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May 25, 2016

Reference No. 3126-16

Jason Dittburner
Toyota Boshoku Canada
230 Universal Road
Woodstock, ON N4S 7W3

Dear Jason,

Re: 2015 NPRI & TRA overview for Toyota Boshoku Woodstock, ON

Please find attached the following information pertaining to the 2015 NPRI & TRA reporting for Toyota Boshoku's Woodstock facility.

- Table 1: 2015 NPRI & TRA Substances Summary
- Table 2: Part 5 Speciated Substance Summary
- Table 3: 2015 NPRI Part 4 Substance Emission Summary
- Table 4: Welding Emissions
- Table 5: Emissions from Natural Gas Consumption
- Table 6: 2015 VOC Emissions
- TRA updated process flow diagrams and balance tables
- NPRI/TRA Online Report Submission

Updated input-output balance tables and process flow diagrams can be found in Attachment A.

If you have any questions or comments regarding this information please feel free to contact us.

Yours truly,
ENVIRO-STEWARDS INC.

Lloyd Hipel, P. Eng.

Table 1: 2015 NPRI & TRA Overall Summary Table

Substance Name	CAS #	Stage	Process	Process Inputs (kg/year) Used	Contained in product	Total Inputs	Released to air	Process Outputs (kg/year) Created	Contained in Product	Total Output
Ethyl acetate	141-78-6	Manufacturing	Door trim assembly	32,938	-	32,938	32,938	-	-	32,938
Heptane	142-82-5	Manufacturing	Door trim assembly	13,175	-	13,175	13,175	-	-	13,175
Methanol	67-56-1	Manufacturing	Door trim assembly	1,647	-	1,647	1,647	-	-	1,647
Cyclohexane	110-82-7	Manufacturing	Door trim assembly	13,175	-	-	-	-	-	
Xylene	1330-20-7	Manufacturing	Injection & spray booth	2,410	-	2,410	2,410	-	-	2,410
		Manufacturing	Door curing & repair	0	-	0	0			
Toluene	108-88-3	Manufacturing	Injection & spray booth	3,374	-	3,374	3,374	-	-	3,374
		Manufacturing	Door curing & repair	0	-					
PM10	n/a	Manufacturing	Welding	-	-	-	-	667	-	667
		Manufacturing	Plastic injection moulding	-	-	-	-	59	-	59
		Ancillary	Cooling tower	-	-	-	-	387	-	387
		Ancillary	Space heating	-	-	-	-	77	-	77
		Manufacturing	Carpet assembly	-	-	-	-	14	-	14
PM2.5	n/a	Ancillary	Welding	-	-	-	-	501	-	501
		Manufacturing	Plastic injection moulding	-	-	-	-	59	-	59
		Ancillary	Cooling tower	-	-	-	-	3	-	3
		Ancillary	Space heating	-	-	-	-	77	-	77
		Manufacturing	Carpet assembly	-	-	-	-	14	-	14
Total VOCs	n/a	-	-	69,733	-	69,733	69,733	-	-	-

Table 2: 2015 NPRI Part 5 Speciated Substance Summary

Part 1: Reporting Threshold (kg)	10,000
Part 5: Reporting Threshold (kg)	1,000

Contaminant	CAS #	Total Emissions (kg)	Part 1 Substance	Part 1 Reportable?	Part 5	Part 5 Reportable?
Methyl ethyl ketone	78-93-3	482	Y	N	Y	N
Cyclohexane	110-82-7	13,175	Y	Y	N	N
Methylcyclohexane *	108-87-2	-	N	N	N	N
Methyl alcohol	67-56-1	1,647	Y	N	Y	Y
Ethyl acetate	141-78-6	32,938	N	N	Y	Y
Heptane	142-82-5	13,175	N	N	Y	Y
Xylene	1330-20-7	2,410	Y	N	Y	Y
Toluene	108-88-3	3,374	Y	N	Y	Y
n-butanol	71-36-3	482	Y	N	N	N
Ethyl benzene	100-41-4	964	Y	N	N	N
Iso-propanol	67-63-0	482	Y	N	Y	N
Iso-butyl alcohol	78-83-1	482	Y	N	N	N

Table 3: 2015 NPRI Part 4 Substance Emission Summary

Pollutant	Process	Material	Quantity	Units	Emission Factor	Units	Annual Emission	Units	% PM-10	PM-10	% PM 2.5	PM-2.5
Particulates												
	Welding[1]	GMAW ER70S-6	128,343	kg/yr	See Note #1	-	667	kg/yr	100%	667	75%	501
	Plastic injection moulding	Plastic	2,221,116	kg/yr	0.0266	g/kg plastic	59	kg/yr	100%	59	100%	59
	Cooling tower (7,700ppm)[2]	Circulated water	468,720	1000gpy	0.012	lb/1000gal	2,597	kg/yr	14.90%	387	0.13%	3
	Heating	Natural gas	627,406	m^3/yr	0.122	g/m^3	77	kg/yr	100%	77	100%	77
	Carpet assembly	-	-	-	-	-	14	kg/yr	100%	14	100%	14
	Total						**3,414**	**kg/yr**		**1,204**		**653**
	Reporting Threshold						20,000	kg/yr		500		300
VOCs												
	Plastic injection moulding	Plastic	2,221,116	kg/yr	0.0307	g/kg plastic	68	kg/yr				
	Assembly booths	Adhesive	60,934	kg/yr	-	-	60,934	kg/yr				
	Touch-up paint booth	Paint	8,675	kg/yr	-	-	8,675	kg/yr				
	Heating	Natural gas	627,406	m^3/yr	-	-	55	kg/yr				
	Total						**69,733**	kg/yr				
	Reporting Threshold						10,000	kg/yr				

Notes:

1. Welding emissions based on Environment Canada's "Guidance for the Reporting of Welding Activities" Emission Calculator
2. Cooling tower emission rates based on article by Joel Reisman and Gordon Frisbie titled Calculating Realistic PM10 Emissions from Cooling Towers.
   PM10 emission factor reported in US-EPA AP-42 Table 13.4-1 is 0.019 lb/1000 US gallons of circulating water, assuming a total dissolved solids concentration of 12,000 ppm. This factor has been adjusted for TDS of 7,700 ppm used in Reisman and Frisbie. The lower TDS yields a higher PM-10 since it is assumed that a larger proportion of particles will be less than 10 microns. Conversely for high TDS values, while there may be more overall particulate, it is less likely that the particulate will be less than 10 microns.
   A cursory literature review indicates that Reisman and Frisbie's methodology is accepted as a refinement of the US-EPA methodology. The US-EPA assumes that all particulate matter in the cooling tower drift is PM-10.

Table 4: 2015 Welding Emissions

GMAW Electrode type E70S: 128,343 kg

Part 4 Releases	
TPM	0.667 tonne
PM10	0.667 tonne
PM2.5	0.501 tonne

All welding fume is considered to be PM-10 (particles < 10 µm aerodynamic diameter)

Since the particle size is less than 10 micron (PM-10), all PM-10 emissions are assumed to be the same as TPM

PM2.5 emissions are assumed as 75% of PM-10 emissions due to the fact that 50% to 75% of the particles have diameters in the range of 0.4 to 0.8 micron size

Table 5: 2015 Emissions from Natural Gas Combustion

2015 Natural Gas Consumption **627,406** m^3

Compound	CAS #	Emission Factor ($lb/10^6 ft^3$)	Data Source	Data Quality	2015 Emissions (kg/yr)	Reporting Threshold (kg/yr)
Carbon Dioxide	124-38-9	1.20E+05	USEPA	A	627,406	100,000,000
Carbon Monoxide	630-08-0	8.40E+01	USEPA	B	843	20,000
HFC-134A	811-97-2	NA	NA		NA	10.0
Methane	74-82-8	2.30E+00	USEPA	B	23	5,000,000
Nitrous Oxide (N_2O)	10024-97-2	2.20E+00	USEPA	E	22	2,700
Oxides of Nitrogen (as NO_2)	NA	1.00E+02	USEPA	B	1,004	NA
Oxides of Nitrogen (as NO)[1]	10102-43-9				655	14,000
PM - Total Particulate Matter	NA	7.60E+00	USEPA	D	76	20,000
PM10[2]	NA	7.60E+00	USEPA	D	76	500
PM2.5[2]	NA	7.60E+00	USEPA	D	76	300
Sulphur Dioxide	7446-09-5	6.00E-01	USEPA	A	6	20,000
Volatile Organic Compounds (VOC)[3]	NA	5.50E+00	USEPA	C	55	10,000

1: Based on ratio of molecular weights of NO to NO_2

2: Assumes that all particulate matter is less than 1 um

3. Sum of VOC from combustion and Other VOCs

Assumptions

18% of annual consumption is carpet oven

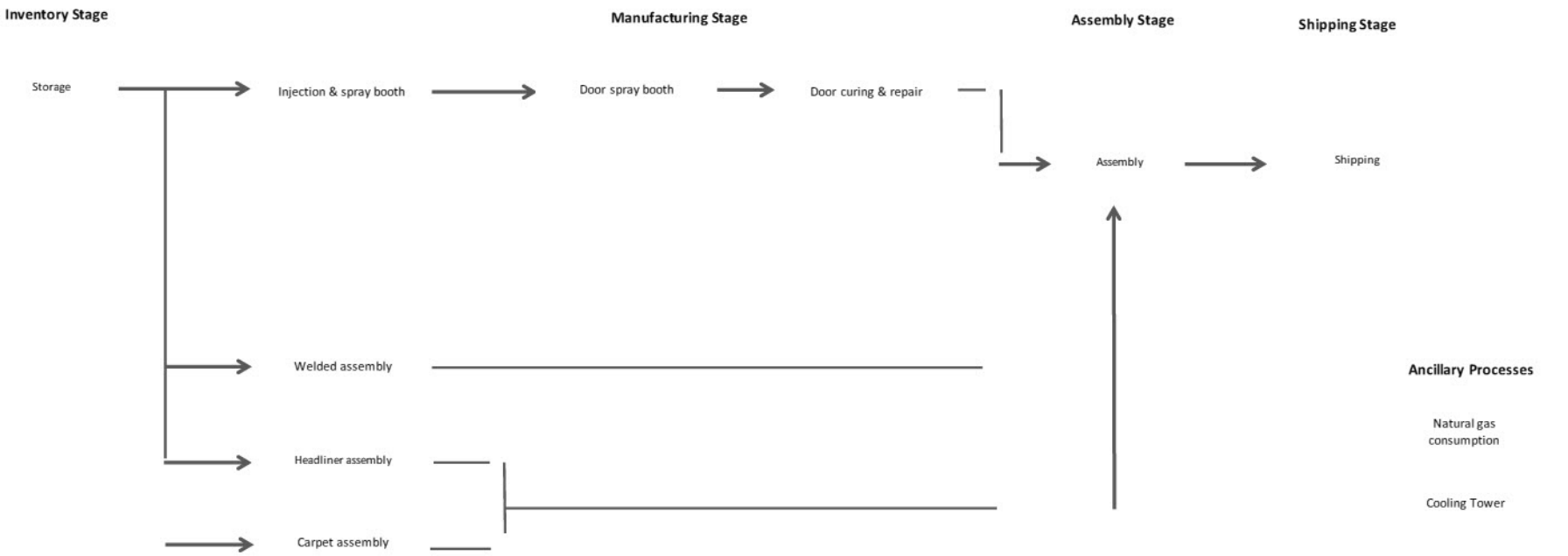
82% of annual consumption is space heating (AMUs)

Table 6: 2015 VOC Emissions Summary

Source Activity	Product Name	2015 Usage (kg)	Expected Contaminants	CAS #	Percent Composition	kg
Backboard Component Assembly	Assembly of seat back component using adhesive Bostik LADH1211	0	Methyl ethyl ketone	78-93-3	5	-
			Cyclohexane	110-82-7	20	-
			Methylcyclohexane *	108-87-2	20	-
			Methyl alcohol	67-56-1	2.5	-
Door Trim Assembly	Assembly of Door Trim ornament using adhesive Sunnex Penguin Cement 321 LH	65,875	Ethyl acetate	141-78-6	50	32,938
			Heptane	142-82-5	20	13,175
			Cyclohexane	110-82-7	20	13,175
			Methyl alcohol	67-56-1	2.5	1,647
Touch-up Paint Booth	Painting interior components using Red Spot Paint & Varnish Co. Black (136B-TT-1) PM paint	9,639	Methyl ethyl ketone	78-93-3	5	482
			Xylene	1330-20-7	25	2,410
			Toluene	108-88-3	35	3,374
			n-butanol	71-36-3	5	482
			Ethylbenzene	100-41-4	10	964
			Iso-propanol	67-63-0	5	482
			Iso-butyl alcohol	78-83-1	5	482
	Total use	75,514			Total VOC	69,609

Attachment A

Overall Process Flow Diagram



TITLE:	Overall PFD
DATE:	01-Jun-15

PM2.5 & PM10 BALANCE (2015)

Input				Process	Output				
Item	Quantity (kg/yr)	Estimation Method Used	Data Quality	Item	Item	Quantity (kg/yr)	Estimation Method Used	Data Quality	Comments
- N/A	-	-	-	Welding	$C_{2.5}$ PM2.5 Created	501	EE	A	
					C_{10} PM10 Created	667	EE	A	
					Subtotal	**1,168**			
					Input-Output balance	**N/A**	PM is created, therefore no balance is calculated.		
- N/A	-	-	-	Plastic injection moulding	$C_{2.5}$ PM2.5 Created	59	EE	A	
					C_{10} PM10 Created	59	EE	A	
					Subtotal	**118**			
					Input-Output balance	**N/A**	PM is created, therefore no balance is calculated.		
- N/A	-	-	-	Cooling tower	$C_{2.5}$ PM2.5 Created	3	EE	A	
					C_{10} PM10 Created	387	EE	A	
					Subtotal	**390**			
					Input-Output balance	**N/A**	PM is created, therefore no balance is calculated.		
- N/A	-	-	-	Space heating	$C_{2.5}$ PM2.5 Created	77	EE	A	
					C_{10} PM10 Created	77	EE	A	
					Subtotal	**153**			
					Input-Output balance	**N/A**	PM is created, therefore no balance is calculated.		
- N/A	-	-	-	Carpet assembly	$C_{2.5}$ PM2.5 Created	14	EE	A	
					C_{10} PM10 Created	14	EE	A	
					Subtotal	**27**			
					Input-Output balance	**N/A**	PM is created, therefore no balance is calculated.		
Total Inputs	**-**				**Total Outputs**	**1,857**			
Input/Output Balance	-		**Reasonable?**	Not applicable.					

DATA QUALITY LEVEL	
H	High
AA	Above average
A	Average
U	Uncertain

NOMENCLATURE	
A	On-site release of toxic substance to *Air*
DIS	On-site or off-site *disposal* of toxic substance
U	*Use* of a toxic substance
Int	*Intermediate* step containing substance
TR	*Transfer* of substance off-site
EE	Engineering Estimate
MB	Mass Balance
EF	Emission Factor

Rationale for Estimation Method Used	
Engineering Estimate	Based on NPRI report, as it is the most accurate data source.

Process Description: Particulate matter (PM2.5 & PM10)

PM2.5 & PM10 are created in the wedlling, plastic injection moulding, cooling tower, and heating (natural gas combustion) processes. Quantities of PM2.5 & PM10 created are shown in the table below the process flow diagrams. The 2015 combined natural gas consumption for space heating and the carpet assembly was 627,406 m^3; and it is assumed that 82% of the natural gas consumption was used for space heating and 18% for the carpet dryer.

Welding

Plastic Injection Moulding

Cooling Tower

Space heating

Carpet assembly

Process	PM2.5 Created (kg/yr)	PM10 Created (kg/yr)
Welding	501	667
Plastic injection moulding	59	59
Cooling tower	3	387
Space heating	77	77
Carpet oven	14	14

LEGEND	
----→	**Absence** of toxic substance
——→	Onsite or offsite release, or offsite transfer of a toxic substance, either in its original form or in another form
——→	**Presence** of toxic substance
D	*Destruction* of toxic substance
A	Onsite release of toxic substance to *Air*
C	*Creation* of toxic substance
DIS	Onsite or offsite *disposal* of toxic substance
U	*Use* of a toxic substance
I	*Input* of a toxic substance from another process
O	Output of a toxic substance to another process
t	*Transfer* of a toxic substance within this process
DQL	Data Quality Level
AA	Above average
A	Average

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TOXIC SUBSTANCE(S):	PM 2.5 & PM 10
DRAWING TITLE:	PM2.5 & PM10 Processes
DATE OF ISSUE:	21-May-14

VOC Balance (2015)

Input					Process	Output				
	Item	Quantity (kg/yr)	Estimation Method Used	Data Quality	Item		Item	Quantity (kg/yr)	Estimation Method Used	Data Quality	Comments
U_m	Use of methanol	1,647	EE	AA	Door trim assembly	A_m	Release to air	1,647	MB	AA	
U_{ea}	Use of ethyl acetate	32,938	EE	AA		A_{ea}	Release to air	32,938	MB	AA	
U_h	Use of heptane	13,175	EE	AA		A_h	Release to air	13,175	MB	AA	
U_c	Use of cyclohexane	13,175	EE	AA		A_c	Release to air	13,175	MB	AA	
						Subtotal		**60,934**			
						Input-Output balance		**0.0**	Balance is reasonable		
U_x	Use of xylene	2,410	EE	AA	Injection spray booth	**Ax**	Release to air	2,410	MB	AA	
U_t	Use of tolune	3,374	EE	AA		**At**	Release to air	3,374	MB	AA	
						Subtotal		**5,783**			
						Input-Output balance		**0.0**	Balance is reasonable		
U_x	Use of xylene	0	EE	AA	Door curing & repair	**Ax**	Release to air	**0**	MB	AA	
U_t	Use of tolune	0	EE	AA		**At**	Release to air	**0**	MB	AA	
						Input-Output balance		**0**	Balance is reasonable		
						Input-Output balance		**0.0**	Balance is reasonable		
Total Inputs		**66,718**				**Total Outputs**		**66,718**			
Input/Output Balance		0		**Reasonable?**	Yes						

DATA QUALITY LEVEL	
H	High
AA	Above average
A	Average
U	Uncertain

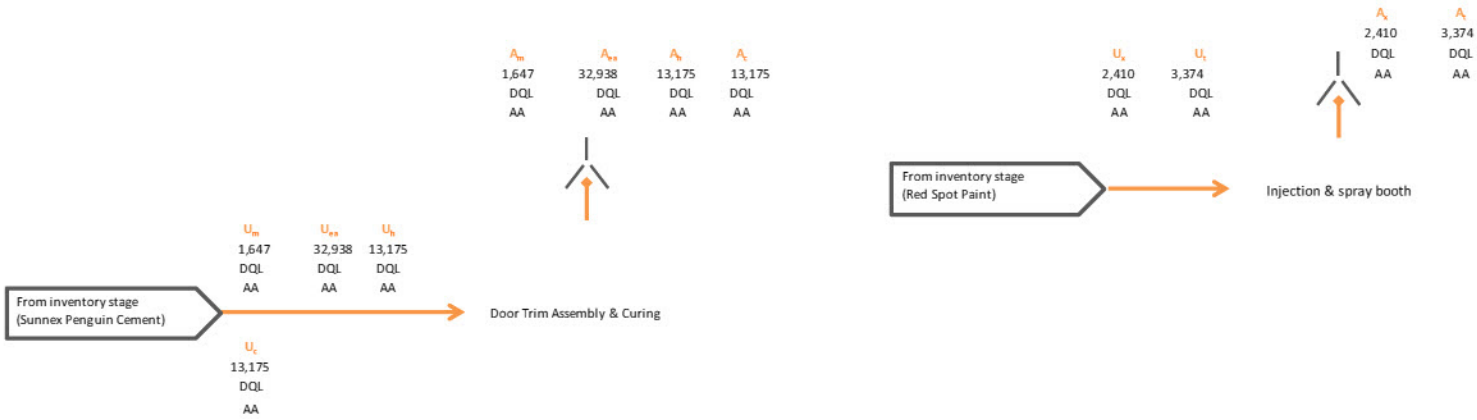
NOMENCLATURE	
A	On-site release of toxic substance to *Air*
DIS	On-site or off-site *disposal* of toxic substance
U	*Use* of a toxic substance
Int	*Intermediate* step containing substance
TR	*Transfer* of substance off-site
EE	Engineering Estimate
MB	Mass Balance
EF	Emission Factor

Rationale for Estimation Method Used	
Engineering Estimate	Calculated based on best available information using MSDSs and purchasing records for 2012.
Mass Balance	Quantities were known from engineering estimate of use, so it was reasonable to assume that the volatile substances were released to air.

Process Description: Methanol, ethyl acetate, heptane, cyclohexane, toluene, and xylene

Methanol, ethyl acetate, heptane , and cyclohexane are all ingredients in Sunnex Penguin Cement 321 LH, which is an adhesive used to join parts in the door trim assembly process. Based on the facility's 2015 usage of this product (65,875 kg), the amount of each of these substances is listed in the diagram below. Following assembly, the parts are cured in an oven, where it is assumed that 100% of these substance is emitted to air. Toluene and xylene are contained in Red Spot paint, which is sprayed onto to the edges of doors following injection. It is 100% of the toluene and xylene volatilize to air.

All quantities are in kg/year



LEGEND	
----→	**Absence** of toxic substance
⟶	Onsite or offsite release, or offsite transfer of a toxic substance, either in its original form or in another form
→	**Presence** of toxic substance
D	*Destruction* of toxic substance
A_x	Onsite release of toxic substance to *Air* (*Am* = methanol, *Aea* = ethyl acetate, *Ah* = heptane, *Ac* = cyclohexane, *Ax* = xylene, *At* = toluene)
C	*Creation* of toxic substance
DIS	Onsite or offsite *disposal* of toxic substance
U_x	*Use* of a toxic substance (U_m = methanol, U_{ea} = ethyl acetate, U_h = heptane, *Uc* = cyclohexane, *Ux* = xylene, *Ut* = toluene)
I	*Input* of a toxic substance from another process
O	Output of a toxic substance to another process
t	*Transfer* of a toxic substance within this process
DQL	Data Quality Level
AA	Above average
A	Average

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TOXIC SUBSTANCE(S):	VOCs
DRAWING TITLE:	Door trim assembly & Spray/repair process
DATE OF ISSUE:	1-Jun-15

Attachment A

Report Preview

Report Details

Report Year	2015
Report Type:	NPRI,ON MOE TRA
Modified Date/Time:	30/05/2016 4:54 PM

Company and Facility Details

Company Name:	Toyota Boshoku Canada Inc.
Mailing Address:	Address Line 1: 230 Universal Road City, Province/Territory, Postal Code: Woodstock Ontario N4S 7W3 Country: Canada
Facility Name:	Toyota Boshoku Canada
NAICS Code:	332999
NPRI ID:	11773
Physical Address:	Address Line 1: 230 Universal Road City, Province/Territory, Postal Code: Woodstock Ontario N4S7W3 Country: Canada Latitude: 43.12770 Longitude: -80.71050 UTM Zone: 17 UTM Easting: 523547 UTM Northing: 4775036

Contacts Details

Contact Type	Technical Contact, Certifying Official
Name:	Jason Dittburner
Position:	Plant Specialist
Mailing Address:	Address Line 1: 230 Universal Road City, Province/Territory, Postal Code: Woodstock Ontario N4S7W3 Country: Canada
Contact Type	Highest Ranking Employee
Name:	Norimichi Adachi
Position:	President

Contact Type	Person who prepared the report
Name:	Lloyd Hipel
Position:	Project Manager
Mailing Address:	Delivery Mode: GeneralDelivery Address Line 1: 1 Union Street City, Province/Territory, Postal Code: Elmira Ontario N3B 3J9 Country: Canada

General Information

Number of employees:	475
Activities for Which the 20,000-Hour Employee Threshold Does Not Apply:	None of the above
Activities Relevant to Reporting Dioxins, Furans and Hexacholorobenzene:	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
Usual Number of Operating Hours per day:	16
Usual Daily Start Time (24h) (hh:mm):	07:00

Substance List

CAS RN	Substance Name	Releases	Releases (Speciated VOCs)	Disposals	Recycling	Unit
110-82-7	Cyclohexane	13.1750	N/A	N/A	N/A	tonnes
67-56-1	Methanol	1.6470	N/A	N/A	N/A	tonnes
NA - M09	PM10 - Particulate Matter <= 10 Microns	1.2040	N/A	N/A	N/A	tonnes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	0.6530	N/A	N/A	N/A	tonnes
108-88-3	Toluene	3.3740	N/A	N/A	N/A	tonnes
NA - M16	Volatile Organic Compounds (VOCs)	69.7330	53.5440	N/A	N/A	tonnes
1330-20-7	Xylene (all isomers)	2.4100	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
110-82-7	Cyclohexane	Yes	Yes		No
67-56-1	Methanol	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
108-88-3	Toluene	Yes	Yes		No

CAS RN	Substance Name	NPRI	ON MOE TRA	ON MOE Reg 127/01	First report for this substance to the ON MOE TRA
NA - M16	Volatile Organic Compounds (VOCs)	Yes	Yes		No
1330-20-7	Xylene (all isomers)	Yes	Yes		No

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
110-82-7	Cyclohexane	Yes	No	No
67-56-1	Methanol	Yes	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
110-82-7	Cyclohexane	No	No	No
67-56-1	Methanol	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	Otherwise Use of the Substance
110-82-7	Cyclohexane	As a physical or chemical processing aid
67-56-1	Methanol	As a physical or chemical processing aid
108-88-3	Toluene	As a physical or chemical processing aid
NA - M16	Volatile Organic Compounds (VOCs)	
1330-20-7	Xylene (all isomers)	As a physical or chemical processing aid

TRA Quantifications

CAS RN	Substance Name	Use, Creation, Contained	Quantity	Use ranges for public reporting
110-82-7	Cyclohexane	Use	13.175 tonnes	Yes
110-82-7	Cyclohexane	Creation	0 tonnes	No
110-82-7	Cyclohexane	Contained	0 tonnes	No
67-56-1	Methanol	Use	1.647 tonnes	Yes
67-56-1	Methanol	Creation	0 tonnes	Yes
67-56-1	Methanol	Contained	0 tonnes	Yes
NA - M09	PM10 - Particulate Matter <= 10 Microns	Use	0 tonnes	No
NA - M09	PM10 - Particulate Matter <= 10 Microns	Creation	1.204 tonnes	Yes
NA - M09	PM10 - Particulate Matter <= 10 Microns	Contained		
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Use	0 tonnes	No
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Creation	0.653 tonnes	Yes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Contained		
108-88-3	Toluene	Use	3.374 tonnes	Yes
108-88-3	Toluene	Creation	0 tonnes	No
108-88-3	Toluene	Contained	0 tonnes	No
NA - M16	Volatile Organic Compounds (VOCs)	Use	69.733 tonnes	Yes
NA - M16	Volatile Organic Compounds (VOCs)	Creation	0 tonnes	No
NA - M16	Volatile Organic Compounds (VOCs)	Contained		
1330-20-7	Xylene (all isomers)	Use	2.41 tonnes	Yes
1330-20-7	Xylene (all isomers)	Creation	0 tonnes	Yes
1330-20-7	Xylene (all isomers)	Contained	0 tonnes	Yes

TRA Quantifications - VOC Breakdown List

CAS RN	Substance Name	Use, Creation, Contained	Quantity

CAS RN	Substance Name	Use, Creation, Contained	Quantity
141-78-6	Ethyl acetate	Use	32.938 tonnes
NA - 31	Heptane (all isomers)	Use	13.175 tonnes
67-56-1	Methanol	Use	1.647 tonnes
108-88-3	Toluene	Use	3.374 tonnes
1330-20-7	Xylene (all isomers)	Use	2.410 tonnes
1330-20-7	Xylene (all isomers)	Creation	0 tonnes

TRA Quantifications - Total Speciated VOCs

Use, Creation, Contained	Quantity
Use	53.544 tonnes
Creation	0 tonnes

TRA Quantifications - Others

CAS RN	Substance Name	Significant Process Change
110-82-7	Cyclohexane	No
67-56-1	Methanol	No
NA - M09	PM10 - Particulate Matter <= 10 Microns	No
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No
108-88-3	Toluene	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
110-82-7	Cyclohexane	Stack or Point Releases	O - Engineering Estimates		13.175 tonnes
67-56-1	Methanol	Stack or Point Releases	O - Engineering Estimates		1.647 tonnes
NA - M09	PM10 - Particulate Matter <= 10 Microns	Stack or Point Releases	O - Engineering Estimates		1.204 tonnes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Stack or Point Releases	O - Engineering Estimates		0.653 tonnes
108-88-3	Toluene	Stack or Point Releases	O - Engineering Estimates		3.374 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	Stack or Point Releases	O - Engineering Estimates		69.733 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	Other Sources - Speciated VOCs	NA - Not Applicable		69.733 tonnes
1330-20-7	Xylene (all isomers)	Stack or Point Releases	O - Engineering Estimates		2.41 tonnes

On-site Releases - Releases to air - Total

CAS RN	Substance Name	Total - Releases to Air
110-82-7	Cyclohexane	13.175 tonnes
67-56-1	Methanol	1.647 tonnes
NA - M09	PM10 - Particulate Matter <= 10 Microns	1.204 tonnes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	0.653 tonnes
108-88-3	Toluene	3.374 tonnes
NA - M16	Volatile Organic Compounds (VOCs)	69.733 tonnes
1330-20-7	Xylene (all isomers)	2.41 tonnes

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

Category	CAS RN	Substance Name	Quantity
Other Sources - Speciated VOCs	141-78-6	Ethyl acetate	32.938 tonnes
Other Sources - Speciated VOCs	NA - 31	Heptane (all isomers)	13.175 tonnes
Other Sources - Speciated VOCs	67-56-1	Methanol	1.647 tonnes
Other Sources - Speciated VOCs	108-88-3	Toluene	3.374 tonnes
Other Sources - Speciated VOCs	1330-20-7	Xylene (all isomers)	2.410 tonnes

On-site Releases - Total

CAS RN	Substance Name	Total releases
110-82-7	Cyclohexane	13.175 tonnes
67-56-1	Methanol	1.647 tonnes

CAS RN	Substance Name	Total releases
108-88-3	Toluene	3.374 tonnes
1330-20-7	Xylene (all isomers)	2.41 tonnes

On-site Releases - Quarterly Breakdown of Annual Releases

CAS RN	Substance Name	Quarter 1	Quarter 2	Quarter 3	Quarter 4
110-82-7	Cyclohexane				
67-56-1	Methanol				
108-88-3	Toluene				
1330-20-7	Xylene (all isomers)				

On-site Releases - Monthly Breakdown of Annual Releases

CAS RN	Substance Name	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
NA - M09	PM10 - Particulate Matter <= 10 Microns												
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns												
NA - M16	Volatile Organic Compounds (VOCs)												

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

CAS RN	Substance Name	Reasons for Changes in Quantities Disposed from Previous Year	Comments (Disposals)
108-88-3	Toluene	Changes in production levels	
110-82-7	Cyclohexane	Changes in production levels	
1330-20-7	Xylene (all isomers)	Changes in production levels	
67-56-1	Methanol	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 Disposed from Previous Year	Comments (Disposals)
108-88-3	Toluene		Other (specify in On-site Releases comment field)	Not disposed of.
110-82-7	Cyclohexane		Other (specify in On-site Releases comment field)	Not disposed of.
1330-20-7	Xylene (all isomers)		Other (specify in On-site Releases comment field)	Not disposed of.
67-56-1	Methanol		Other (specify in On-site Releases comment field)	Not disposed of.

Recycling - Reasons and Comments

CAS RN	Substance Name	Reasons Why Substance Was Recycled	Reasons for Changes in Quantities Recycled from Previous Year	Comments
108-88-3	Toluene		Other (specify in recycling comments field)	Not recycled.
110-82-7	Cyclohexane		Other (specify in recycling comments field)	Not recycled
1330-20-7	Xylene (all isomers)		Other (specify in recycling comments field)	Not recycled.
67-56-1	Methanol		Other (specify in recycling comments field)	Not recycled.

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
110-82-7	Cyclohexane	No	Enters the facility (Use)	13.175 tonnes	11.628 tonnes	2014	1.547	13.30
110-82-7	Cyclohexane	No	Creation	0 tonnes	0 tonnes	2014	0	
110-82-7	Cyclohexane	No	Contained	0 tonnes	0 tonnes	2014	0	
141-78-6	Ethyl acetate	Yes	Enters the facility (Use)	32.938 tonnes	29.07 tonnes	2014	3.868	13.31
NA - 31	Heptane (all isomers)	Yes	Enters the facility (Use)	13.175 tonnes	11.628 tonnes	2014	1.547	13.30
67-56-1	Methanol	No	Enters the facility (Use)	1.647 tonnes	1.454 tonnes	2014	0.193	13.27

CAS RN	Substance Name	Is Breakdown	Category	Quantity	Last Reported Quantity	Reporting Period of Last Reported Quantity	Change	% Change
67-56-1	Methanol	No	Creation	0 tonnes	0 tonnes	2014	0	
67-56-1	Methanol	No	Contained	0 tonnes	0 tonnes	2014	0	
67-56-1	Methanol	Yes	Enters the facility (Use)	1.647 tonnes	1.454 tonnes	2014	0.193	13.27
NA - M09	PM10 - Particulate Matter <= 10 Microns	No	Enters the facility (Use)	0 tonnes	0 tonnes	2014	0	
NA - M09	PM10 - Particulate Matter <= 10 Microns	No	Creation	1.204 tonnes	1.072 tonnes	2014	0.132	12.31
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No	Enters the facility (Use)	0 tonnes	0 tonnes	2014	0	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No	Creation	0.653 tonnes	0.549 tonnes	2014	0.104	18.94
108-88-3	Toluene	No	Enters the facility (Use)	3.374 tonnes	3.975 tonnes	2014	-0.601	-15.12
108-88-3	Toluene	No	Creation	0 tonnes	0 tonnes	2014	0	
108-88-3	Toluene	No	Contained	0 tonnes	0 tonnes	2014	0	
108-88-3	Toluene	Yes	Enters the facility (Use)	3.374 tonnes	3.975 tonnes	2014	-0.601	-15.12
1330-20-7	Xylene (all isomers)	No	Enters the facility (Use)	2.41 tonnes	2.839 tonnes	2014	-0.429	-15.11
1330-20-7	Xylene (all isomers)	No	Creation	0 tonnes	0 tonnes	2014	0	
1330-20-7	Xylene (all isomers)	No	Contained	0 tonnes	0 tonnes	2014	0	
1330-20-7	Xylene (all isomers)	Yes	Enters the facility (Use)	2.410 tonnes	2.839 tonnes	2014	-0.429	-15.11
1330-20-7	Xylene (all isomers)	Yes	Creation	0 tonnes	0 tonnes	2014	0	

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

CAS RN	Substance Name	Reason(s) for Change	Other Reason
110-82-7	Cyclohexane	Increase in production levels	
67-56-1	Methanol	Increase in production levels	
NA - M09	PM10 - Particulate Matter <= 10 Microns	Increase in production levels	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Increase in production levels	
108-88-3	Toluene	Increase in production levels	
NA - M16	Volatile Organic Compounds (VOCs)	Increase in production levels	
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
110-82-7	Cyclohexane	No	Total Releases to Air	13.175 tonnes	11.628 tonnes	2014	1.547	13.30
110-82-7	Cyclohexane	No	Total Releases to Water	0 tonnes	0 tonnes	2014	0	
110-82-7	Cyclohexane	No	Total Releases to Land	0 tonnes	0 tonnes	2014	0	
110-82-7	Cyclohexane	No	Total Releases to All Media	0 tonnes	0 tonnes	2014	0	
141-78-6	Ethyl acetate	Yes	Total Releases to Air	32.938 tonnes	29.07 tonnes	2014	3.868	13.31
NA - 31	Heptane (all isomers)	Yes	Total Releases to Air	13.175 tonnes	11.628 tonnes	2014	1.547	13.30
67-56-1	Methanol	No	Total Releases to Air	1.647 tonnes	1.454 tonnes	2014	0.193	13.27
67-56-1	Methanol	No	Total Releases to Water	0 tonnes	0 tonnes	2014	0	
67-56-1	Methanol	No	Total Releases to Land	0 tonnes	0 tonnes	2014	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	1.647 tonnes	1.454 tonnes	2014	0.193	13.27
NA - M09	PM10 - Particulate Matter <= 10 Microns	No	Total Releases to Air	1.204 tonnes	1.072 tonnes	2014	0.132	12.31
NA - M09	PM10 - Particulate Matter <= 10 Microns	No	Total Releases to Water	0 tonnes	0 tonnes	2014	0	
NA - M09	PM10 - Particulate Matter <= 10 Microns	No	Total Releases to Land	0 tonnes	0 tonnes	2014	0	
NA - M09	PM10 - Particulate Matter <= 10 Microns	No	Total Releases to All Media	0 tonnes	0 tonnes	2014	0	

CAS RN	Substance Name	Is Breakdown	Category	Quantity	Last Reported Quantity	Reporting Period of Last Reported Quantity	Change	% Change
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No	Total Releases to Air	0.653 tonnes	0.549 tonnes	2014	0.104	18.94
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No	Total Releases to Water	0 tonnes	0 tonnes	2014	0	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No	Total Releases to Land	0 tonnes	0 tonnes	2014	0	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No	Total Releases to All Media	0 tonnes	0 tonnes	2014	0	
108-88-3	Toluene	No	Total Releases to Air	3.374 tonnes	3.975 tonnes	2014	-0.601	-15.12
108-88-3	Toluene	No	Total Releases to Water	0 tonnes	0 tonnes	2014	0	
108-88-3	Toluene	No	Total Releases to Land	0 tonnes	0 tonnes	2014	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	3.374 tonnes	3.975 tonnes	2014	-0.601	-15.12
1330-20-7	Xylene (all isomers)	No	Total Releases to Air	2.41 tonnes	2.839 tonnes	2014	-0.429	-15.11
1330-20-7	Xylene (all isomers)	No	Total Releases to Water	0 tonnes	0 tonnes	2014	0	
1330-20-7	Xylene (all isomers)	No	Total Releases to Land	0 tonnes	0 tonnes	2014	0	
1330-20-7	Xylene (all isomers)	No	Total Releases to All Media	0 tonnes	0 tonnes	2014	0	
1330-20-7	Xylene (all isomers)	Yes	Total Releases to Air	2.410 tonnes	2.839 tonnes	2014	-0.429	-15.11

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

CAS RN	Substance Name	Reason(s) for Change	Other Reason
110-82-7	Cyclohexane	Increase in production levels	
67-56-1	Methanol	Increase in production levels	
NA - M09	PM10 - Particulate Matter <= 10 Microns	Increase in production levels	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Increase in production levels	
108-88-3	Toluene	Increase in production levels	
NA - M16	Volatile Organic Compounds (VOCs)	Increase in production levels	
1330-20-7	Xylene (all isomers)	Decrease in production levels	

Progress on TRA Plan - Objectives

CAS RN	Substance Name	Objectives
110-82-7	Cyclohexane	Toyota Boshoku Woodstock intends to reduce the use of cyclohexane through product design, equipment modification, and improved inventory techniques, and training and improved operating practices.
141-78-6	Ethyl acetate	Toyota Boshoku Woodstock intends to reduce the use of ethyl acetate through improved inventory techniques, improved operating practices.
NA - 31	Heptane (all isomers)	Toyota Boshoku Woodstock intends to reduce the use of heptane through improved inventory techniques, improved operating practices.
67-56-1	Methanol	Toyota Boshoku Woodstock intends to reduce the use of methanol through product design, improved inventory techniques, improved operating practices.
NA - M09	PM10 - Particulate Matter <= 10 Microns	Toyota Boshoku Woodstock intends to reduce the use of PM10 through product design, equipment modification, and training and improved operating practices.
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Toyota Boshoku Woodstock intends to reduce the creation of PM2.5 through product design, equipment modification, and training and improved operating practices.
108-88-3	Toluene	Toyota Boshoku Woodstock intends to reduce the use of xylene and toluene through feedstock substitution, product design, process modification, improved inventory techniques, and training and improved operating practices.
1330-20-7	Xylene (all isomers)	Toyota Boshoku Woodstock intends to reduce the use of xylene and toluene through feedstock substitution, product design, process modification, improved inventory techniques, and training and improved operating practices.

Progress on TRA Plan - Targets

CAS RN	Substance Name	Quantity	Years	Description of Target
110-82-7	Cyclohexane	No quantity target	No timeline target	

CAS RN	Substance Name	Quantity	Years	Description of Target
141-78-6	Ethyl acetate	No quantity target	No timeline target	
NA - 31	Heptane (all isomers)	No quantity target	No timeline target	
67-56-1	Methanol	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	
108-88-3	Toluene	No quantity target	No timeline target	
1330-20-7	Xylene (all isomers)	No quantity target	No timeline target	

Progress on TRA Plan - Description

CAS RN	Substance Name	Quantity	Years	Description of Target
110-82-7	Cyclohexane	No quantity target	No timeline target	
141-78-6	Ethyl acetate	No quantity target	No timeline target	
NA - 31	Heptane (all isomers)	No quantity target	No timeline target	
67-56-1	Methanol	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	
108-88-3	Toluene	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	Public summary of the description of the steps	Public summary of the comparison of the steps
110-82-7	Cyclohexane	Improved application techniques	Robot reteaching and jig modifications	Robot reteaching and jig modifications
110-82-7	Cyclohexane	Other	Modified pickup tube length	Modified pickup tube length
110-82-7	Cyclohexane	Other	Installed drum change over indicator system	Installed drum change over indicator system
110-82-7	Cyclohexane	Other	Optimized process and created work point standard	Optimized process and created work point standard
110-82-7	Cyclohexane	Changed product specifications	Cancelled due to product design constraints	Cancelled due to product design constraints
110-82-7	Cyclohexane	Improved maintenance scheduling, record keeping or procedures	Optimized process and created work point standard	Optimized process and created work point standard
141-78-6	Ethyl acetate	Other	Through continuous improvement and kaizen activities our steps for reducing the Methanol, Ethyl acetate and heptane levels will enable us to reach our goals.	Through continuous improvement and kaizen activities our steps for reducing the Methanol, Ethyl acetate and heptane levels will enable us to reach our goals.
141-78-6	Ethyl acetate	Other	Through continuous improvement and kaizen activities our steps for reducing the Methanol, Ethyl acetate and heptane levels will enable us to reach our goals.	Through continuous improvement and kaizen activities our steps for reducing the Methanol, Ethyl acetate and heptane levels will enable us to reach our goals.
141-78-6	Ethyl acetate	Other	Through continuous improvement and Kaizen activities our steps for reducing the methanol, ethyl acetate and heptane levels will enable us to reach our goals.	Through continuous improvement and Kaizen activities our steps for reducing the methanol, ethyl acetate and heptane levels will enable us to reach our goals.
141-78-6	Ethyl acetate	Other	Through continuous improvement and kaizen activities our steps for reducing the Methanol, Ethyl acetate and heptane levels will enable us to reach our goals.	Through continuous improvement and kaizen activities our steps for reducing the Methanol, Ethyl acetate and heptane levels will enable us to reach our goals.
NA - 31	Heptane (all isomers)	Other	Through continuous improvement and kaizen activities our steps for reducing the Methanol, Ethyl acetate and heptane levels will enable us to reach our goals.	Through continuous improvement and kaizen activities our steps for reducing the Methanol, Ethyl acetate and heptane levels will enable us to reach our goals.

CAS RN	Substance Name	Activity	Public summary of the description of the steps	Public summary of the comparison of the steps
NA - 31	Heptane (all isomers)	Other	Through continuous improvement and kaizen activities our steps for reducing the Methanol, Ethyl acetate and heptane levels will enable us to reach our goals.	Through continuous improvement and kaizen activities our steps for reducing the Methanol, Ethyl acetate and heptane levels will enable us to reach our goals.
NA - 31	Heptane (all isomers)	Other	Through continuous improvement and Kaizen activities our steps for reducing the methanol, ethyl acetate and heptane levels will enable us to reach our goals.	Through continuous improvement and Kaizen activities our steps for reducing the methanol, ethyl acetate and heptane levels will enable us to reach our goals.
NA - 31	Heptane (all isomers)	Other	Through continuous improvement and kaizen activities our steps for reducing the Methanol, Ethyl acetate and heptane levels will enable us to reach our goals.	Through continuous improvement and kaizen activities our steps for reducing the Methanol, Ethyl acetate and heptane levels will enable us to reach our goals.
67-56-1	Methanol	Other	Through continuous improvement and kaizen activities our steps for reducing the Methanol, Ethyl acetate and heptane levels will enable us to reach our goals.	Through continuous improvement and kaizen activities our steps for reducing the Methanol, Ethyl acetate and heptane levels will enable us to reach our goals.
67-56-1	Methanol	Other	Through continuous improvement and kaizen activities our steps for reducing the Methanol, Ethyl acetate and heptane levels will enable us to reach our goals.	Through continuous improvement and kaizen activities our steps for reducing the Methanol, Ethyl acetate and heptane levels will enable us to reach our goals.
67-56-1	Methanol	Other	Through continuous improvement and Kaizen activities our steps for reducing the methanol, ethyl acetate and heptane levels will enable us to reach our goals.	Through continuous improvement and Kaizen activities our steps for reducing the methanol, ethyl acetate and heptane levels will enable us to reach our goals.
67-56-1	Methanol	Changed product specifications	TBCA has discontinued this process.	TBCA has discontinued this process.
67-56-1	Methanol	Other	Through continuous improvement and kaizen activities our steps for reducing the Methanol, Ethyl acetate and heptane levels will enable us to reach our goals.	Through continuous improvement and kaizen activities our steps for reducing the Methanol, Ethyl acetate and heptane levels will enable us to reach our goals.
NA - M09	PM10 - Particulate Matter <= 10 Microns	Other	Through continuous improvement and kaizen activities our steps for reducing the PM levels will enable us to reach our goals.	Through continuous improvement and kaizen activities our steps for reducing the PM levels will enable us to reach our goals.
NA - M09	PM10 - Particulate Matter <= 10 Microns	Other	Through continuous improvement and kaizen activities our steps for reducing the PM levels will enable us to reach our goals.	Through continuous improvement and kaizen activities our steps for reducing the PM levels will enable us to reach our goals.
NA - M09	PM10 - Particulate Matter <= 10 Microns	Modified design or composition	Through continuous improvement and Kaizen activities our steps for reducing the PM levels will enable us to reach our goals.	Through continuous improvement and Kaizen activities our steps for reducing the PM levels will enable us to reach our goals.
NA - M09	PM10 - Particulate Matter <= 10 Microns	Other	Through continuous improvement and kaizen activities our steps for reducing the PM levels will enable us to reach our goals.	Through continuous improvement and kaizen activities our steps for reducing the PM levels will enable us to reach our goals.
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	Through continuous improvement and kaizen activities our steps for reducing the PM levels will enable us to reach our goals.	Through continuous improvement and kaizen activities our steps for reducing the PM levels will enable us to reach our goals.
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	Through continuous improvement and kaizen activities our steps for reducing the PM levels will enable us to reach our goals.	Through continuous improvement and kaizen activities our steps for reducing the PM levels will enable us to reach our goals.

CAS RN	Substance Name	Activity	Public summary of the description of the steps	Public summary of the comparison of the steps
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Modified design or composition	Through continuous improvement and Kaizen activities our steps for reducing the PM levels will enable us to reach our goals.	Through continuous improvement and Kaizen activities our steps for reducing the PM levels will enable us to reach our goals.
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	Through continuous improvement and kaizen activities our steps for reducing the PM levels will enable us to reach our goals.	Through continuous improvement and kaizen activities our steps for reducing the PM levels will enable us to reach our goals.
108-88-3	Toluene	Other	Optimized process and created work point standard.	Optimized process and created work point standard.
108-88-3	Toluene	Instituted improved purchasing procedures	Followed per the plan; in progress.	Followed per the plan; in progress.
108-88-3	Toluene	Substituted materials	Cancelled due to product design constraints.	Cancelled due to product design constraints.
108-88-3	Toluene	Modified design or composition	Cancelled due to product design constraints.	Cancelled due to product design constraints.
108-88-3	Toluene	Training related to toxics substance reduction	Refined work point standard and team member training.	Refined work point standard and team member training.
108-88-3	Toluene	Other	Spray station added to training workshop.	Spray station added to training workshop.
1330-20-7	Xylene (all isomers)	Modified equipment, layout or piping	Optimized process and created work point standard	Optimized process and created work point standard
1330-20-7	Xylene (all isomers)	Instituted improved purchasing procedures	In progress as per plan.	In progress as per plan.
1330-20-7	Xylene (all isomers)	Substituted materials	Cancelled due to product design constraints	Cancelled due to product design constraints
1330-20-7	Xylene (all isomers)	Other	Cancelled due to product design constraints	Cancelled due to product design constraints
1330-20-7	Xylene (all isomers)	Other	Refined work point standard and team member training	Refined work point standard and team member training
1330-20-7	Xylene (all isomers)	Training related to toxics substance reduction	Spray station added to training workshop	Spray station added to training workshop

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

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
110-82-7	Cyclohexane	Improved application techniques	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the steps described:	0.233 tonnes

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	The amount of reduction in **creation** of the substance at the facility during the reporting period that resulted due to the steps described:	0.002 tonnes

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
108-88-3	Toluene	Other	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the steps described:	0.0795 tonnes
1330-20-7	Xylene (all isomers)	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:	0.0568 tonnes

Progress on TRA Plan - Reductions due to Options Implemented - Improved inventory management or purchasing techniques

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
110-82-7	Cyclohexane	Other	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the steps described:	0.233 tonnes

techniques

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
110-82-7	Cyclohexane	Other	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the steps described:	0.58 tonnes
110-82-7	Cyclohexane	Other	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the steps described:	0.233 tonnes
141-78-6	Ethyl acetate	Other	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the steps described:	0.251 tonnes

techniques

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
NA - 31	Heptane (all isomers)	Other	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the steps described:	0.1 tonnes

techniques

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
67-56-1	Methanol	Other	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the steps described:	0.013 tonnes

techniques

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
NA - M09	PM10 - Particulate Matter <= 10 Microns	Modified design or composition	The amount of reduction in **creation** of the substance at the facility during the reporting period that resulted due to the steps described:	0.027 tonnes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Modified design or composition	The amount of reduction in **creation** of the substance at the facility during the reporting period that resulted due to the steps described:	0.02 tonnes

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity

Progress on TRA Plan - Reductions due to Options Implemented - Good operator practice or training

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
110-82-7	Cyclohexane	Improved maintenance scheduling, record keeping or procedures	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the steps described:	0.116 tonnes
141-78-6	Ethyl acetate	Other	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the steps described:	0.431 tonnes

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
NA - 31	Heptane (all isomers)	Other	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the steps described:	0.172 tonnes
67-56-1	Methanol	Other	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the steps described:	0.022 tonnes
NA - M09	PM10 - Particulate Matter <= 10 Microns	Other	The amount of reduction in **creation** of the substance at the facility during the reporting period that resulted due to the steps described:	0.003 tonnes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	Other	The amount of reduction in **creation** of the substance at the facility during the reporting period that resulted due to the steps described:	0.003 tonnes

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General Information

Number of employees:	475
Activities for Which the 20,000-Hour Employee Threshold Does Not Apply:	None of the above
Activities Relevant to Reporting Dioxins, Furans and Hexacholorobenzene:	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
Usual Number of Operating Hours per day:	16
Usual Daily Start Time (24h) (hh:mm):	07:00

Substance List

CAS RN	Substance Name	Releases	Releases (Speciated VOCs)	Disposals	Recycling	Unit
110-82-7	Cyclohexane	13.1750	N/A	N/A	N/A	tonnes
67-56-1	Methanol	1.6470	N/A	N/A	N/A	tonnes
NA - M09	PM10 - Particulate Matter <= 10 Microns	1.2040	N/A	N/A	N/A	tonnes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	0.6530	N/A	N/A	N/A	tonnes
108-88-3	Toluene	3.3740	N/A	N/A	N/A	tonnes
NA - M16	Volatile Organic Compounds (VOCs)	69.7330	53.5440	N/A	N/A	tonnes
1330-20-7	Xylene (all isomers)	2.4100	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
110-82-7	Cyclohexane	Yes	Yes		No
67-56-1	Methanol	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
108-88-3	Toluene	Yes	Yes		No

CAS RN	Substance Name	Activity	Reductions due to Options Implemented	Quantity
1330-20-7	Xylene (all isomers)	Training related to toxics substance reduction	The amount of reduction in **use** of the substance at the facility during the reporting period that resulted due to the steps described:	0.0568 tonnes

Progress on TRA Plan - Additional Actions

CAS RN	Substance Name	Provide a public summary of the description of the additional action taken
110-82-7	Cyclohexane	
141-78-6	Ethyl acetate	
NA - 31	Heptane (all isomers)	
67-56-1	Methanol	
NA - M09	PM10 - Particulate Matter <= 10 Microns	
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	
108-88-3	Toluene	
1330-20-7	Xylene (all isomers)	

Progress on TRA Plan - Amendments

CAS RN	Substance Name	Were any amendments made to the toxic substance reduction plan during the reporting period
110-82-7	Cyclohexane	No
141-78-6	Ethyl acetate	No
NA - 31	Heptane (all isomers)	No
67-56-1	Methanol	No
NA - M09	PM10 - Particulate Matter <= 10 Microns	No
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	No
108-88-3	Toluene	No
1330-20-7	Xylene (all isomers)	No

Empty