environment by choosing Yes or No from the drop-down boxes beside the questions below.

On-site Releases to the Environment

Was the substance released on-site?*

If the substance was released on-site and the total quantity released was less than one tonne, select the check-box below:

The substance will be reported as the sum of releases to all media (total of 1 tonne or less).

Disposals and Off-site Transfers for Recycling

Was the substance disposed of (on-site or off-site), or transferred for treatment prior to final disposal?*

Is the facility required to report on disposals of tailings and waste rock for the selected reporting period?*

Was the substance transferred off-site for recycling?*

Yes

Nature of Activities*

Manufacture the Substance

Process the Substance

As a reactant

Otherwise Use of the Substance

TRA Quantifications

Enters the facility (Use), Creation, Contained in Product for ON MOE TRA

Enters the facility (Use)

The amount of substance that enters a process as the substance itself or part of another substance, rolled up at the facility level.

Quantity (Tonnes)

3643

Do you want to use ranges for public reporting? If "No" is selected you are indicating that any report to the public may contain the exact quantity provided.

Yes

Creation

The amount of substance that is created

Quantity (Tonnes)

0

Do you want to use ranges for public reporting? If "No" is selected you are indicating that any report to the public may contain the exact quantity provided.

Yes

Contained in Product

The amount of substance contained in product

Quantity (Tonnes)

0

Do you want to use ranges for public reporting? If "No" is selected you are indicating that any report to the public may contain the exact quantity provided.

Yes

Change in Method of Quantification

There has been a change in the method or combination of methods used to track and quantify the substance during the previous calendar year

Describe the changes**

Select the reason for change:**

Describe how the change impact tracking and quantification of the substance**

Incidents out of the normal course of events

There have been incidents out of the normal course of events that occurred at the facility during the previous calendar year that affected the results of tracking/quantification of this substance.

Explain how tracking and quantifications were affected**

Significant Process Change

There has been a significant process change at the facility during the previous calendar year.

On-site Releases

Total Quantity Released (All Media)

Releases to All Media

	Basis Of Estimate:	Quantity (Tonnes)
Total Quantity Released	C - Mass Balance	0

Breakdown of Annual Releases

Distribute Equally

Quarterly Breakdown*

Jan - Mar %

Apr - Jun %

Jul - Sep %

Oct - Dec %

25

25

25

25

Total %

100

Reasons for Changes in Quantities Released from Previous Year

Select the applicable reason or reasons*

No significant change (i.e.

Comments ? (On-Site Releases)

Disposals

Reasons for Changes in Quantities Disposed from Previous Year

Select the applicable reason or reasons.

No significant change (i.e.

Comments? (Disposals)

Recycling

Reasons Why Substance Was Recycled

Select one or more reasons.*

Other

Off-site Transfers for Recycling

Off-site Transfers

	Basis Of Estimate:	Quantity (Tonnes)
Energy Recovery	NA - Not Applicable	
Recovery of Solvents	NA - Not Applicable	
Recovery of Organic Substances	NA - Not Applicable	

(not solvents)

Recovery of Metals and Metal Compounds

NA - Not Applicable

Recovery of Inorganic Materials (not metals)

NA - Not Applicable

Recovery of Acids and Bases

NA - Not Applicable

Recovery of Catalysts

NA - Not Applicable

Recovery of Pollution Abatement Residues

NA - Not Applicable

Refining of Re-use of Used Oil

NA - Not Applicable

Other

C - Mass Balance

26.6

Total Quantity Recycled

26.6

Assign Disposals / Transfers to Off-site Facilities

Assign Disposals / Transfers to Off-site Facilities

Basis of Estimate for Off-sites

Enter breakdown values for:

Other

Basis of Estimate

C - Mass Balance

Quantity (Tonnes)

26.6

Off-site

Kingswood Industrial Services Corp

Off-Site Name

Kingswood Industrial Services Corp

Quantity (Tonnes)

26.6

Address

115 Glenwood Drive

Prov

ON

City

Brantford

Country

Canada

Total Assigned (must equal total reported)

26.6

Reasons for Changes in Quantities Released from Previous Year

Select the applicable reason or reasons*

No significant change (i.e.

Comments? (Recycling)

Comparison Report: Enters, Creation, Contained in Product

Enters the facility (Use)

Enters the facility (Use)

Quantity (Tonnes)	Last Reported Quantity (Tonnes)	Reporting Period of Last Reported Quantity	Change
% Change	3643	4121	2011
			-478

Creation

Creation

Quantity (Tonnes)	Last Reported Quantity (Tonnes)	Reporting Period of Last Reported Quantity	Change
% Change	0	0	2011
			0

Contained in Product

Contained in Product

Quantity (Tonnes)	Last Reported Quantity (Tonnes)	Reporting Period of Last Reported Quantity	Change
% Change	0	0	2011
			0

Reasons for Change

Reasons for Change

Reason(s) for Change

No reasons - quantities approximately the same

(please specify)

Comparison Report: On-site Releases

Total Quantity Disposed (All Media)

Quantity (Tonnes)	Last Reported Quantity (Tonnes)	Reporting Period of Last Reported Quantity	Change
% Change	0	0	2011
			0

Reasons for Change

Reasons for Change

Reason(s) for Change

No reasons - quantities approximately the same

(please specify)

Comparison Report: Transfers off-site for Recycling

Total off-site Transfers for Recycling

Total off-site Transfers for Recycling

Quantity (Tonnes)	Last Reported Quantity (Tonnes)	Reporting Period of Last Reported Quantity	Change	
% Change	26.6	24.8	2011	1.8

Reasons for Change

Reasons for Change

Reason(s) for Change

No reasons - quantities approximately the same

(please specify)

Post Plan Substance Details

7647-01-0, Hydrochloric acid

7647-01-0, Hydrochloric acid

Objectives, Description and Targets

Objectives

Objectives in plan:*

This Plan describes the use of each of these chemicals, and the current measures taken to reduce risks associated with them. Kemira Water Solutions Canada Inc. is part of an international company, specializing in development of drinking water treatment chemicals, specifically coagulants. The Brantford location produces Polyaluminum Chloride Sulphate (CAS: 39290-78-3) and Aluminum Chlorohydrate (CAS: 12042-91-0) used in water treatment for municipal and industrial applications, shipping over 21 100 tonnes and 1900 tonnes in 2011 respectively. In order to maintain our high standard of environmental practice, we strive to create minimal pollution, and go to great lengths to assure that risks of air, water, and land contamination are minimal. More sophisticated analysis on our stack emissions was completed in 2012, which allowed us to continue monitoring the only source of release of these chemicals under normal operation.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

	Quantity (tonnes)	Unit
<input checked="" type="checkbox"/> No quantity target	or	

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of Target:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity (tonnes)	Unit
<input checked="" type="checkbox"/> No quantity target	or <input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target or years

Description of targets:

Actions

Additional Actions

Were there any additional actions outside the plan taken during the reporting period to reduce the use and/or creation of the substance?*

Describe any additional actions that were taken during the reporting period to achieve the plan's objectives:**

Provide a public summary of the description of the additional action taken:**

Reductions due to additional actions taken**

The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.

No Amount tonnes

The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.

No Amount tonnes

The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions.

No Amount tonnes

The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the additional actions.

No Amount tonnes

The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the additional actions.

No Amount tonnes

The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions.

No Amount tonnes

The amount of reduction in the substance disposed on-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions.

No Amount tonnes

The amount of reduction in the substance disposed off-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions.

No Amount tonnes

The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the additional actions.

No Amount tonnes

Amendments

Amendments

Were any amendments made to the toxic substance reduction plan during the reporting period?*

No

Description any amendments that were made to the toxic substance reduction plan during the reporting period**

Provide a public summary of the description of any amendments that were made to the toxic substance reduction plan during the reporting period**

7664-93-9, Sulphuric acid

7664-93-9, Sulphuric acid

Objectives, Description and Targets

Objectives

Objectives in plan:*

This Plan describes the use of each of these chemicals, and the current measures taken to reduce risks associated with them.
 Kemira Water Solutions Canada Inc. is part of an international company, specializing in development of drinking water treatment chemicals, specifically coagulants. The Brantford location produces Polyaluminum Chloride Sulphate (CAS: 39290-78-3) and Aluminum Chlorohydrate (CAS: 12042-91-0) used in water treatment for municipal and industrial applications, shipping over 21 100 tonnes and 1900 tonnes in 2011 respectively. In order to maintain our high standard of environmental practice, we strive to create minimal pollution, and go to great lengths to assure that risks of air, water, and land contamination are minimal. More sophisticated analysis on our stack emissions was completed in 2012, which allowed us to continue monitoring the only source of release of these chemicals under normal operation.

Use Targets

What is the targeted reduction in use of the toxic substance at the facility?*

	Quantity (tonnes)	Unit
<input checked="" type="checkbox"/> No quantity target	or	
	<input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

<input checked="" type="checkbox"/> No timeline target	or	<input type="text"/>	years
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Description of Target:

Creation Targets

What is the targeted reduction in creation of the toxic substance at the facility?*

	Quantity (tonnes)	Unit
<input checked="" type="checkbox"/> No quantity target	or	
	<input type="text"/>	<input type="text"/>

What is the targeted timeframe for this reduction?*

No timeline target

or

years

Description of targets:

Actions

Additional Actions

Were there any additional actions outside the plan taken during the reporting period to reduce the use and/or creation of the substance?*

Describe any additional actions that were taken during the reporting period to achieve the plan's objectives.**

Provide a public summary of the description of the additional action taken:**

Reductions due to additional actions taken**

The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.

No Amount tonnes

The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.

No Amount tonnes

The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions.

No Amount tonnes

The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the additional actions.

No Amount tonnes

The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the additional actions.

No Amount tonnes

The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions.

No Amount tonnes

The amount of reduction in the substance disposed on-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions.

No Amount tonnes

The amount of reduction in the substance disposed off-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions.

No Amount tonnes

The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the additional actions.

No Amount tonnes

Amendments

Amendments

Were any amendments made to the toxic substance reduction plan during the reporting period?*

Description any amendments that were made to the toxic substance reduction plan during the reporting period**

Provide a public summary of the description of any amendments that were made to the toxic substance reduction plan during the reporting period**