

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:	Update 1 - Submitted
Modified Date/Time:	09/11/2018 11:15 AM
Report Update Comments:	Correction to Xylene creation.

Company and Facility Details

Company Name:	GreenField Specialty Alcohols Inc.
Business Number:	130336852
Mailing Address:	Address Line 1: 98 Walker Drive City, Province/Territory, Postal Code: Brampton Ontario L6T 4H6 Country: Canada
Facility Name:	Chatham
NAICS Code:	325190
NPRI ID:	5739
Physical Address:	Address Line 1: 275 Bloomfield Road City, Province/Territory, Postal Code: Chatham Ontario N7M5J5 Country: Canada Latitude: 42.3839 Longitude: -82.2218 UTM Zone: 17 UTM Easting: 399423 UTM Northing: 4693124

Permits

Number or Permit Number:	9242-7MGJNK
Government Department, Agency, or Program Name:	Ontario Industrial Sewage Works C of A.
Number or Permit Number:	1031-79EJGF
Government Department, Agency, or Program Name:	Ontario Air/Noise permit
Number or Permit Number:	ON1524202
Government Department, Agency, or Program Name:	Ontario MOE - Hazardous Waste Generator Number

Contacts Details

Contact Type	Technical Contact, Certifying Official, Person who prepared the report, Person who coordinated the preparation of the Toxics Reduction Plan
Name:	Dianne Schenk

Position: EH&S Manager

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Contact Type: Highest Ranking Employee

Name: Veselin Nikolov

Position: Plant Manager

Telephone: 5194361555

Extension: 8671

Email: veselin.nikolov@greenfield.com

Mailing Address: Address Line 1: 275 Bloomfield Drive
City, Province/Territory, Postal Code: Chatham Ontario N7M 0N6
Country: Canada

General Information

Number of employees: 70

Activities for Which the 20,000-Hour Employee Threshold Does Not Apply: None of the above

Activities Relevant to Reporting of 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	4.9750	N/A	N/A	N/A	tonnes
NA - 16	Ammonia (total)	2.8100	N/A	N/A	N/A	tonnes
71-43-2	Benzene	0.7230	N/A	N/A	N/A	tonnes
630-08-0	Carbon monoxide	252.0640	N/A	N/A	N/A	tonnes
98-82-8	Cumene	N/A	N/A	N/A	N/A	tonnes
110-82-7	Cyclohexane	0.0200	N/A	N/A	N/A	tonnes
100-41-4	Ethylbenzene	0.3310	N/A	N/A	N/A	tonnes
67-56-1	Methanol	1.4660	N/A	N/A	N/A	tonnes
110-54-3	n-Hexane	0.4940	N/A	N/A	N/A	tonnes
11104-93-1	Nitrogen oxides (expressed as NO2)	174.1810	N/A	N/A	N/A	tonnes
NA - M09	PM10 Particulate Matter <= 10 Microns	34.4750	N/A	N/A	N/A	tonnes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	6.9560	N/A	N/A	N/A	tonnes

CAS RN	Substance Name	Releases	Releases (Speciated VOCs)	Disposals	Recycling	Unit
7664-93-9	Sulphuric acid	N/A	N/A	N/A	N/A	tonnes
108-88-3	Toluene	0.4030	N/A	N/A	N/A	tonnes
NA - M08	Total Particulate Matter	83.8420	N/A	N/A	N/A	tonnes
NA - M16	Volatile Organic Compounds (VOCs)	118.7820	100.7030	N/A	N/A	tonnes
1330-20-7	Xylene (all isomers)	2.4860	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)	Yes	Yes		No
71-43-2	Benzene	Yes	Yes		No
630-08-0	Carbon monoxide	Yes	Yes		No
98-82-8	Cumene	No	No		No
110-82-7	Cyclohexane	Yes	Yes		No
100-41-4	Ethylbenzene	Yes	Yes		No
67-56-1	Methanol	Yes	Yes		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

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
98-82-8	Cumene	Facility has permanently ceased to use or create the substance	Switching from regular gasoline as a denaturant to natural gasoline, as per Excise Canada, which does not contain cumene.	Information and quantifications were made from the SDS for natural gasoline.

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)	Yes	No	No
71-43-2	Benzene	Yes	Yes	No
98-82-8	Cumene	No	No	No
110-82-7	Cyclohexane	Yes	No	No
100-41-4	Ethylbenzene	Yes	Yes	No
67-56-1	Methanol	Yes	No	No
110-54-3	n-Hexane	Yes	No	No
7664-93-9	Sulphuric acid	No	No	No
108-88-3	Toluene	Yes	No	No
NA - M16	Volatile Organic Compounds (VOCs)		No	Yes
1330-20-7	Xylene (all isomers)	Yes	No	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
67-56-1	Methanol	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 by-product		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	
67-56-1	Methanol	As an impurity	As a formulation component	
110-54-3	n-Hexane	As a by-product	As a formulation component	
7664-93-9	Sulphuric acid			As a physical or chemical processing aid
108-88-3	Toluene	As an impurity	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	4.975 tonnes	Yes
75-07-0	Acetaldehyde	Contained in Product	3.859 tonnes	Yes
NA - 16	Ammonia (total)	Use	960.102 tonnes	Yes
NA - 16	Ammonia (total)	Creation	2.810 tonnes	Yes
NA - 16	Ammonia (total)	Contained in Product	0 tonnes	No
71-43-2	Benzene	Use	7.656 tonnes	Yes
71-43-2	Benzene	Creation	0 tonnes	No
71-43-2	Benzene	Contained in Product	6.933 tonnes	Yes
630-08-0	Carbon monoxide	Use	0 tonnes	No
630-08-0	Carbon monoxide	Creation	252.064 tonnes	Yes
630-08-0	Carbon monoxide	Contained in Product		
110-82-7	Cyclohexane	Use	30.625 tonnes	Yes
110-82-7	Cyclohexane	Creation	0.020 tonnes	No
110-82-7	Cyclohexane	Contained in Product	30.6 tonnes	Yes
100-41-4	Ethylbenzene	Use	0.0264 tonnes	Yes
100-41-4	Ethylbenzene	Creation	0.202 tonnes	Yes
100-41-4	Ethylbenzene	Contained in Product	0.0264 tonnes	Yes
67-56-1	Methanol	Use	1.0559 tonnes	Yes
67-56-1	Methanol	Creation	191.9 tonnes	Yes
67-56-1	Methanol	Contained in Product	191.9 tonnes	Yes
110-54-3	n-Hexane	Use	766 tonnes	Yes
110-54-3	n-Hexane	Creation	0.45 tonnes	Yes
110-54-3	n-Hexane	Contained in Product	766 tonnes	Yes
11104-93-1	Nitrogen oxides (expressed as NO2)	Use	0 tonnes	No
11104-93-1	Nitrogen oxides (expressed as NO2)	Creation	174.169 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	34.475 tonnes	Yes
NA - M09	PM10 - Particulate Matter <= 10 Microns	Contained in Product		
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Use	0 tonnes	No
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Creation	6.956 tonnes	Yes

CAS RN	Substance Name	Use, Creation, Contained in Product	Quantity	Use ranges for public reporting
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Contained in Product		
7664-93-9	Sulphuric acid	Use	1498.7 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	5.104 tonnes	Yes
108-88-3	Toluene	Creation	0.399 tonnes	Yes
108-88-3	Toluene	Contained in Product	4.701 tonnes	Yes
NA - M08	Total Particulate Matter	Use	0 tonnes	No
NA - M08	Total Particulate Matter	Creation	83.842 tonnes	Yes
NA - M08	Total Particulate Matter	Contained in Product		
NA - M16	Volatile Organic Compounds (VOCs)	Use	1507.5 tonnes	Yes
NA - M16	Volatile Organic Compounds (VOCs)	Creation	355.98 tonnes	Yes
NA - M16	Volatile Organic Compounds (VOCs)	Contained in Product		
1330-20-7	Xylene (all isomers)	Use	8.665 tonnes	Yes
1330-20-7	Xylene (all isomers)	Creation	0.023 tonnes	Yes
1330-20-7	Xylene (all isomers)	Contained in Product	8.366 tonnes	Yes

TRA Quantifications - VOC Breakdown List

CAS RN	Substance Name	Use, Creation, Contained in Product	Quantity
71-43-2	Benzene	Use	7.656 tonnes
NA - 24	Butane (all isomers)	Use	19 tonnes
NA - 24	Butane (all isomers)	Creation	1.777 tonnes
64-17-5	Ethanol	Creation	187 tonnes
141-78-6	Ethyl acetate	Use	19.9 tonnes
67-56-1	Methanol	Use	1.056 tonnes
67-56-1	Methanol	Creation	165 tonnes
110-54-3	n-Hexane	Use	680.5 tonnes
NA - 35	Pentane (all isomers)	Use	765.6 tonnes
NA - 35	Pentane (all isomers)	Creation	2.2 tonnes
108-88-3	Toluene	Use	5.104 tonnes
1330-20-7	Xylene (all isomers)	Use	8.665 tonnes

TRA Quantifications - Total Speciated VOCs

Use, Creation, Contained in Product	Quantity
Use	1507.481 tonnes
Creation	355.977 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
NA - 16	Ammonia (total)					No
71-43-2	Benzene					No
630-08-0	Carbon monoxide					No
110-82-7	Cyclohexane					No
100-41-4	Ethylbenzene					No
67-56-1	Methanol					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

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
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	M3 - Source Testing		0 tonnes
75-07-0	Acetaldehyde	Fugitive Releases	O - Engineering Estimates		0.564 tonnes
75-07-0	Acetaldehyde	Other Non-point Releases	M3 - Source Testing		4.411 tonnes
NA - 16	Ammonia (total)	Stack or Point Releases	E2 - Published Emission Factors		2.810 tonnes
630-08-0	Carbon monoxide	Stack or Point Releases	E2 - Published Emission Factors		245.895 tonnes
630-08-0	Carbon monoxide	Other Non-point Releases	O - Engineering Estimates		6.169 tonnes
110-82-7	Cyclohexane	Storage or Handling Releases	O - Engineering Estimates		0.02 tonnes
67-56-1	Methanol	Stack or Point Releases	O - Engineering Estimates		1.424 tonnes
67-56-1	Methanol	Storage or Handling Releases	O - Engineering Estimates		0.01 tonnes
67-56-1	Methanol	Fugitive Releases	O - Engineering Estimates		0.032 tonnes
110-54-3	n-Hexane	Stack or Point Releases	E2 - Published Emission Factors		0.044 tonnes
110-54-3	n-Hexane	Storage or Handling Releases	O - Engineering Estimates		0.450 tonnes
11104-93-1	Nitrogen oxides (expressed as NO2)	Stack or Point Releases	E2 - Published Emission Factors		153.102 tonnes
11104-93-1	Nitrogen oxides (expressed as NO2)	Fugitive Releases	O - Engineering Estimates		0.379 tonnes
11104-93-1	Nitrogen oxides (expressed as NO2)	Other Non-point Releases	E2 - Published Emission Factors		20.7 tonnes
NA - M09	PM10 - Particulate Matter <= 10 Microns	Stack or Point Releases	O - Engineering Estimates		26.270 tonnes
NA - M09	PM10 - Particulate Matter <= 10 Microns	Storage or Handling Releases	E2 - Published Emission Factors		2.692 tonnes
NA - M09	PM10 - Particulate Matter <= 10 Microns	Fugitive Releases	E2 - Published Emission Factors		5.513 tonnes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Stack or Point Releases	M3 - Source Testing		3.284 tonnes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Storage or Handling Releases	E2 - Published Emission Factors		1.281 tonnes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Fugitive Releases	E2 - Published Emission Factors		2.391 tonnes
108-88-3	Toluene	Stack or Point Releases	M3 - Source Testing		0.390 tonnes
108-88-3	Toluene	Storage or Handling Releases	O - Engineering Estimates		0.013 tonnes
NA - M08	Total Particulate Matter	Stack or Point Releases	M3 - Source Testing		66.03 tonnes
NA - M08	Total Particulate Matter	Storage or Handling Releases	E2 - Published Emission Factors		16.796 tonnes
NA - M08	Total Particulate Matter	Fugitive Releases	E2 - Published Emission Factors		1.016 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	Stack or Point Releases	M3 - Source Testing		9.194 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	Storage or Handling Releases	O - Engineering Estimates		76.722 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	Fugitive Releases	O - Engineering Estimates		13.777 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	Other Non-point Releases	O - Engineering Estimates		19.089 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	Other Sources - Speciated VOCs	NA - Not Applicable		113.564 tonnes
1330-20-7	Xylene (all isomers)	Stack or Point Releases	O - Engineering Estimates		0.023 tonnes
1330-20-7	Xylene (all isomers)	Storage or Handling Releases	M3 - Source Testing		2.463 tonnes

On-site Releases - Releases to air - Total

CAS RN	Substance Name	Total - Releases to Air
75-07-0	Acetaldehyde	4.975 tonnes
NA - 16	Ammonia (total)	2.810 tonnes
630-08-0	Carbon monoxide	252.064 tonnes
110-82-7	Cyclohexane	0.02 tonnes
67-56-1	Methanol	1.466 tonnes
110-54-3	n-Hexane	0.494 tonnes
11104-93-1	Nitrogen oxides (expressed as NO2)	174.181 tonnes
NA - M09	PM10 - Particulate Matter <= 10 Microns	34.475 tonnes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	6.956 tonnes
108-88-3	Toluene	0.403 tonnes
NA - M08	Total Particulate Matter	83.842 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	118.782 tonnes
1330-20-7	Xylene (all isomers)	2.486 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)	dry distillers grains dryer stack	17.763 tonnes	76.2000	1.7000	21.000	80.000

CAS RN	Substance Name	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
NA - M10	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	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	Other (specify in On-site Releases comment field)	Remodelling completed.
110-82-7	Cyclohexane	No significant change (i.e. < 10%) or no change	
11104-93-1	Nitrogen oxides (expressed as NO2)	Other (specify in On-site Releases comment field)	Remodelling completed
1330-20-7	Xylene (all isomers)	Other (specify in On-site Releases comment field)	Change in quantity of denaturant used.
630-08-0	Carbon monoxide	No significant change (i.e. < 10%) or no change	
67-56-1	Methanol	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	Pollution prevention activities	
7664-93-9	Sulphuric acid	Pollution prevention activities	
98-82-8	Cumene	Other (specify in On-site Releases comment field)	Cumene is not present in the natural gasoline that is utilized as a denaturant.
NA - 16	Ammonia (total)	No significant change (i.e. < 10%) or no change	Used 960.1 tonnes of 100% ammonia for pH and nutrient requirements of process and loss was zero. Emission is based on ammonia release from combustion of Natural Gas.
NA - M08	Total Particulate Matter	Changes in production levels	
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	
67-56-1	Methanol		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	
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	

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	

CAS RN	Substance Name	Reasons Why Substance Was Recycled	Reasons for Changes in Quantities Recycled from Previous Year	Comments
1330-20-7	Xylene (all isomers)		No significant change (i.e. < 10%) or no change	
67-56-1	Methanol		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	
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	4.975 tonnes	5.149 tonnes	2016	-0.174	-3.38
75-07-0	Acetaldehyde	No	Contained in Product	3.859 tonnes	2.951 tonnes	2016	0.908	30.77
NA - 16	Ammonia (total)	No	Enters the facility (Use)	960.102 tonnes	937.259 tonnes	2016	22.843	2.44
NA - 16	Ammonia (total)	No	Creation	2.810 tonnes	2.908 tonnes	2016	-0.098	-3.37
NA - 16	Ammonia (total)	No	Contained in Product	0 tonnes	0 tonnes	2016	0	
71-43-2	Benzene	No	Enters the facility (Use)	7.656 tonnes	9.621 tonnes	2016	-1.965	-20.42
71-43-2	Benzene	No	Creation	0 tonnes	0 tonnes	2016	0	
71-43-2	Benzene	No	Contained in Product	6.933 tonnes	9.621 tonnes	2016	-2.688	-27.94
71-43-2	Benzene	Yes	Enters the facility (Use)	7.656 tonnes	9.621 tonnes	2016	-1.965	-20.42
NA - 24	Butane (all isomers)	Yes	Enters the facility (Use)	19 tonnes	0 tonnes	2016	19	100
NA - 24	Butane (all isomers)	Yes	Creation	1.777 tonnes	1.8 tonnes	2016	-0.023	-1.28
630-08-0	Carbon monoxide	No	Enters the facility (Use)	0 tonnes	0 tonnes	2016	0	
630-08-0	Carbon monoxide	No	Creation	252.064 tonnes	260.848 tonnes	2016	-8.784	-3.37
110-82-7	Cyclohexane	No	Enters the facility (Use)	30.625 tonnes	38.482 tonnes	2016	-7.857	-20.42
110-82-7	Cyclohexane	No	Creation	0.020 tonnes	0.21 tonnes	2016	-0.190	-90.48
110-82-7	Cyclohexane	No	Contained in Product	30.6 tonnes	38.461 tonnes	2016	-7.861	-20.44
64-17-5	Ethanol	Yes	Creation	187 tonnes	189 tonnes	2016	-2	-1.06
141-78-6	Ethyl acetate	Yes	Enters the facility (Use)	19.9 tonnes	86.099 tonnes	2016	-66.199	-76.89
100-41-4	Ethylbenzene	No	Enters the facility (Use)	0.0264 tonnes	0.417 tonnes	2016	-0.3906	-93.67
100-41-4	Ethylbenzene	No	Creation	0.202 tonnes	0 tonnes	2016	0.202	100
100-41-4	Ethylbenzene	No	Contained in Product	0.0264 tonnes	0.414 tonnes	2016	-0.3876	-93.62
67-56-1	Methanol	No	Enters the facility (Use)	1.0559 tonnes	16.693 tonnes	2016	-15.6371	-93.67
67-56-1	Methanol	No	Creation	191.9 tonnes	198.6 tonnes	2016	-6.7	-3.37
67-56-1	Methanol	No	Contained in Product	191.9 tonnes	198.6 tonnes	2016	-6.7	-3.37
67-56-1	Methanol	Yes	Enters the facility (Use)	1.056 tonnes	16.693 tonnes	2016	-15.637	-93.67
67-56-1	Methanol	Yes	Creation	165 tonnes	170 tonnes	2016	-5	-2.94
110-54-3	n-Hexane	No	Enters the facility (Use)	766 tonnes	962 tonnes	2016	-196	-20.37
110-54-3	n-Hexane	No	Creation	0.45 tonnes	0.46 tonnes	2016	-0.01	-2.17
110-54-3	n-Hexane	No	Contained in Product	766 tonnes	962 tonnes	2016	-196	-20.37
110-54-3	n-Hexane	Yes	Enters the facility (Use)	680.5 tonnes	962 tonnes	2016	-281.5	-29.26
11104-93-1	Nitrogen oxides (expressed as NO2)	No	Enters the facility (Use)	0 tonnes	0 tonnes	2016	0	

CAS RN	Substance Name	Is Breakdown	Category	Quantity	Last Reported Quantity	Reporting Period of Last Reported Quantity	Change	% Change
11104-93-1	Nitrogen oxides (expressed as NO2)	No	Creation	174.169 tonnes	153.481 tonnes	2016	20.688	13.48
NA - 35	Pentane (all isomers)	Yes	Enters the facility (Use)	765.6 tonnes	962 tonnes	2016	-196.4	-20.42
NA - 35	Pentane (all isomers)	Yes	Creation	2.2 tonnes	2.3 tonnes	2016	-0.1	-4.35
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	34.475 tonnes	35.048 tonnes	2016	-0.573	-1.63
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	6.956 tonnes	7.199 tonnes	2016	-0.243	-3.38
7664-93-9	Sulphuric acid	No	Enters the facility (Use)	1498.7 tonnes	1569.7 tonnes	2016	-71.0	-4.52
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)	5.104 tonnes	6.414 tonnes	2016	-1.310	-20.42
108-88-3	Toluene	No	Creation	0.399 tonnes	0.413 tonnes	2016	-0.014	-3.39
108-88-3	Toluene	No	Contained in Product	4.701 tonnes	6.409 tonnes	2016	-1.708	-26.65
108-88-3	Toluene	Yes	Enters the facility (Use)	5.104 tonnes	6.414 tonnes	2016	-1.310	-20.42
NA - M08	Total Particulate Matter	No	Enters the facility (Use)	0 tonnes	0 tonnes	2016	0	
NA - M08	Total Particulate Matter	No	Creation	83.842 tonnes	106.572 tonnes	2016	-22.730	-21.33
1330-20-7	Xylene (all isomers)	No	Enters the facility (Use)	8.665 tonnes	13.193 tonnes	2016	-4.528	-34.32
1330-20-7	Xylene (all isomers)	No	Creation	0.023 tonnes	0.027 tonnes	2016	-0.004	-14.81
1330-20-7	Xylene (all isomers)	No	Contained in Product	8.366 tonnes	12.884 tonnes	2016	-4.518	-35.07
1330-20-7	Xylene (all isomers)	Yes	Enters the facility (Use)	8.665 tonnes	13.193 tonnes	2016	-4.528	-34.32

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	Implementation of toxics reduction option(s)	
NA - 16	Ammonia (total)	No reasons - quantities approximately the same	
71-43-2	Benzene	Decrease in production levels	
630-08-0	Carbon monoxide	No reasons - quantities approximately the same	
110-82-7	Cyclohexane	Decrease in production levels	
100-41-4	Ethylbenzene	Other	Remodelling completed.
67-56-1	Methanol	Decrease in production levels	
110-54-3	n-Hexane	Decrease in production levels	
11104-93-1	Nitrogen oxides (expressed as NO2)	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	
7664-93-9	Sulphuric acid	Implementation of toxics reduction option(s)	
108-88-3	Toluene	Decrease in production levels	
NA - M08	Total Particulate Matter	Decrease in production levels	
NA - M16	Volatile Organic Compounds (VOCs)	Decrease in production levels	
1330-20-7	Xylene (all isomers)	Other	Decrease in denaturant usage.

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	4.975 tonnes	5.149 tonnes	2016	-0.174	-3.38
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	

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 All Media	0 tonnes	0 tonnes	2014	0	
NA - 16	Ammonia (total)	No	Total Releases to Air	2.810 tonnes	2.908 tonnes	2016	-0.098	-3.37
NA - 16	Ammonia (total)	No	Total Releases to Water	0 tonnes	0 tonnes	2016	0	
NA - 16	Ammonia (total)	No	Total Releases to Land	0 tonnes	0 tonnes	2016	0	
NA - 16	Ammonia (total)	No	Total Releases to All Media	0 tonnes	0 tonnes	2012	0	
71-43-2	Benzene	No	Total Releases to Air	0 tonnes	0 tonnes	2014	0	
71-43-2	Benzene	No	Total Releases to Water	0 tonnes	0 tonnes	2014	0	
71-43-2	Benzene	No	Total Releases to Land	0 tonnes	0 tonnes	2014	0	
71-43-2	Benzene	No	Total Releases to All Media	0.723 tonnes	0.748 tonnes	2016	-0.025	-3.34
630-08-0	Carbon monoxide	No	Total Releases to Air	252.064 tonnes	254.464 tonnes	2016	-2.400	-0.94
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	0 tonnes	2012	0	
110-82-7	Cyclohexane	No	Total Releases to Air	0.02 tonnes	0.021 tonnes	2016	-0.001	-4.76
110-82-7	Cyclohexane	No	Total Releases to Water	0 tonnes	0 tonnes	2016	0	
110-82-7	Cyclohexane	No	Total Releases to Land	0 tonnes	0 tonnes	2016	0	
110-82-7	Cyclohexane	No	Total Releases to All Media	0 tonnes	0 tonnes	2014	0	
64-17-5	Ethanol	Yes	Total Releases to Air	95.737 tonnes	99.073 tonnes	2016	-3.336	-3.37
141-78-6	Ethyl acetate	Yes	Total Releases to Air	1.777 tonnes	1.798 tonnes	2016	-0.021	-1.17
100-41-4	Ethylbenzene	No	Total Releases to Air	0 tonnes	0 tonnes	2014	0	
100-41-4	Ethylbenzene	No	Total Releases to Water	0 tonnes	0 tonnes	2014	0	
100-41-4	Ethylbenzene	No	Total Releases to Land	0 tonnes	0 tonnes	2014	0	
100-41-4	Ethylbenzene	No	Total Releases to All Media	0.331 tonnes	0.343 tonnes	2016	-0.012	-3.50
67-56-1	Methanol	No	Total Releases to Air	1.466 tonnes	1.517 tonnes	2016	-0.051	-3.36
67-56-1	Methanol	No	Total Releases to Water	0 tonnes	0 tonnes	2016	0	
67-56-1	Methanol	No	Total Releases to Land	0 tonnes	0 tonnes	2016	0	
67-56-1	Methanol	No	Total Releases to All Media	0 tonnes	0 tonnes	2014	0	
67-56-1	Methanol	Yes	Total Releases to Air	1.466 tonnes	1.517 tonnes	2016	-0.051	-3.36
110-54-3	n-Hexane	No	Total Releases to Air	0.494 tonnes	1.082 tonnes	2016	-0.588	-54.34
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 tonnes	2014	0	
11104-93-1	Nitrogen oxides (expressed as NO2)	No	Total Releases to Air	174.181 tonnes	153.481 tonnes	2016	20.700	13.49
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	0 tonnes	2014	0	
NA - M09	PM10 - Particulate Matter <= 10 Microns	No	Total Releases to Air	34.475 tonnes	35.048 tonnes	2016	-0.573	-1.63

CAS RN	Substance Name	Is Breakdown	Category	Quantity	Last Reported Quantity	Reporting Period of Last Reported Quantity	Change	% Change
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	0 tonnes	2012	0	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No	Total Releases to Air	6.956 tonnes	7.199 tonnes	2016	-0.243	-3.38
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	0 tonnes	2014	0	
74-98-6	Propane	Yes	Total Releases to Air	1.333 tonnes	1.379 tonnes	2015	-0.046	-3.34
108-88-3	Toluene	No	Total Releases to Air	0.403 tonnes	0.4633 tonnes	2016	-0.0603	-13.02
108-88-3	Toluene	No	Total Releases to Water	0 tonnes	0 tonnes	2016	0	
108-88-3	Toluene	No	Total Releases to Land	0 tonnes	0 tonnes	2015	0	
108-88-3	Toluene	No	Total Releases to All Media	0 tonnes	0 tonnes	2014	0	
108-88-3	Toluene	Yes	Total Releases to Air	0.390 tonnes	0.4633 tonnes	2016	-0.0733	-15.82
NA - M08	Total Particulate Matter	No	Total Releases to Air	83.842 tonnes	106.572 tonnes	2016	-22.730	-21.33
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	0 tonnes	2014	0	
1330-20-7	Xylene (all isomers)	No	Total Releases to Air	2.486 tonnes	2.572 tonnes	2016	-0.086	-3.34
1330-20-7	Xylene (all isomers)	No	Total Releases to Water	0 tonnes	0 tonnes	2016	0	
1330-20-7	Xylene (all isomers)	No	Total Releases to Land	0 tonnes	0 tonnes	2016	0	
1330-20-7	Xylene (all isomers)	No	Total Releases to All Media	0 tonnes	0 tonnes	2014	0	

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

CAS RN	Substance Name	Reason(s) for Change	Other Reason
75-07-0	Acetaldehyde	Implementation of toxics reduction option(s)	
NA - 16	Ammonia (total)	No reasons - quantities approximately the same	
71-43-2	Benzene	No reasons - quantities approximately the same	
630-08-0	Carbon monoxide	No reasons - quantities approximately the same	
110-82-7	Cyclohexane	No reasons - quantities approximately the same	
100-41-4	Ethylbenzene	No reasons - quantities approximately the same	
67-56-1	Methanol	No reasons - quantities approximately the same	
110-54-3	n-Hexane	Decrease in production levels	
11104-93-1	Nitrogen oxides (expressed as NO2)	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	Decrease in production levels	
NA - M08	Total Particulate Matter	Decrease in production levels	
NA - M16	Volatile Organic Compounds (VOCs)	Decrease in production levels	
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 for another government jurisdiction (i.e. other Federal government department, province, municipality). Specify name in comments field below.

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).

EC E2 plan related to use of aqueous (30%) ammonia.

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	GFE, Chatham Facility intends to reduce the creation of Acetaldehyde by 1%.
NA - 16	Ammonia (total)	GFSA, Chatham Facility intends to reduce the use of ammonia through product design and equipment or process modification.
71-43-2	Benzene	GFE, Chatham Facility intends to reduce the use of Benzene by 67%.
NA - 24	Butane (all isomers)	It has been determined that it is not technically and economically feasible at this time to reduce the use of butane. Even though Greenfield Specialty Alcohols Inc., Chatham Facility has decided not to implement any reduction options at this time it will revisit it in the future.
630-08-0	Carbon monoxide	It has been determined that it is not technically and economically feasible at this time to reduce the creation of carbon monoxide. Even though GFSA Chatham facility has decided not to implement any reduction options at this time it will revisit it in the future.
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 Specialty Alcohols Inc., Chatham Facility has decided not to implement any reduction options at this time it will revisit it in the future.
64-17-5	Ethanol	While GFSA, Chatham Facility does not intend to reduce the creation of ethyl alcohol, any opportunities for improved efficiencies and optimization will be reviewed and considered.
141-78-6	Ethyl acetate	It has been determined that it is not technically and economically feasible at this time to reduce the creation of ethyl acetate. Even though GFSA Chatham facility has decided not to implement any reduction options at this time it will revisit it in the future.
100-41-4	Ethylbenzene	GFE, Chatham Facility intends to reduce the use of Ethylbenzene by 100%.
67-56-1	Methanol	While GFE, Chatham Facility does not intend to reduce the creation of methanol at the present time, any opportunities for reduction will be reviewed and considered.
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 n-Hexane. Even though GFSA Chatham facility 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)	It has been determined that it is not technically and economically feasible at this time to reduce the creation of nitrogen oxides. Even though GFSA Chatham facility has decided not to implement any reduction options at this time it will revisit it in the future.
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 Specialty Alcohols Inc., Chatham Facility 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	GFSA, Chatham Facility intends to reduce the creation of Particulate Matter 10 microns through a new leak detection program.
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	GFSA, Chatham Facility intends to reduce the creation of Particulate Matter <= 2.5 microns through a new leak detection program.
74-98-6	Propane	It has been determined that it is not technically and economically feasible at this time to reduce the use of formaldehyde. Even though Greenfield Specialty Alcohols Inc., Chatham Facility has decided not to implement any reduction options at this time it will revisit it in the future.
7664-93-9	Sulphuric acid	GFE, Chatham Facility intends to reduce the use of sulphuric acid by 5% over a 6 year period.
108-88-3	Toluene	GFE, Chatham Facility intends to reduce the use of Toluene by 97%.
NA - M08	Total Particulate Matter	GFSA, Chatham Facility intends to reduce the creation of Total Particulate Matter through a new leak detection program.
1330-20-7	Xylene (all isomers)	GFE, Chatham Facility intends to reduce the use of Xylene by 99.4%.

Progress on TRA Plan - Use Targets

CAS RN	Substance Name	Quantity	Years	Description of Target
75-07-0	Acetaldehyde	0.21 tonnes	1	
NA - 16	Ammonia (total)	No quantity target	No timeline target	
71-43-2	Benzene	3.82 tonnes	1	
NA - 24	Butane (all isomers)	No quantity target	No timeline target	
630-08-0	Carbon monoxide	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	22.9 tonnes	1	

CAS RN	Substance Name	Quantity	Years	Description of Target
67-56-1	Methanol	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	
74-98-6	Propane	No quantity target	No timeline target	
7664-93-9	Sulphuric acid	123.1 tonnes	6	
108-88-3	Toluene	166.67 tonnes	1	- Substituting regular gasoline with natural gasoline, containing lower levels of toxic substances
NA - M08	Total Particulate Matter	No quantity target	No timeline target	
1330-20-7	Xylene (all isomers)	136.5 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	
NA - 16	Ammonia (total)	No quantity target	No timeline target	
71-43-2	Benzene	No quantity target	No timeline target	
NA - 24	Butane (all isomers)	No quantity target	No timeline target	
630-08-0	Carbon monoxide	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	
67-56-1	Methanol	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	
74-98-6	Propane	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	
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
75-07-0	Acetaldehyde	Modified equipment, layout or piping	Continued corn oil extraction process to reduce throughput to dryers where acetaldehyde is created.	Continued corn oil extraction process to reduce throughput to dryers where acetaldehyde is created.	Corn oil extraction equipment has been installed and operational as per plan schedule.	Corn oil extraction equipment has been installed and operational as per plan schedule.
NA - 16	Ammonia (total)	Other	Continued use of improved software system that manages all set points to ensure all production parameters are within tolerance and maintained.	Continued use of improved software system that manages all set points to ensure all production parameters are within tolerance and maintained.	System is running as per plan schedule.	System is running as per plan schedule.
NA - 16	Ammonia (total)	Modified design or composition	Continuing trials with new enzymes that will allow for a reduction in use of ammonia.	Continuing trials with new enzymes that will allow for a reduction in use of ammonia.	New enzymes to be trialed as they become available.	New enzymes to be trialed as they become available.
71-43-2	Benzene	Substituted materials	Continued substituting regular gasoline as a denaturant with natural gasoline, as per Excise Canada, which contains lower levels of benzene.	Continued substituting regular gasoline as a denaturant with natural gasoline, as per Excise Canada, which contains lower levels of benzene.	Switch has been made to natural gasoline as a denaturant from gasoline as per plan schedule.	Switch has been made to natural gasoline as a denaturant from gasoline as per plan schedule.
			Switched from using regular	Switched from using regular		Switch has been

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
100-41-4	Ethylbenzene	Substituted materials	gasoline as a denaturant and now using natural gasoline, as per Excise Canada, which does not contain ethylbenzene.	gasoline as a denaturant and now using natural gasoline, as per Excise Canada, which does not contain ethylbenzene.	Switch has been made from regular gasoline to natural gasoline as per plan schedule.	made from regular gasoline to natural gasoline as per plan schedule.
NA - M09	PM10 - Particulate Matter <= 10 Microns	Implemented inspection or monitoring program of potential spill or leak sources	PM program ongoing along with software system to monitor equipment performance.	PM program ongoing along with software system to monitor equipment performance.	PM program in place along with software system to monitor equipment performance as per plan schedule.	PM program in place along with software system to monitor equipment performance as per plan schedule.
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Implemented inspection or monitoring program of potential spill or leak sources	PM program for leak detection and software system for plant condition monitoring in place and operating.	PM program for leak detection and software system for plant condition monitoring in place and operating.	PM program in place along with software system to monitor equipment as per plan schedule.	PM program in place along with software system to monitor equipment as per plan schedule.
7664-93-9	Sulphuric acid	Modified design or composition	Continued use of phytase enzyme to reduce the requirement of sulphuric acid for pH control.	Continued use of an enzyme to reduce the requirement of sulphuric acid for pH control.	Continued use of the phytase enzyme along with continued trials of new enzymes as per plan schedule.	Continued use of the enzyme along with continued trials of new enzymes as per plan schedule.
108-88-3	Toluene	Substituted materials	Continued substitution of regular gasoline with natural gasoline, as a denaturant as per Excise Canada, which contains lower levels of toluene.	Continued substitution of regular gasoline with natural gasoline, as a denaturant as per Excise Canada, which contains lower levels of toluene.	Switch has been made to natural gasoline which contains lower levels of toluene as per the plan schedule.	Switch has been made to natural gasoline which contains lower levels of toluene as per the plan schedule.
NA - M08	Total Particulate Matter	Modified equipment, layout or piping	Condensing Dried Distillers Grains stack exhaust project completed.	Condensing Dried Distillers Grains stack exhaust project completed.	Stack exhaust project completed as per plan schedule.	Stack exhaust project completed as per plan schedule.
NA - M08	Total Particulate Matter	Implemented inspection or monitoring program of potential spill or leak sources	Program for leak detection in place and ongoing.	Program for leak detection in place and ongoing.	Leak detection program in place and running as per plan schedule.	Leak detection program in place and running as per plan schedule.
1330-20-7	Xylene (all isomers)	Substituted materials	Continued substituting regular gasoline with natural gasoline, as a denaturant following Excise Canada requirements, which contains lower levels of xylene.	Continued substituting regular gasoline with natural gasoline, as a denaturant following Excise Canada requirements, which contains lower levels of xylene.	Switch has been made to natural gasoline as a denaturant from gasoline as per plan schedule.	Switch has been made to natural gasoline as a denaturant from gasoline as per plan schedule.

CAS RN	Substance Name	Activity	Will the timelines in the current version of the plan will be met	Comments:
75-07-0	Acetaldehyde	Modified equipment, layout or piping	Yes	
NA - 16	Ammonia (total)	Other	Yes	
NA - 16	Ammonia (total)	Modified design or composition	Yes	
71-43-2	Benzene	Substituted materials	Yes	
100-41-4	Ethylbenzene	Substituted materials	Yes	
NA - M09	PM10 - Particulate Matter <= 10 Microns	Implemented inspection or monitoring program of potential spill or leak sources	Yes	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Implemented inspection or monitoring program of potential spill or leak sources	Yes	
7664-93-9	Sulphuric acid	Modified design or composition	Yes	
108-88-3	Toluene	Substituted materials	Yes	
NA - M08	Total Particulate Matter	Modified equipment, layout or piping	Yes	
NA - M08	Total Particulate Matter	Implemented inspection or monitoring program of potential spill or leak sources	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
75-07-0	Acetaldehyde	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
75-07-0	Acetaldehyde	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:	0.174 tonnes
75-07-0	Acetaldehyde	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
75-07-0	Acetaldehyde	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:	0.174 tonnes
75-07-0	Acetaldehyde	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
75-07-0	Acetaldehyde	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
NA - M08	Total Particulate Matter	Implemented inspection or monitoring program of potential spill or leak sources	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the steps described:	22.73 tonnes
NA - M08	Total Particulate Matter	Implemented inspection or monitoring program of potential spill or leak sources	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
NA - M08	Total Particulate Matter	Implemented inspection or monitoring program of potential spill or leak sources	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:	22.73 tonnes
NA - M08	Total Particulate Matter	Implemented inspection or monitoring program of potential spill or leak sources	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
NA - M08	Total Particulate Matter	Implemented inspection or monitoring program of potential spill or leak sources	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
NA - M08	Total Particulate Matter	Implemented inspection or monitoring program of potential spill or leak sources	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
NA - M08	Total Particulate Matter	Implemented inspection or monitoring program of potential spill or leak sources	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
NA - M08	Total Particulate Matter	Implemented inspection or monitoring program of potential spill or leak sources	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		
NA - 16	Ammonia (total)	No		
71-43-2	Benzene	No		
NA - 24	Butane (all isomers)	No		
630-08-0	Carbon monoxide	No		
110-82-7	Cyclohexane	No		
64-17-5	Ethanol	No		
141-78-6	Ethyl acetate	No		
100-41-4	Ethylbenzene	No		
67-56-1	Methanol	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		
74-98-6	Propane	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.	

CAS RN	Substance Name	Reductions due to additional actions taken	Quantity
108-88-3	Toluene	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.	
108-88-3	Toluene	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.	
108-88-3	Toluene	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions.	
108-88-3	Toluene	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.	
108-88-3	Toluene	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.	
108-88-3	Toluene	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions.	
108-88-3	Toluene	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.	
108-88-3	Toluene	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.	
108-88-3	Toluene	The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the additional actions.	
NA - M08	Total Particulate Matter	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.	
NA - M08	Total Particulate Matter	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.	
NA - M08	Total Particulate Matter	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions.	
NA - M08	Total Particulate Matter	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.	
NA - M08	Total Particulate Matter	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.	
NA - M08	Total Particulate Matter	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions.	
NA - M08	Total Particulate Matter	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.	
NA - M08	Total Particulate Matter	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.	
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		
NA - 16	Ammonia (total)	No		
71-43-2	Benzene	No		
NA - 24	Butane (all isomers)	No		
630-08-0	Carbon monoxide	No		
110-82-7	Cyclohexane	No		
64-17-5	Ethanol	No		
141-78-6	Ethyl acetate	No		
100-41-4	Ethylbenzene	No		
67-56-1	Methanol	No		

CAS RN	Substance Name	Were any amendments made to the toxic substance reduction plan during the reporting period	Description of the 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
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		
74-98-6	Propane	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 Specialty Alcohols Inc.

Certifying Official (or authorized delegate)

Dianne Schenk

Report Submitted by

Dianne Schenk

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 09/11/2018, I, Veselin Nikolov, 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

NA - 16

Ammonia (total)

71-43-2

Benzene

NA - 24

Butane (all isomers)

630-08-0

Carbon monoxide

110-82-7

Cyclohexane

64-17-5

Ethanol

141-78-6	Ethyl acetate
100-41-4	Ethylbenzene
67-56-1	Methanol
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
74-98-6	Propane
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 09/11/2018, I Veselin Nikolov, 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 Chatham and am familiar with their contents and to my knowledge they are factually accurate.

TRA Exit Record Substances

CAS RN	Substance Name
98-82-8	Cumene

Company Name

GreenField Specialty Alcohols Inc.

Highest Ranking Employee

Veselin Nikolov

Report Submitted by

Dianne Schenk

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	09/11/2018	Chatham	Ontario	Chatham	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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