

National Pollutant Release Inventory (NPRI) and Partners



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Report Preview

Report Details

Report Year	2017
Report Type:	NPRI,ON MOE TRA
Report Status:	Submitted
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Company and Facility Details

Company Name:	GreenField Global Inc.
Business Number:	130336852
Mailing Address:	Address Line 1: 6985 Financial Drive City, Province/Territory, Postal Code: Mississauga Ontario L5N 0G3 Country: Canada
Facility Name:	Johnstown
NAICS Code:	325190
NPRI ID:	11684
Physical Address:	Address Line 1: 141 Commerce Drive City, Province/Territory, Postal Code: Johnstown Ontario K0E1T0 Country: Canada Latitude: 44.7353 Longitude: -75.4842

Contacts Details

Contact Type	Technical Contact, Certifying Official, Person who prepared the report
Name:	Dianne Schenk
Position:	EH&S Manager
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Contact Type	Highest Ranking Employee
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Position:	Plant Manager
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Email:

brendan.bland@greenfield.com

Mailing Address:

Delivery Mode: GeneralDelivery
 Address Line 1: 141 - Commerce Drive
 City, Province/Territory, Postal Code: Johnstown Ontario K0E1T1
 Country: Canada

General Information

Number of employees:

57

Activities for Which the 20,000-Hour Employee Threshold Does Not Apply:

None of the above

Activities Relevant to Reporting Dioxins, Furans and Hexachlorobenzene:

None of the above

Activities Relevant to Reporting of Polycyclic Aromatic Hydrocarbons (PAHs):

Wood preservation using creosote: No

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:

No

Did the facility report under other environmental regulations or permits:

No

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

Yes

Was the facility shut down for more than one week during the year:

No

Operating Schedule - Days of the Week:

Mon, Tue, Wed, Thu, Fri, Sat, Sun

Usual Number of Operating Hours per day:

24

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

07:00

Substance List

CAS RN	Substance Name	Releases	Releases (Speciated VOCs)	Disposals	Recycling	Unit
75-07-0	Acetaldehyde	15.7850	N/A	N/A	N/A	tonnes
NA - 16	Ammonia (total)	N/A	N/A	N/A	N/A	tonnes
71-43-2	Benzene	0.1780	N/A	N/A	N/A	tonnes
630-08-0	Carbon monoxide	26.7550	N/A	N/A	N/A	tonnes
98-82-8	Cumene	N/A	N/A	N/A	N/A	tonnes
110-82-7	Cyclohexane	0.0750	N/A	N/A	N/A	tonnes
100-41-4	Ethylbenzene	0.0030	N/A	N/A	N/A	tonnes
1634-04-4	Methyl tert-butyl ether	N/A	N/A	N/A	N/A	tonnes
91-20-3	Naphthalene	N/A	N/A	N/A	N/A	tonnes
110-54-3	n-Hexane	3.3880	N/A	N/A	N/A	tonnes
11104-93-1	Nitrogen oxides (expressed as NO2)	83.4290	N/A	N/A	N/A	tonnes
NA - M09	PM10 - Particulate Matter <= 10 Microns	13.8580	N/A	N/A	N/A	tonnes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	3.6710	N/A	N/A	N/A	tonnes
7664-93-9	Sulphuric acid	N/A	N/A	N/A	N/A	tonnes
108-88-3	Toluene	0.3530	N/A	N/A	N/A	tonnes
NA - M08	Total Particulate Matter	26.0920	N/A	N/A	N/A	tonnes
NA - M16	Volatile Organic Compounds (VOCs)	165.8770	160.6430	N/A	N/A	tonnes
1330-20-7	Xylene (all isomers)	0.0410	N/A	N/A	N/A	tonnes

Applicable Programs

CAS RN	Substance Name	NPRI	ON MOE TRA	ON MOE Reg 127/01	First report for this substance to the ON MOE TRA
75-07-0	Acetaldehyde	Yes	Yes		No
NA - 16	Ammonia (total)	No	No		No
71-43-2	Benzene	Yes	Yes		No
630-08-0	Carbon monoxide	Yes	Yes		No
98-82-8	Cumene	No	No		No

CAS RN	Substance Name	NPRI	ON MOE TRA	ON MOE Reg 127/01	First report for this substance to the ON MOE TRA
110-82-7	Cyclohexane	Yes	Yes		No
100-41-4	Ethylbenzene	Yes	Yes		No
1634-04-4	Methyl tert-butyl ether	Yes	Yes		No
91-20-3	Naphthalene	No	No		No
110-54-3	n-Hexane	Yes	Yes		No
11104-93-1	Nitrogen oxides (expressed as NO2)	Yes	Yes		No
NA - M09	PM10 - Particulate Matter <= 10 Microns	Yes	Yes		No
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Yes	Yes		No
7664-93-9	Sulphuric acid	Yes	Yes		No
108-88-3	Toluene	Yes	Yes		No
NA - M08	Total Particulate Matter	Yes	Yes		No
NA - M16	Volatile Organic Compounds (VOCs)	Yes	Yes		No
1330-20-7	Xylene (all isomers)	Yes	Yes		No

Applicable Programs - Comments

CAS RN	Substance Name	Comments
NA - 16	Ammonia (total)	The use of ammonia has been eliminated.
91-20-3	Naphthalene	This substance has been eliminated by changing to natural gasoline as a denaturant instead of regular gasoline as a denaturant as per Excise Canada.

TRA Exit Record

CAS RN	Substance Name	Circumstance(s) that apply	Describe the circumstances that lead to the criteria no longer being met	Describe the information and any quantifications relied upon for making the determination
NA - 16	Ammonia (total)	Facility has permanently ceased to use or create the substance	The use of ammonia has been eliminated and replaced with urea as a source of nitrogen for yeast. This was accomplished by support from top management to source a nontoxic substance.	This was determined through engineering to source a replacement substance and the use of Safety Data Sheets to verify quantities.
91-20-3	Naphthalene	Facility has permanently ceased to use or create the substance	This substance has been eliminated by changing to natural gasoline as a denaturant instead of regular gasoline as a denaturant as per Excise Canada and part of our Toxic Substance reduction plan.	The elimination of this substance was determined through the Safety Data Sheet for natural gasoline and remodelling of our ECA.

General Information about the Substance - Releases and Transfers of the Substance

CAS RN	Substance Name	Was the substance released on-site	The substance will be reported as the sum of releases to all media (total of 1 tonne or less)	1 tonne or more of a Part 5 Substance (Speciated VOC) was released to air
75-07-0	Acetaldehyde	Yes	No	No
NA - 16	Ammonia (total)	No	No	No
71-43-2	Benzene	Yes	Yes	No
98-82-8	Cumene	No	No	No
110-82-7	Cyclohexane	Yes	Yes	No
100-41-4	Ethylbenzene	Yes	Yes	No
1634-04-4	Methyl tert-butyl ether	No	No	No
91-20-3	Naphthalene	No	No	No
110-54-3	n-Hexane	Yes	No	No
7664-93-9	Sulphuric acid	No	No	No
108-88-3	Toluene	Yes	Yes	No
NA - M16	Volatile Organic Compounds (VOCs)		No	Yes
1330-20-7	Xylene (all isomers)	Yes	Yes	No

General Information about the Substance - Disposals and Off-site Transfers for Recycling

CAS RN	Substance Name	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
75-07-0	Acetaldehyde	No	No	No
NA - 16	Ammonia (total)	No	No	No
71-43-2	Benzene	No	No	No
98-82-8	Cumene	No	No	No
110-82-7	Cyclohexane	No	No	No
100-41-4	Ethylbenzene	No	No	No

CAS RN	Substance Name	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
1634-04-4	Methyl tert-butyl ether	No	No	No
91-20-3	Naphthalene	No	No	No
110-54-3	n-Hexane	No	No	No
7664-93-9	Sulphuric acid	No	No	No
108-88-3	Toluene	No	No	No
NA - M16	Volatile Organic Compounds (VOCs)			
1330-20-7	Xylene (all isomers)	No	No	No

General Information about the Substance - Nature of Activities

CAS RN	Substance Name	Manufacture the Substance	Process the Substance	Otherwise Use of the Substance
75-07-0	Acetaldehyde	As an impurity		
NA - 16	Ammonia (total)			As a physical or chemical processing aid
71-43-2	Benzene		As a formulation component	
98-82-8	Cumene		As a formulation component	
110-82-7	Cyclohexane		As a formulation component	
100-41-4	Ethylbenzene		As a formulation component	
1634-04-4	Methyl tert-butyl ether		As a formulation component	
91-20-3	Naphthalene		As a formulation component	
110-54-3	n-Hexane		As a formulation component	
7664-93-9	Sulphuric acid			As a physical or chemical processing aid
108-88-3	Toluene		As a formulation component	
NA - M16	Volatile Organic Compounds (VOCs)			
1330-20-7	Xylene (all isomers)		As a formulation component	

TRA Quantifications

CAS RN	Substance Name	Use, Creation, Contained in Product	Quantity	Use ranges for public reporting
75-07-0	Acetaldehyde	Use	0 tonnes	No
75-07-0	Acetaldehyde	Creation	15.785 tonnes	Yes
75-07-0	Acetaldehyde	Contained in Product	594.78 tonnes	Yes
71-43-2	Benzene	Use	31.865 tonnes	Yes
71-43-2	Benzene	Creation	0 tonnes	No
71-43-2	Benzene	Contained in Product	31.509 tonnes	Yes
630-08-0	Carbon monoxide	Use	0 tonnes	No
630-08-0	Carbon monoxide	Creation	26.755 tonnes	Yes
630-08-0	Carbon monoxide	Contained in Product		
98-82-8	Cumene	Use	0 tonnes	No
98-82-8	Cumene	Creation	0 tonnes	No
98-82-8	Cumene	Contained in Product	0 tonnes	No
110-82-7	Cyclohexane	Use	127.46 tonnes	Yes
110-82-7	Cyclohexane	Creation	0 tonnes	No
110-82-7	Cyclohexane	Contained in Product	127.39 tonnes	Yes
100-41-4	Ethylbenzene	Use	0.056 tonnes	Yes
100-41-4	Ethylbenzene	Creation	0 tonnes	No
100-41-4	Ethylbenzene	Contained in Product	0.053 tonnes	Yes
1634-04-4	Methyl tert-butyl ether	Use	0 tonnes	No
1634-04-4	Methyl tert-butyl ether	Creation	0 tonnes	No
1634-04-4	Methyl tert-butyl ether	Contained in Product	0 tonnes	No
110-54-3	n-Hexane	Use	3361 tonnes	Yes
110-54-3	n-Hexane	Creation	0 tonnes	No
110-54-3	n-Hexane	Contained in Product	3358 tonnes	Yes
11104-93-1	Nitrogen oxides (expressed as NO2)	Use	0 tonnes	No
11104-93-1	Nitrogen oxides (expressed as NO2)	Creation	83.429 tonnes	Yes
11104-93-1	Nitrogen oxides (expressed as NO2)	Contained in Product		
NA - M09	PM10 - Particulate Matter <= 10 Microns	Use	0 tonnes	No
NA - M09	PM10 - Particulate Matter <= 10 Microns	Creation	13.858 tonnes	Yes
NA - M09	PM10 - Particulate Matter <= 10 Microns	Contained in Product		

CAS RN	Substance Name	Use, Creation, Contained in Product	Quantity	Use ranges for public reporting
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Use	0 tonnes	No
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Creation	3.671 tonnes	Yes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Contained in Product		
7664-93-9	Sulphuric acid	Use	1461.208 tonnes	Yes
7664-93-9	Sulphuric acid	Creation	0 tonnes	No
7664-93-9	Sulphuric acid	Contained in Product	0 tonnes	No
108-88-3	Toluene	Use	17.703 tonnes	Yes
108-88-3	Toluene	Creation	0 tonnes	No
108-88-3	Toluene	Contained in Product	17.35 tonnes	Yes
NA - M08	Total Particulate Matter	Use	0 tonnes	No
NA - M08	Total Particulate Matter	Creation	26.092 tonnes	Yes
NA - M08	Total Particulate Matter	Contained in Product		
NA - M16	Volatile Organic Compounds (VOCs)	Use	6775.6 tonnes	Yes
NA - M16	Volatile Organic Compounds (VOCs)	Creation	158.75 tonnes	Yes
NA - M16	Volatile Organic Compounds (VOCs)	Contained in Product		
1330-20-7	Xylene (all isomers)	Use	3.877 tonnes	Yes
1330-20-7	Xylene (all isomers)	Creation	0 tonnes	No
1330-20-7	Xylene (all isomers)	Contained in Product	3.836 tonnes	Yes

TRA Quantifications - VOC Breakdown List

CAS RN	Substance Name	Use, Creation, Contained in Product	Quantity
71-43-2	Benzene	Use	31.865 tonnes
64-17-5	Ethanol	Creation	158.750 tonnes
110-54-3	n-Hexane	Use	3361.4 tonnes
NA - 35	Pentane (all isomers)	Use	3361.4 tonnes
108-88-3	Toluene	Use	17.703 tonnes
1330-20-7	Xylene (all isomers)	Use	3.541 tonnes

TRA Quantifications - Total Speciated VOCs

Use, Creation, Contained in Product	Quantity
Use	6775.909 tonnes
Creation	158.750 tonnes

TRA Quantifications - Others

CAS RN	Substance Name	Change in Method of Quantification	Reasons for Change	Description of how the change impact tracking and quantification of the substance	Description of how an incident(s) affected quantifications	Significant Process Change
75-07-0	Acetaldehyde					No
71-43-2	Benzene					No
630-08-0	Carbon monoxide					No
98-82-8	Cumene					No
110-82-7	Cyclohexane					No
100-41-4	Ethylbenzene					No
1634-04-4	Methyl tert-butyl ether					No
110-54-3	n-Hexane					No
11104-93-1	Nitrogen oxides (expressed as NO2)					No
NA - M09	PM10 - Particulate Matter <= 10 Microns					No
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns					No
7664-93-9	Sulphuric acid					No
108-88-3	Toluene					No
NA - M08	Total Particulate Matter					No
NA - M16	Volatile Organic Compounds (VOCs)					No
1330-20-7	Xylene (all isomers)					No

On-site Releases - Releases to air

CAS RN	Substance Name	Category	Basis of Estimate	Detail Code	Quantity
75-07-0	Acetaldehyde	Stack or Point Releases	C - Mass Balance		15.132 tonnes
75-07-0	Acetaldehyde	Storage or Handling Releases	C - Mass Balance		0.011 tonnes
75-07-0	Acetaldehyde	Fugitive Releases	O - Engineering Estimates		0.642 tonnes
630-08-0	Carbon monoxide	Stack or Point Releases	O - Engineering Estimates		26.755 tonnes
630-08-0	Carbon monoxide	Fugitive Releases	O - Engineering Estimates		0 tonnes
110-54-3	n-Hexane	Storage or Handling Releases	O - Engineering Estimates		3.388 tonnes
11104-93-1	Nitrogen oxides (expressed as NO2)	Stack or Point Releases	O - Engineering Estimates		83.429 tonnes
NA - M09	PM10 - Particulate Matter <= 10 Microns	Stack or Point Releases	E2 - Published Emission Factors		3.393 tonnes
NA - M09	PM10 - Particulate Matter <= 10 Microns	Storage or Handling Releases	E1 - Site Specific Emission Factors		5.956 tonnes
NA - M09	PM10 - Particulate Matter <= 10 Microns	Fugitive Releases	E2 - Published Emission Factors		4.509 tonnes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Stack or Point Releases	E2 - Published Emission Factors		1.261 tonnes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Storage or Handling Releases	E2 - Published Emission Factors		1.644 tonnes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Fugitive Releases	O - Engineering Estimates		0.766 tonnes
NA - M08	Total Particulate Matter	Stack or Point Releases	M3 - Source Testing		4.197 tonnes
NA - M08	Total Particulate Matter	Storage or Handling Releases	E2 - Published Emission Factors		19.886 tonnes
NA - M08	Total Particulate Matter	Fugitive Releases	E2 - Published Emission Factors		2.009 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	Stack or Point Releases	C - Mass Balance		6.943 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	Storage or Handling Releases	O - Engineering Estimates		140.991 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	Fugitive Releases	O - Engineering Estimates		17.943 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	Other Sources - Speciated VOCs	NA - Not Applicable		158.934 tonnes

On-site Releases - Releases to air - Total

CAS RN	Substance Name	Total - Releases to Air
75-07-0	Acetaldehyde	15.785 tonnes
630-08-0	Carbon monoxide	26.755 tonnes
110-54-3	n-Hexane	3.388 tonnes
11104-93-1	Nitrogen oxides (expressed as NO2)	83.429 tonnes
NA - M09	PM10 - Particulate Matter <= 10 Microns	13.858 tonnes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	3.671 tonnes
NA - M08	Total Particulate Matter	26.092 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	165.877 tonnes

On-site Releases - Releases to air - Releases from Stacks equal to or greater than 50m

CAS RN	Substance Name	Stack Name	Quantity	Height (m)	Diameter (m)	Exit Velocity (m/s)	Exit Temperature (°C)
11104-93-1	Nitrogen oxides (expressed as NO2)	Thermal Oxidizer Stack S-10	44.391 tonnes	53.3000	1.8300	19.800	120.000
630-08-0	Carbon monoxide	Thermal Oxidizer Stack S-10	17.007 tonnes	53.3000	1.8300	19.800	120.000
NA - M08	Total Particulate Matter	Thermal Oxidizer Stack S-10	3.829 tonnes	53.3000	1.8300	19.800	120.000
NA - M08	Total Particulate Matter	Type II DISA Cyclo Filter	0.368 tonnes	53.3000	0.9100	19.000	40.000
NA - M09	PM10 - Particulate Matter <= 10 Microns	Thermal Oxidizer Stack S-10	3.025 tonnes	53.3000	1.8300	19.800	120.000
NA - M09	PM10 - Particulate Matter <= 10 Microns	Type II DISA Cyclo Filter	0.368 tonnes	53.3000	0.9100	19.000	40.000
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Thermal Oxidizer Stack S-10	0.893 tonnes	53.3000	1.8300	19.800	120.000
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Type II DISA Cyclo Filter	0.368 tonnes	53.3000	0.9100	19.000	40.000
NA - M16	Volatile Organic Compounds (VOCs)	Thermal Oxidizer Stack S-10	6.157 tonnes	53.3000	1.8300	19.800	120.000
NA - M16	Volatile Organic Compounds (VOCs)	Type II DISA Cyclo Filter	0.786 tonnes	53.3000	0.9100	19.000	40.000

On-site Releases - Releases to air - VOC Stack Breakdown List

Stack Name	CAS RN	Substance Name	Quantity
Thermal Oxidizer Stack S-10	64-17-5	Ethanol	0.430 tonnes
Thermal Oxidizer Stack S-10	141-78-6	Ethyl acetate	2.227 tonnes
Thermal Oxidizer Stack S-10	50-00-0	Formaldehyde	0.530 tonnes
Thermal Oxidizer Stack S-10	67-56-1	Methanol	2.97 tonnes
Type II DISA Cyclo Filter	50-00-0	Formaldehyde	0.107 tonnes
Type II DISA Cyclo Filter	67-56-1	Methanol	0.679 tonnes

On-site Releases - Releases to air - VOC Breakdown List

Category	CAS RN	Substance Name	Quantity
Other Sources - Speciated VOCs	64-17-5	Ethanol	151.000 tonnes
Other Sources - Speciated VOCs	67-56-1	Methanol	2.70 tonnes

Total Quantity Released (All Media)

CAS RN	Substance Name	Category	Basis of Estimate	Detail Code	Quantity
71-43-2	Benzene	Total Quantity Released	O - Engineering Estimates		0.178 tonnes
110-82-7	Cyclohexane	Total Quantity Released	C - Mass Balance		0.075 tonnes
100-41-4	Ethylbenzene	Total Quantity Released	C - Mass Balance		0.003 tonnes
108-88-3	Toluene	Total Quantity Released	O - Engineering Estimates		0.353 tonnes
1330-20-7	Xylene (all isomers)	Total Quantity Released	O - Engineering Estimates		0.041 tonnes

On-site Releases - Total

CAS RN	Substance Name	Total releases
75-07-0	Acetaldehyde	15.785 tonnes
110-54-3	n-Hexane	3.388 tonnes

On-site Releases - Quarterly Breakdown of Annual Releases

CAS RN	Substance Name	Quarter 1	Quarter 2	Quarter 3	Quarter 4
75-07-0	Acetaldehyde	25	25	25	25
71-43-2	Benzene	25	25	25	25
110-82-7	Cyclohexane	25	25	25	25
100-41-4	Ethylbenzene	25	25	25	25
110-54-3	n-Hexane	25	25	25	25
108-88-3	Toluene	25	25	25	25
1330-20-7	Xylene (all isomers)	25	25	25	25

On-site Releases - Monthly Breakdown of Annual Releases

CAS RN	Substance Name	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
630-08-0	Carbon monoxide	8.33	8.33	8.34	8.33	8.33	8.34	8.33	8.33	8.34	8.33	8.33	8.34
11104-93-1	Nitrogen oxides (expressed as NO2)	8.33	8.33	8.34	8.33	8.33	8.34	8.33	8.33	8.34	8.33	8.33	8.34
NA - M09	PM10 - Particulate Matter <= 10 Microns	8.33	8.33	8.34	8.33	8.33	8.34	8.33	8.33	8.34	8.33	8.33	8.34
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	8.33	8.33	8.34	8.33	8.33	8.34	8.33	8.33	8.34	8.33	8.33	8.34
NA - M08	Total Particulate Matter	8.33	8.33	8.34	8.33	8.33	8.34	8.33	8.33	8.34	8.33	8.33	8.34
NA - M16	Volatile Organic Compounds (VOCs)	8.33	8.33	8.34	8.33	8.33	8.34	8.33	8.33	8.34	8.33	8.33	8.34

On-site Releases - Reasons for Changes in Quantities Released from Previous Year

CAS RN	Substance Name	Reasons for Changes in Quantities from Previous Year	Comments
100-41-4	Ethylbenzene	Changes in production levels	
108-88-3	Toluene	Changes in production levels	
110-54-3	n-Hexane	Changes in production levels	
110-82-7	Cyclohexane	Changes in production levels	Change in production levels. Use of natural gasoline as denaturant (as required by Excise Canada) that contains higher quantity of cyclohexane but lower quantities of other toxic substances.
11104-93-1	Nitrogen oxides (expressed as NO2)	Changes in production levels	
1330-20-7	Xylene (all isomers)	No significant change (i.e. < 10%) or no change	
1634-04-4	Methyl tert-butyl ether	Other (specify in On-site Releases comment field)	Use of natural gasoline as a denaturant has eliminated this substance.

CAS RN	Substance Name	Reasons for Changes in Quantities from Previous Year	Comments
630-08-0	Carbon monoxide	Changes in production levels Other (specify in On-site Releases comment field)	Remodelling completed.
71-43-2	Benzene	Changes in production levels	
75-07-0	Acetaldehyde	Changes in production levels	
7664-93-9	Sulphuric acid	No significant change (i.e. < 10%) or no change	
91-20-3	Naphthalene	Other (specify in On-site Releases comment field)	Change in denaturant has eliminated naphthalene.
98-82-8	Cumene	No significant change (i.e. < 10%) or no change	
NA - 16	Ammonia (total)	Pollution prevention activities	The use of ammonia has been eliminated.
NA - M08	Total Particulate Matter	No significant change (i.e. < 10%) or no change	
NA - M09	PM10 - Particulate Matter <= 10 Microns	Changes in production levels	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Changes in production levels	
NA - M16	Volatile Organic Compounds (VOCs)	Changes in production levels	

Disposals - Reasons and Comments

CAS RN	Substance Name	Reasons Why Substance Was Disposed	Reasons for Changes in Quantities from Previous Year	Comments
100-41-4	Ethylbenzene		No significant change (i.e. < 10%) or no change	
108-88-3	Toluene		No significant change (i.e. < 10%) or no change	
110-54-3	n-Hexane		No significant change (i.e. < 10%) or no change	
110-82-7	Cyclohexane		No significant change (i.e. < 10%) or no change	
1330-20-7	Xylene (all isomers)		No significant change (i.e. < 10%) or no change	
1634-04-4	Methyl tert-butyl ether		No significant change (i.e. < 10%) or no change	
71-43-2	Benzene		No significant change (i.e. < 10%) or no change	
75-07-0	Acetaldehyde		No significant change (i.e. < 10%) or no change	
7664-93-9	Sulphuric acid		No significant change (i.e. < 10%) or no change	
91-20-3	Naphthalene		No significant change (i.e. < 10%) or no change	
98-82-8	Cumene		No significant change (i.e. < 10%) or no change	
NA - 16	Ammonia (total)		Pollution prevention activities	

Recycling - Reasons and Comments

CAS RN	Substance Name	Reasons Why Substance Was Recycled	Reasons for Changes in Quantities Recycled from Previous Year	Comments
100-41-4	Ethylbenzene		No significant change (i.e. < 10%) or no change	
108-88-3	Toluene		No significant change (i.e. < 10%) or no change	
110-54-3	n-Hexane		No significant change (i.e. < 10%) or no change	
110-82-7	Cyclohexane		No significant change (i.e. < 10%) or no change	
1330-20-7	Xylene (all isomers)		No significant change (i.e. < 10%) or no change	
1634-04-4	Methyl tert-butyl ether		No significant change (i.e. < 10%) or no change	
71-43-2	Benzene		No significant change (i.e. < 10%) or no change	
75-07-0	Acetaldehyde		No significant change (i.e. < 10%) or no change	
7664-93-9	Sulphuric acid		No significant change (i.e. < 10%) or no change	
91-20-3	Naphthalene		No significant change (i.e. < 10%) or no change	
98-82-8	Cumene		No significant change (i.e. < 10%) or no change	
NA - 16	Ammonia (total)		No significant change (i.e. < 10%) or no change	

Comparison Report - Enters, Creation, Contained in Product

CAS RN	Substance Name	Is Breakdown	Category	Quantity	Last Reported Quantity	Reporting Period of Last Reported Quantity	Change	% Change
75-07-0	Acetaldehyde	No	Enters the facility (Use)	0 tonnes	0 tonnes	2016	0	
75-07-0	Acetaldehyde	No	Creation	15.785 tonnes	16.083 tonnes	2016	-0.298	-1.85
75-07-0	Acetaldehyde	No	Contained in Product	594.78 tonnes	622.81 tonnes	2016	-28.03	-4.50
71-43-2	Benzene	No	Enters the facility (Use)	31.865 tonnes	35.88 tonnes	2016	-4.015	-11.19

CAS RN	Substance Name	Is Breakdown	Category	Quantity	Last Reported Quantity	Reporting Period of Last Reported Quantity	Change	% Change
71-43-2	Benzene	No	Creation	0 tonnes	0 tonnes	2016	0	
71-43-2	Benzene	No	Contained in Product	31.509 tonnes	35.69 tonnes	2016	-4.181	-11.71
71-43-2	Benzene	Yes	Enters the facility (Use)	31.865 tonnes	35.69 tonnes	2016	-3.825	-10.72
630-08-0	Carbon monoxide	No	Enters the facility (Use)	0 tonnes	0 tonnes	2016	0	
630-08-0	Carbon monoxide	No	Creation	26.755 tonnes	34.899 tonnes	2016	-8.144	-23.34
98-82-8	Cumene	No	Enters the facility (Use)	0 tonnes	0 tonnes	2016	0	
98-82-8	Cumene	No	Creation	0 tonnes	0 tonnes	2016	0	
98-82-8	Cumene	No	Contained in Product	0 tonnes	0 tonnes	2011	0	
110-82-7	Cyclohexane	No	Enters the facility (Use)	127.46 tonnes	143.521 tonnes	2016	-16.061	-11.19
110-82-7	Cyclohexane	No	Creation	0 tonnes	0 tonnes	2016	0	
110-82-7	Cyclohexane	No	Contained in Product	127.39 tonnes	143.434 tonnes	2016	-16.044	-11.19
64-17-5	Ethanol	Yes	Creation	158.750 tonnes	161.188 tonnes	2016	-2.438	-1.51
100-41-4	Ethylbenzene	No	Enters the facility (Use)	0.056 tonnes	0.039 tonnes	2016	0.017	43.59
100-41-4	Ethylbenzene	No	Creation	0 tonnes	0 tonnes	2016	0	
100-41-4	Ethylbenzene	No	Contained in Product	0.053 tonnes	0.039 tonnes	2016	0.014	35.90
1634-04-4	Methyl tert-butyl ether	No	Enters the facility (Use)	0 tonnes	0 tonnes	2014	0	
1634-04-4	Methyl tert-butyl ether	No	Creation	0 tonnes	0 tonnes	2016	0	
1634-04-4	Methyl tert-butyl ether	No	Contained in Product	0 tonnes	0 tonnes	2016	0	
110-54-3	n-Hexane	No	Enters the facility (Use)	3361 tonnes	3785 tonnes	2016	-424	-11.20
110-54-3	n-Hexane	No	Creation	0 tonnes	0 tonnes	2016	0	
110-54-3	n-Hexane	No	Contained in Product	3358 tonnes	3781 tonnes	2016	-423	-11.19
110-54-3	n-Hexane	Yes	Enters the facility (Use)	3361.4 tonnes	3785 tonnes	2016	-423.6	-11.19
11104-93-1	Nitrogen oxides (expressed as NO2)	No	Enters the facility (Use)	0 tonnes	0 tonnes	2016	0	
11104-93-1	Nitrogen oxides (expressed as NO2)	No	Creation	83.429 tonnes	94.859 tonnes	2016	-11.430	-12.05
NA - 35	Pentane (all isomers)	Yes	Enters the facility (Use)	3361.4 tonnes	3784.9 tonnes	2016	-423.5	-11.19
NA - M09	PM10 - Particulate Matter <= 10 Microns	No	Enters the facility (Use)	0 tonnes	0 tonnes	2016	0	
NA - M09	PM10 - Particulate Matter <= 10 Microns	No	Creation	13.858 tonnes	15.573 tonnes	2016	-1.715	-11.01
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No	Enters the facility (Use)	0 tonnes	0 tonnes	2016	0	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No	Creation	3.671 tonnes	4.86 tonnes	2016	-1.189	-24.47
7664-93-9	Sulphuric acid	No	Enters the facility (Use)	1461.208 tonnes	1574.278 tonnes	2016	-113.070	-7.18
7664-93-9	Sulphuric acid	No	Creation	0 tonnes	0 tonnes	2016	0	
7664-93-9	Sulphuric acid	No	Contained in Product	0 tonnes	0 tonnes	2016	0	
108-88-3	Toluene	No	Enters the facility (Use)	17.703 tonnes	19.93 tonnes	2016	-2.227	-11.17
108-88-3	Toluene	No	Creation	0 tonnes	0 tonnes	2016	0	
108-88-3	Toluene	No	Contained in Product	17.35 tonnes	19.579 tonnes	2016	-2.229	-11.38
108-88-3	Toluene	Yes	Enters the facility (Use)	17.703 tonnes	19.93 tonnes	2016	-2.227	-11.17
NA - M08	Total Particulate Matter	No	Enters the facility (Use)	0 tonnes	0 tonnes	2016	0	
NA - M08	Total Particulate Matter	No	Creation	26.092 tonnes	26.095 tonnes	2016	-0.003	-0.01
1330-20-7	Xylene (all isomers)	No	Enters the facility (Use)	3.877 tonnes	4.218 tonnes	2016	-0.341	-8.08
1330-20-7	Xylene (all isomers)	No	Creation	0 tonnes	0 tonnes	2016	0	
1330-20-7	Xylene (all isomers)	No	Contained in Product	3.836 tonnes	4.176 tonnes	2016	-0.340	-8.14

CAS RN	Substance Name	Is Breakdown	Category	Quantity	Last Reported Quantity	Reporting Period of Last Reported Quantity	Change	% Change
1330-20-7	Xylene (all isomers)	Yes	Enters the facility (Use)	3.541 tonnes	4.218 tonnes	2016	-0.677	-16.05

Comparison Report - Enters, Creation, Contained in Product : Reason(s) for Change

CAS RN	Substance Name	Reason(s) for Change	Other Reason
75-07-0	Acetaldehyde	Decrease in production levels	
71-43-2	Benzene	Decrease in production levels	
630-08-0	Carbon monoxide	Decrease in production levels	
98-82-8	Cumene	Implementation of toxics reduction option(s)	
110-82-7	Cyclohexane	Decrease in production levels Other	Decrease in production level. Denaturant (required by Excise Canada) has a higher percentage of cyclohexane but lower levels of other toxic substances.
100-41-4	Ethylbenzene	Increase in production levels	
1634-04-4	Methyl tert-butyl ether	Implementation of toxics reduction option(s)	
110-54-3	n-Hexane	Decrease in production levels	
11104-93-1	Nitrogen oxides (expressed as NO2)	Decrease in production levels	
NA - M09	PM10 - Particulate Matter <= 10 Microns	Decrease in production levels	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Decrease in production levels	
7664-93-9	Sulphuric acid	Implementation of toxics reduction option(s)	
108-88-3	Toluene	Decrease in production levels	
NA - M08	Total Particulate Matter	No reasons - quantities approximately the same	
NA - M16	Volatile Organic Compounds (VOCs)	Decrease in production levels Other	Remodelling of substances.
1330-20-7	Xylene (all isomers)	Decrease in production levels	

Comparison Report - On-site Releases

CAS RN	Substance Name	Is Breakdown	Category	Quantity	Last Reported Quantity	Reporting Period of Last Reported Quantity	Change	% Change
75-07-0	Acetaldehyde	No	Total Releases to Air	15.785 tonnes	16.083 tonnes	2016	-0.298	-1.85
75-07-0	Acetaldehyde	No	Total Releases to Water	0 tonnes	0 tonnes	2016	0	
75-07-0	Acetaldehyde	No	Total Releases to Land	0 tonnes	0 tonnes	2016	0	
75-07-0	Acetaldehyde	No	Total Releases to All Media	0 tonnes				
71-43-2	Benzene	No	Total Releases to Air	0 tonnes				
71-43-2	Benzene	No	Total Releases to Water	0 tonnes				
71-43-2	Benzene	No	Total Releases to Land	0 tonnes				
71-43-2	Benzene	No	Total Releases to All Media	0.178 tonnes	0.190 tonnes	2016	-0.012	-6.32
630-08-0	Carbon monoxide	No	Total Releases to Air	26.755 tonnes	34.899 tonnes	2016	-8.144	-23.34
630-08-0	Carbon monoxide	No	Total Releases to Water	0 tonnes	0 tonnes	2016	0	
630-08-0	Carbon monoxide	No	Total Releases to Land	0 tonnes	0 tonnes	2016	0	
630-08-0	Carbon monoxide	No	Total Releases to All Media	0 tonnes				
110-82-7	Cyclohexane	No	Total Releases to Air	0 tonnes				
110-82-7	Cyclohexane	No	Total Releases to Water	0 tonnes				
110-82-7	Cyclohexane	No	Total Releases to Land	0 tonnes				
110-82-7	Cyclohexane	No	Total Releases to All Media	0.075 tonnes	0.087 tonnes	2016	-0.012	-13.79
64-17-5	Ethanol	Yes	Total Releases to Air	151.430 tonnes	161.188 tonnes	2016	-9.758	-6.05
141-78-6	Ethyl acetate	Yes	Total Releases to Air	2.227 tonnes	2.361 tonnes	2016	-0.134	-5.68

CAS RN	Substance Name	Is Breakdown	Category	Quantity	Last Reported Quantity	Reporting Period of Last Reported Quantity	Change	% Change
100-41-4	Ethylbenzene	No	Total Releases to Air	0 tonnes				
100-41-4	Ethylbenzene	No	Total Releases to Water	0 tonnes				
100-41-4	Ethylbenzene	No	Total Releases to Land	0 tonnes				
100-41-4	Ethylbenzene	No	Total Releases to All Media	0.003 tonnes	0.001 tonnes	2016	0.002	200
50-00-0	Formaldehyde	Yes	Total Releases to Air	0.637 tonnes	0.667 tonnes	2016	-0.030	-4.50
67-56-1	Methanol	Yes	Total Releases to Air	6.349 tonnes	5.973 tonnes	2016	0.376	6.29
110-54-3	n-Hexane	No	Total Releases to Air	3.388 tonnes	3.688 tonnes	2016	-0.300	-8.13
110-54-3	n-Hexane	No	Total Releases to Water	0 tonnes	0 tonnes	2016	0	
110-54-3	n-Hexane	No	Total Releases to Land	0 tonnes	0 tonnes	2016	0	
110-54-3	n-Hexane	No	Total Releases to All Media	0 tonnes	0.037 tonnes	2014	-0.037	-100
11104-93-1	Nitrogen oxides (expressed as NO2)	No	Total Releases to Air	83.429 tonnes	94.859 tonnes	2016	-11.430	-12.05
11104-93-1	Nitrogen oxides (expressed as NO2)	No	Total Releases to Water	0 tonnes	0 tonnes	2016	0	
11104-93-1	Nitrogen oxides (expressed as NO2)	No	Total Releases to Land	0 tonnes	0 tonnes	2016	0	
11104-93-1	Nitrogen oxides (expressed as NO2)	No	Total Releases to All Media	0 tonnes				
NA - M09	PM10 - Particulate Matter <= 10 Microns	No	Total Releases to Air	13.858 tonnes	15.573 tonnes	2016	-1.715	-11.01
NA - M09	PM10 - Particulate Matter <= 10 Microns	No	Total Releases to Water	0 tonnes	0 tonnes	2016	0	
NA - M09	PM10 - Particulate Matter <= 10 Microns	No	Total Releases to Land	0 tonnes	0 tonnes	2016	0	
NA - M09	PM10 - Particulate Matter <= 10 Microns	No	Total Releases to All Media	0 tonnes				
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No	Total Releases to Air	3.671 tonnes	4.860 tonnes	2016	-1.189	-24.47
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No	Total Releases to Water	0 tonnes	0 tonnes	2016	0	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No	Total Releases to Land	0 tonnes	0 tonnes	2016	0	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No	Total Releases to All Media	0 tonnes				
108-88-3	Toluene	No	Total Releases to Air	0 tonnes	3.009 tonnes	2011	-3.009	-100
108-88-3	Toluene	No	Total Releases to Water	0 tonnes	0 tonnes	2011	0	
108-88-3	Toluene	No	Total Releases to Land	0 tonnes	0 tonnes	2011	0	
108-88-3	Toluene	No	Total Releases to All Media	0.353 tonnes	0.354 tonnes	2016	-0.001	-0.28
NA - M08	Total Particulate Matter	No	Total Releases to Air	26.092 tonnes	26.095 tonnes	2016	-0.003	-0.01
NA - M08	Total Particulate Matter	No	Total Releases to Water	0 tonnes	0 tonnes	2016	0	
NA - M08	Total Particulate Matter	No	Total Releases to Land	0 tonnes	0 tonnes	2016	0	
NA - M08	Total Particulate Matter	No	Total Releases to All Media	0 tonnes				
1330-20-7	Xylene (all isomers)	No	Total Releases to Air	0 tonnes	2.337 tonnes	2011	-2.337	-100
1330-20-7	Xylene (all isomers)	No	Total Releases to Water	0 tonnes	0 tonnes	2011	0	
1330-20-7	Xylene (all isomers)	No	Total Releases to Land	0 tonnes	0 tonnes	2011	0	
1330-20-7	Xylene (all isomers)	No	Total Releases to All Media	0.041 tonnes	0.042 tonnes	2016	-0.001	-2.38

Comparison Report - On-site Releases - Reason(s) for Change

CAS RN	Substance Name	Reason(s) for Change	Other Reason
75-07-0	Acetaldehyde	Decrease in production levels	
71-43-2	Benzene	Decrease in production levels	

CAS RN	Substance Name	Reason(s) for Change	Other Reason
630-08-0	Carbon monoxide	Decrease in production levels Other	Remodelling completed.
110-82-7	Cyclohexane	Decrease in production levels	
100-41-4	Ethylbenzene	Increase in production levels	
110-54-3	n-Hexane	Decrease in production levels	
11104-93-1	Nitrogen oxides (expressed as NO2)	Decrease in production levels Other	Remodelling completed.
NA - M09	PM10 - Particulate Matter <= 10 Microns	Decrease in production levels	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Decrease in production levels	
108-88-3	Toluene	No reasons - quantities approximately the same	
NA - M08	Total Particulate Matter	No reasons - quantities approximately the same	
NA - M16	Volatile Organic Compounds (VOCs)	Decrease in production levels Other	Remodelling completed
1330-20-7	Xylene (all isomers)	No reasons - quantities approximately the same	

Pollution Prevention

Does the facility have a documented pollution prevention plan?

Yes

a) Please check all that apply

Plan was prepared or implemented on a voluntary basis.

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

Yes

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

Substances (provide the name of the primary Substances in the comments field below)

Please summarize your pollution prevention plan. If you selected "Substances", please specify the substances that were addressed in your plan (this information will be publicly available).

Plan addresses any chemical spill.

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

No

Progress on TRA Plan - Objectives

CAS RN	Substance Name	Objectives
75-07-0	Acetaldehyde	While GFE, Johnstown Facility does not intend to reduce the creation of acetaldehyde at the present time, any opportunities for reduction will be reviewed and considered.
71-43-2	Benzene	GFE, Johnstown Facility intends to reduce the use of Benzene by 53%.
630-08-0	Carbon monoxide	While Greenfield Johnstown Limited Partnership Facility does not intend to reduce the creation of carbon monoxide at the present time, any opportunities for reduction will be reviewed and considered.
98-82-8	Cumene	Greenfield Johnstown Limited Partnership Facility does intend to reduce the use of cumene.
110-82-7	Cyclohexane	It has been determined that it is not technically and economically feasible at this time to reduce the use of cyclohexane. Even though Greenfield Johnstown Limited Partnership has decided not to implement any reduction options at this time it will revisit it in the future.
64-17-5	Ethanol	No toxic substance reduction options will be implemented at this time but many initiatives have been implemented to reduce ethyl alcohol losses through leak prevention programs and a computer monitoring system to ensure optimum production conditions are maintained.
141-78-6	Ethyl acetate	- Greenfield Johnstown Limited Partnership Facility intends to reduce the creation of ethyl acetate by introducing a Corn oil extraction process to reduce dryer throughput.
100-41-4	Ethylbenzene	GFE, Johnstown Facility intends to reduce the use of Ethylbenzene by 100%.
50-00-0	Formaldehyde	While GFE, Johnstown Facility does not intend to reduce the creation of formaldehyde at the present time, any opportunities for reduction will be reviewed and considered.
67-56-1	Methanol	While GFE, Johnstown Facility does not intend to reduce the creation of methanol at the present time, future opportunities for reduction will be reviewed and considered.
1634-04-4	Methyl tert-butyl ether	Greenfield Johnstown Limited Partnership Facility does intend to reduce the use of methyl tert-butyl ether by substituting regular gasoline with natural gasoline, containing lower levels of toxic substances.
110-54-3	n-Hexane	It has been determined that it is not technically and economically feasible at this time to reduce the use of hexane. Even though Greenfield Johnstown Limited Partnership has decided not to implement any reduction options at this time it will revisit it in the future.
11104-93-1	Nitrogen oxides (expressed as NO2)	While Greenfield Johnstown Limited Partnership Facility does not intend to reduce the creation of nitrogen oxides at the present time, any opportunities for reduction will be reviewed and considered.
NA - 35	Pentane (all isomers)	It has been determined that it is not technically and economically feasible at this time to reduce the use of pentane. Even though Greenfield Johnstown Limited Partnership has decided not to implement any reduction options at this time it will revisit it in the future.
NA - M09	PM10 - Particulate Matter <= 10 Microns	While Greenfield Johnstown Limited Partnership Facility does not intend to reduce the creation of PM 10 Particulate Matter at the present time, any opportunities for reduction will be reviewed and considered. Leak prevention programs are in place to minimize particulate matter as well a computerized program was installed to maintain operating parameters within a tight tolerance and therefore again minimizing leaks and inefficiencies.
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	While Greenfield Johnstown Limited Partnership Facility does not intend to reduce the creation of PM 2.5 Particulate Matter at the present time, any opportunities for reduction will be reviewed and considered. Leak prevention programs are in place to minimize particulate matter as well a computerized program was installed to maintain operating parameters within a tight tolerance and therefore again minimizing leaks and inefficiencies.
7664-93-9	Sulphuric acid	GFE, Johnstown Facility intends to reduce the use of sulphuric acid by 15% over a 6 year period.

CAS RN	Substance Name	Objectives
108-88-3	Toluene	GFE, Johnstown Facility intends to reduce the use of Toluene by 97%.
NA - M08	Total Particulate Matter	While Greenfield Johnstown Limited Partnership Facility does not intend to reduce the creation of Total Particulate Matter at the present time, any opportunities for reduction will be reviewed and considered. Leak prevention programs are in place to minimize particulate matter as well a computerized program was installed to maintain operating parameters within a tight tolerance and therefore again minimizing leaks and inefficiencies.
1330-20-7	Xylene (all isomers)	GFE, Johnstown Facility intends to reduce the use of Xylene by 99%.

Progress on TRA Plan - Use Targets

CAS RN	Substance Name	Quantity	Years	Description of Target
75-07-0	Acetaldehyde	No quantity target	No timeline target	
71-43-2	Benzene	14.3 tonnes	1	
630-08-0	Carbon monoxide	No quantity target	No timeline target	
98-82-8	Cumene	No quantity target	No timeline target	
110-82-7	Cyclohexane	No quantity target	No timeline target	
64-17-5	Ethanol	No quantity target	No timeline target	
141-78-6	Ethyl acetate	No quantity target	No timeline target	
100-41-4	Ethylbenzene	60.5 tonnes	1	GFE, Johnstown Facility intends to reduce the use of Ethylbenzene by 100%.
50-00-0	Formaldehyde	No quantity target	No timeline target	
67-56-1	Methanol	No quantity target	No timeline target	
1634-04-4	Methyl tert-butyl ether	No quantity target	No timeline target	
110-54-3	n-Hexane	No quantity target	No timeline target	
11104-93-1	Nitrogen oxides (expressed as NO2)	No quantity target	No timeline target	
NA - 35	Pentane (all isomers)	No quantity target	No timeline target	
NA - M09	PM10 - Particulate Matter <= 10 Microns	No quantity target	No timeline target	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No quantity target	No timeline target	
7664-93-9	Sulphuric acid	206 tonnes	6	
108-88-3	Toluene	391.7 tonnes	1	
NA - M08	Total Particulate Matter	No quantity target	No timeline target	
1330-20-7	Xylene (all isomers)	299.9 tonnes	1	

Progress on TRA Plan - Creation Targets

CAS RN	Substance Name	Quantity	Years	Description of Target
75-07-0	Acetaldehyde	No quantity target	No timeline target	
71-43-2	Benzene	No quantity target	No timeline target	
630-08-0	Carbon monoxide	No quantity target	No timeline target	
98-82-8	Cumene	No quantity target	No timeline target	
110-82-7	Cyclohexane	No quantity target	No timeline target	
64-17-5	Ethanol	No quantity target	No timeline target	
141-78-6	Ethyl acetate	No quantity target	No timeline target	
100-41-4	Ethylbenzene	No quantity target	No timeline target	
50-00-0	Formaldehyde	No quantity target	No timeline target	
67-56-1	Methanol	No quantity target	No timeline target	
1634-04-4	Methyl tert-butyl ether	No quantity target	No timeline target	
110-54-3	n-Hexane	No quantity target	No timeline target	
11104-93-1	Nitrogen oxides (expressed as NO2)	No quantity target	No timeline target	
NA - 35	Pentane (all isomers)	No quantity target	No timeline target	
NA - M09	PM10 - Particulate Matter <= 10 Microns	No quantity target	No timeline target	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No quantity target	No timeline target	
7664-93-9	Sulphuric acid	No quantity target	No timeline target	
108-88-3	Toluene	No quantity target	No timeline target	

CAS RN	Substance Name	Quantity	Years	Description of Target
NA - M08	Total Particulate Matter	No quantity target	No timeline target	
1330-20-7	Xylene (all isomers)	No quantity target	No timeline target	

Progress on TRA Plan - Toxic Reduction Options Implemented

CAS RN	Substance Name	Activity	Steps that were taken in the reporting period to implement the toxic reduction option	Public summary of the description of the steps	Comparison of the steps that were described in the plan for implementation with the actual steps taken during the reporting period	Public summary of the comparison of the steps
71-43-2	Benzene	Substituted materials	Continued substitution of regular gasoline with natural gasoline as a denaturant as per Excise Canada, containing lower levels of toxic substances.	Continued substitution of regular gasoline with natural gasoline as a denaturant as per Excise Canada, containing lower levels of toxic substances.	Substitution of gasoline with natural gasoline is on schedule as per plan.	Substitution of gasoline with natural gasoline is on schedule as per plan.
98-82-8	Cumene	Substituted materials	Continued substitution of regular gasoline with natural gasoline as a denaturant, as per Excise Canada, containing lower levels of toxic substances.	Continued substitution of regular gasoline with natural gasoline as a denaturant, as per Excise Canada, containing lower levels of toxic substances.	Gasoline used a denaturant has been substituted with natural gasoline resulting in a 100% reduction in the use of cumene.	Gasoline used a denaturant has been substituted with natural gasoline resulting in a 100% reduction in the use of cumene.
141-78-6	Ethyl acetate	Modified equipment, layout or piping	Corn oil extraction is in place and operating.	Corn oil extraction is in place and operating.	Corn oil extraction equipment was operational as per plan schedule.	Corn oil extraction equipment was operational as per plan schedule.
100-41-4	Ethylbenzene	Substituted materials	Continued to substitute gasoline with natural gasoline as a denaturant in our ethanol as per Excise Canada as it does not contain ethylbenzene.	Continued to substitute gasoline with natural gasoline as a denaturant in our ethanol as per Excise Canada as it does not contain ethylbenzene.	On schedule as per our plan with the substitution of gasoline as a denaturant with natural gasoline.	On schedule as per our plan with the substitution of gasoline as a denaturant, following Excise Canada regulations, with natural gasoline.
1634-04-4	Methyl tert-butyl ether	Substituted materials	Substituting regular gasoline with natural gasoline as a denaturant as per Excise Canada.	Substituting regular gasoline with natural gasoline as a denaturant as per Excise Canada.	On schedule with substitution of gasoline with natural gasoline as per plan.	On schedule with substitution of gasoline with natural gasoline as per plan.
7664-93-9	Sulphuric acid	Substituted materials	Trial of new enzyme to reduce requirement of sulphuric acid for pH control.	Trial of new enzyme to reduce requirement of sulphuric acid for pH control.	Trials of various new and improved enzymes are ongoing to try and reduce sulphuric acid. These trials are on schedule according to the plan.	Trials of various new and improved enzymes are ongoing to try and reduce sulphuric acid. These trials are on schedule according to the plan.
108-88-3	Toluene	Substituted materials	Natural gasoline continues to be used as a denaturant, as per Excise Canada, which has lower levels of toluene than gasoline.	Natural gasoline continues to be used as a denaturant, as per Excise Canada, which has lower levels of toluene than gasoline.	Natural gasoline usage is in place as per plan.	Natural gasoline usage is in place as per plan.
1330-20-7	Xylene (all isomers)	Substituted materials	Continued to substitute regular gasoline with natural gasoline, which has lower levels of xylene, as a denaturant following Excise Canada regulations.	Continued to substitute regular gasoline with natural gasoline, which has lower levels of xylene, as a denaturant following Excise Canada regulations.	Substitution of gasoline with natural gasoline as a denaturant per Excise Canada is on schedule as per plan.	Substitution of gasoline with natural gasoline as a denaturant per Excise Canada is on schedule as per plan.

CAS RN	Substance Name	Activity	Will the timelines in the current version of the plan will be met	Comments:
71-43-2	Benzene	Substituted materials	Yes	
98-82-8	Cumene	Substituted materials	Yes	
141-78-6	Ethyl acetate	Modified equipment, layout or piping	Yes	
100-41-4	Ethylbenzene	Substituted materials	Yes	
1634-04-4	Methyl tert-butyl ether	Substituted materials	Yes	
7664-93-9	Sulphuric acid	Substituted materials	Yes	
108-88-3	Toluene	Substituted materials	Yes	
1330-20-7	Xylene (all isomers)	Substituted materials	Yes	

Progress on TRA Plan - Reductions due to Options Implemented - Equipment or process modifications

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
141-78-6	Ethyl acetate	Modified equipment, layout or piping	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
141-78-6	Ethyl acetate	Modified equipment, layout or piping	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
141-78-6	Ethyl acetate	Modified equipment, layout or piping	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the steps described:	No Amount
141-78-6	Ethyl acetate	Modified equipment, layout or piping	The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the steps described:	0.093 tonnes
141-78-6	Ethyl acetate	Modified equipment, layout or piping	The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
141-78-6	Ethyl acetate	Modified equipment, layout or piping	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to steps described:	No Amount

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
1634-04-4	Methyl tert-butyl ether	Substituted materials	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to steps described:	No Amount
1634-04-4	Methyl tert-butyl ether	Substituted materials	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 steps described:	No Amount
1634-04-4	Methyl tert-butyl ether	Substituted materials	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 steps described:	No Amount
1634-04-4	Methyl tert-butyl ether	Substituted materials	The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the steps described:	No Amount
7664-93-9	Sulphuric acid	Substituted materials	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the steps described:	113.07 tonnes
7664-93-9	Sulphuric acid	Substituted materials	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
7664-93-9	Sulphuric acid	Substituted materials	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the steps described:	No Amount
7664-93-9	Sulphuric acid	Substituted materials	The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
7664-93-9	Sulphuric acid	Substituted materials	The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
7664-93-9	Sulphuric acid	Substituted materials	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to steps described:	No Amount
7664-93-9	Sulphuric acid	Substituted materials	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 steps described:	No Amount
7664-93-9	Sulphuric acid	Substituted materials	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 steps described:	No Amount
7664-93-9	Sulphuric acid	Substituted materials	The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the steps described:	No Amount
108-88-3	Toluene	Substituted materials	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the steps described:	2.227 tonnes
108-88-3	Toluene	Substituted materials	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
108-88-3	Toluene	Substituted materials	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the steps described:	2.229 tonnes
108-88-3	Toluene	Substituted materials	The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the steps described:	0.001 tonnes
108-88-3	Toluene	Substituted materials	The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
108-88-3	Toluene	Substituted materials	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to steps described:	No Amount
108-88-3	Toluene	Substituted materials	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 steps described:	No Amount
108-88-3	Toluene	Substituted materials	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 steps described:	No Amount
108-88-3	Toluene	Substituted materials	The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the steps described:	No Amount
1330-20-7	Xylene (all isomers)	Substituted materials	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the steps described:	0.341 tonnes
1330-20-7	Xylene (all isomers)	Substituted materials	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
1330-20-7	Xylene (all isomers)	Substituted materials	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the steps described:	0.349 tonnes
1330-20-7	Xylene (all isomers)	Substituted materials	The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the steps described:	0.001 tonnes
1330-20-7	Xylene (all isomers)	Substituted materials	The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the steps described:	No Amount
1330-20-7	Xylene (all isomers)	Substituted materials	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to steps described:	No Amount
1330-20-7	Xylene (all isomers)	Substituted materials	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 steps described:	No Amount
1330-20-7	Xylene (all isomers)	Substituted materials	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 steps described:	No Amount
1330-20-7	Xylene (all isomers)	Substituted materials	The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the steps described:	No Amount

Progress on TRA Plan - Additional Actions

CAS RN	Substance Name	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
75-07-0	Acetaldehyde	No		
71-43-2	Benzene	No		
630-08-0	Carbon monoxide	No		
98-82-8	Cumene	No		
110-82-7	Cyclohexane	No		

CAS RN	Substance Name	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
64-17-5	Ethanol	No		
141-78-6	Ethyl acetate	No		
100-41-4	Ethylbenzene	No		
50-00-0	Formaldehyde	No		
67-56-1	Methanol	No		
1634-04-4	Methyl tert-butyl ether	No		
110-54-3	n-Hexane	No		
11104-93-1	Nitrogen oxides (expressed as NO2)	No		
NA - 35	Pentane (all isomers)	No		
NA - M09	PM10 - Particulate Matter <= 10 Microns	No		
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No		
7664-93-9	Sulphuric acid	No		
108-88-3	Toluene	No		
NA - M08	Total Particulate Matter	No		
1330-20-7	Xylene (all isomers)	No		

Progress on TRA Plan - Reductions due to additional actions taken

CAS RN	Substance Name	Reductions due to additional actions taken	Quantity
75-07-0	Acetaldehyde	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.	
75-07-0	Acetaldehyde	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.	
75-07-0	Acetaldehyde	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions.	
75-07-0	Acetaldehyde	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.	
75-07-0	Acetaldehyde	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.	
75-07-0	Acetaldehyde	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions.	
75-07-0	Acetaldehyde	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.	
75-07-0	Acetaldehyde	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.	
75-07-0	Acetaldehyde	The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the additional actions.	
71-43-2	Benzene	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.	
71-43-2	Benzene	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.	
71-43-2	Benzene	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions.	
71-43-2	Benzene	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.	
71-43-2	Benzene	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.	
71-43-2	Benzene	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions.	
71-43-2	Benzene	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.	
71-43-2	Benzene	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.	
71-43-2	Benzene	The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the additional actions.	
630-08-0	Carbon monoxide	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.	
630-08-0	Carbon monoxide	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.	

CAS RN	Substance Name	Reductions due to additional actions taken	Quantity
NA - M08	Total Particulate Matter	The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the additional actions.	
1330-20-7	Xylene (all isomers)	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.	
1330-20-7	Xylene (all isomers)	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.	
1330-20-7	Xylene (all isomers)	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions.	
1330-20-7	Xylene (all isomers)	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.	
1330-20-7	Xylene (all isomers)	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.	
1330-20-7	Xylene (all isomers)	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions.	
1330-20-7	Xylene (all isomers)	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.	
1330-20-7	Xylene (all isomers)	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.	
1330-20-7	Xylene (all isomers)	The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the additional actions.	

Progress on TRA Plan - Amendments

CAS RN	Substance Name	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
75-07-0	Acetaldehyde	No		
71-43-2	Benzene	No		
630-08-0	Carbon monoxide	No		
98-82-8	Cumene	No		
110-82-7	Cyclohexane	No		
64-17-5	Ethanol	No		
141-78-6	Ethyl acetate	No		
100-41-4	Ethylbenzene	No		
50-00-0	Formaldehyde	No		
67-56-1	Methanol	No		
1634-04-4	Methyl tert-butyl ether	No		
110-54-3	n-Hexane	No		
11104-93-1	Nitrogen oxides (expressed as NO2)	No		
NA - 35	Pentane (all isomers)	No		
NA - M09	PM10 - Particulate Matter <= 10 Microns	No		
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No		
7664-93-9	Sulphuric acid	No		
108-88-3	Toluene	No		
NA - M08	Total Particulate Matter	No		
1330-20-7	Xylene (all isomers)	No		

Report Submission and Electronic Certification

NPRI - Electronic Statement of Certification

Specify the language of correspondence _____

English

Comments (optional) _____

I hereby certify that I have exercised due diligence to ensure that the submitted information is true and complete. The amounts and values for the facility(ies) identified below are accurate, based on reasonable estimates using available data. The data for the facility(ies) that I represent are

hereby submitted to the programs identified below using the Single Window Reporting Application.

I also acknowledge that the data will be made public.

Note: Only the person identified as the Certifying Official or the authorized delegate should submit the report(s) identified below.

Company Name

GreenField Global Inc.

Certifying Official (or authorized delegate)

Dianne Schenk

Report Submitted by

Brendan Bland

I, the Certifying Official or authorized delegate, agree with the statements above and acknowledge that by pressing the "Submit Report(s)" button, I am electronically certifying and submitting the facility report(s) for the identified company to its affiliated programs.

ON MOE TRA - Electronic Certification Statement

Annual Report Certification Statement

As of 24/05/2018, I, Brendan Bland, certify that I have read the reports on the toxic substance reduction plans for the toxic substances referred to below and am familiar with their contents, and to my knowledge the information contained in the reports is factually accurate and the reports comply with the Toxics Reduction Act, 2009 and Ontario Regulation 455/09 (General) made under that Act.

TRA Substance List

CAS RN	Substance Name
75-07-0	Acetaldehyde
71-43-2	Benzene
630-08-0	Carbon monoxide
98-82-8	Cumene
110-82-7	Cyclohexane
64-17-5	Ethanol
141-78-6	Ethyl acetate
100-41-4	Ethylbenzene
50-00-0	Formaldehyde
67-56-1	Methanol
1634-04-4	Methyl tert-butyl ether
110-54-3	n-Hexane
11104-93-1	Nitrogen oxides (expressed as NO2)
NA - 35	Pentane (all isomers)
NA - M09	PM10 - Particulate Matter <= 10 Microns
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns
7664-93-9	Sulphuric acid
108-88-3	Toluene
NA - M08	Total Particulate Matter
1330-20-7	Xylene (all isomers)

Exit Record Certification Statement

As of 24/05/2018, I Brendan Bland, certify that I have read the records created for the purposes of section 11.2 of Ontario Regulation 455/09 (General) made under the Toxics Reductions Act, (2009) in respect of the use and creation of the toxic substances referred to below at Johnstown and am familiar with their contents and to my knowledge they are factually accurate.

TRA Exit Record Substances

CAS RN	Substance Name
91-20-3	Naphthalene
NA - 16	Ammonia (total)

Company Name

GreenField Global Inc.

Highest Ranking Employee

Brendan Bland

Report Submitted by

Brendan Bland

Website address

I, the highest ranking employee, agree with the certification statement(s) above and acknowledge that by checking the box I am electronically signing the statement(s). I also acknowledge that by pressing the 'Submit Report(s)' button I am submitting the facility record(s)/report(s) for the identified facility to the Director under the Toxics Reduction Act, 2009. I also acknowledge that the Toxics Reduction Act, 2009 and Ontario Regulation 455/09 provide the authority to the Director under the Act to make certain information as specified in subsection 27(5) of Ontario Regulation 455/09 available to the public.

Submitted Report

Period	Submission Date	Facility Name	Province	City	Programs
2017	24/05/2018	Johnstown	Ontario	Johnstown	NPRI,ON MOE TRA

Note: If there is a change in the contact information for the facility, a change in the owner or operator of the facility, if operations at the facility are terminated, or if information submitted for any previous year was mistaken or inaccurate, please update this information through SWIM or by contacting the National Pollutant Release Inventory directly.

Version: 3.14.0



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