Substance Reporting

Toyota Motor Manufacturing Canada (Cambridge)

In 2009, the Government of Ontario passed a legislation known as the Toxics Reduction Act, 2009. The purpose of this Act, and supporting regulation, is to:
1) prevent pollution and protect human health and environment by reducing the use and creation of specific substances and
2) inform the public.

The Ministry of Environment (MOE) requires facilities to report on the specific substances that have been defined by the Act and make this information available to the public on the internet.

Facility Information

Site:	Toyota Motor Manufacturing Canada (Cambridge)
Address:	1055 Fountain Street North, P.O. Box 5002 Cambridge ON N3H 5K2

General Information

National Pollutant Release Inventory (NPRI) ID:	3790
Ministry of Environment (MOE) ID for Ontario Regulation 127:	5793
Full time employees:	5800
Canada SIC 4-digit code::	Motor Vehicle Ind (3231)
U.S. SIC Code:	Motor Vehicles and Car Bodies (3711)
NAICS 6-digit code:	Automobile & Light-Duty Motor Vehicle Mfg. (336110)
UTM coordinates:	550668 (easting), 4807266 (northing), Zone 17
Canadian Parent Company:	Not applicable to Toyota Motor Manufacturing Canada
Public Contact:	Mr. Scott Mackenzie Manager, Government Affairs (519) 653-1111 ext 2380 Scott.Mackenzie@toyota.com

Reduction Plan Objectives

TMMC is committed to protecting the environment and ensuring that its automobile manufacturing operations are safe for its team members, the community and the environment. To support this commitment, TMMC will continue to lead pollution prevention and continual improvement activities for each reportable substance

As per the plans created under Ontario Regulation 455/09, TMMC did not intend to implement any options identified through the Toxics Reduction Act Plan as no new activities were indentified through the Act. TMMC will continue to evaluate potential opportunities for reduction of toxic substances through the ISO 14001 Environmental Management System and Environmental Policy. Therefore, no summary or quantification of actions taken will be made under section 27 (1) paragraph 6 of O. Reg 455/09. Additionally, no amendments have been made to the toxics reduction plan during the reporting period.

- ON MECP TRA - Electronic Certification Statement

Annual Report Certification Statement

As of 24/06/2019, I, Derek Kidnie, 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.

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. *

General Information

			Enters (tonnes)			Created (tonnes)			Released (tonnes)			Disposal (tonnes)			Transfers (tonnes)			Contained in Product			Reason for Changes	NPRI Part
Substance Name	CAS Number	Primary Use in the Facility	2018 Quantity (tonnes)	Change in Percent (%)	Change in Mass (tonnes)	2018 Quantity (tonnes)	Change in Percent (%)	Change in Mass (tonnes)	2018 Quantity (tonnes)	Change in Percent (%)	Change in Mass (tonnes)	2018 Quantity (tonnes)	Change in Percent (%)	Change in Mass (tonnes)	2018 Quantity (tonnes)	Change in Percent (%)	Change in Mass (tonnes)	2018 Quantity (tonnes)	Change in Percent (%)	Change in Mass (tonnes)		
Acetone	67-64-1	A VOC which is a component of vehicle paint and materials used in the painting process	10 to 100	-15%	-2	N/A	N/A	N/A	1 to 10	-24%	<1	Data for disposal, transfer and contained in product are not required under O. Reg 127.									Decreased material usage	O. Reg. 127
$PM_{2.5}$	*	Byproduct of painting processes and combustion sources	N/A	N/A	N/A	1 to 10	1%	0	1 to 10	9%	1										Production related	4
PM_{10}	*	Byproduct of painting processes and combustion sources	N/A	N/A	N/A	1 to 10	4%	<1	1 to 10	9%	<1										Production related	4
Carbon monoxide	630-08-0	Byproduct of stationary combustion units	N/A	N/A	N/A	10 to 100	0%	<1	10 to 100	0%	<1	Data for disposal, transfer and contained in product are not required under O. Reg 455 for substances belonging to Part 4 and Part 5 of NPRI.									No significant change	4
Nitrogen oxides (expressed as nitrogen dioxide)	11104-93-1	Byproduct of stationary combustion units	N/A	N/A	N/A	10 to 100	0%	<1	10 to 100	0%	<1										No significant change	4
Sulphuric acid	7664-93-9	Used to treat wastewater primarily generated by painting operations to meet municipal discharge quality requirements. It is completely neutralized and it therefore not released.	10 to 100	108%	22	N/A	N/A	N/A	N/A	N/A	N/A	0 to 1	100%	1	N/A	N/A	N/A	N/A	N/A	N/A	Decreased material usage	1
Xylene (all isomers)	1330-20-7	A VOC which is a component of vehicle paint and materials used in the painting process	10 to 100	-28%	-33	N/A	N/A	N/A	10 to 100	-35%	-13	0 to 1	82%	<1	10 to 100	-29%	-19	N/A	N/A	N/A	Decreased material usage	1,5
Methanol	67-56-1	The primary ingredient in windshield washer fluid added to the assembled vehicle.	100 to 1,000	-8%	-30	N/A	N/A	N/A	1 to 10	-24%	<1	0 to 1	97%	<1	0 to 1	-96%	<1	100 to 1,000	0%	N/A	Production related	1,5
Zinc (and its compounds)	*	Vehicle bodies are made of steel. Zinc is a critical component in the steel for its corrosion prevention properties. It is also used in the coating process to pre-treat the steel body prior to applying the paint.	1,000 to 10,000	-11%	-130	N/A	N/A	N/A	0 to 1	6%	<1	0 to 1	-10%	<1	10 to 100	-14%	-2	1,000 to 10,000	-11%	-129	Production related	1
Manganese (and its compounds)	*	Manganese is a component in the steel used to make the vehicle body.	1,000 to 10,000	-12%	-151	N/A	N/A	N/A	0 to 1	-96%	<1	0 to 1	-10%	<1	1 to 10	-16%	<1	1,000 to 10,000	-12%	-149	Production related	1
Isopropyl alcohol	67-63-0	A VOC which is a component of vehicle paint and materials used in the painting process	10 to 100	-14%	-3	N/A	N/A	N/A	0 to 1	-94%	-15	10 to 100	100%	<1	1 to 10	813%	1	N/A	N/A	N/A	Decreased material usage	1,5
n-Butyl alcohol	71-36-3	A VOC which is a component of vehicle paint and materials used in the painting process	10 to 100	-4%	-1	N/A	N/A	N/A	10 to 100	-6%	-1	0 to 1	82%	<1	0 to 1	28%	0	N/A	N/A	N/A	Decreased material usage	1,5
1,2,4-Trimethylbenzene	95-63-6	A VOC which is a component of vehicle paint and materials used in the painting process	10 to 100	-13%	-4	N/A	N/A	N/A	10 to 100	-7%	<1	0 to 1	84%	<1	0 to 1	-95%	<1	N/A	N/A	N/A	Material reformulation	1,5
Methyl isobutyl ketone	108-10-1	A VOC which is a component of vehicle paint and materials used in the painting process	10 to 100	-31%	-19	N/A	N/A	N/A	10 to 100	-36%	-7	0 to 1	83%	<1	10 to 100	-27%	-11	N/A	N/A	N/A	Decreased material usage	1,5
2-Butoxyethanol	111-76-2	A VOC which is a component of vehicle paint and materials used in the painting process	10 to 100	-33%	-7	N/A	N/A	N/A	1 to 10	-36%	-5	0 to 1	100%	<1	1 to 10	-25%	-1	N/A	N/A	N/A	Material reformulation	1,5
Methyl tert-butyl ether	1634-04-4	A secondaty ingredient in gasoline added to the assembled vehicle	100 to 1,000	New reportable	New reportable	N/A	N/A	N/A	0 to 1	New reportable	New reportable	0 to 1	New	New	N/A	New	New	100 to 1,000	New	New	Newly reportable	1
Sodium nitrite	7632-00-0	Used in the pre-treatment of the metal vehicle bodies in preparation for painting	10 to 100	66%	26	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1 to 10	523800%	5	N/A	N/A	N/A	Production related	1
Nitric acid	7697-37-2	Used to treat wastewater primarily generated by painting operations to meet municipal discharge quality requirements. It is completely neutralized and it therefore not released.	10 to 100	-28%	-8	N/A	N/A	N/A	N/A	N/A	N/A	0 to 1	100%	1	1 to 10	1897%	1	N/A	N/A	N/A	Increased material usage	1
Butyl benzyl phthalate	85-68-7	A component in sealer used on the vehicle body	10 to 100	-10%	-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1 to 10	34%	<1	10 to 100	2%	1	Production related	1
Methylenebis(phenylisocyanate)	101-68-8	A component used to manufacture plastic instrumentation panels for the vehicle	10 to 100	-14%	-3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0 to 1	72%	<1	10 to 100	0%	N/A	Increased material usage	1
Polymeric diphenylmethane diisocyanate	9016-87-9	A component used to manufacture plastic instrumentation panels for the vehicle	10 to 100	-14%	-4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0 to 1	77%	<1	10 to 100	11%	2	Increased material usage	1
Phosphorus (total)	*	Used in the pre-treatment of the metal vehicle bodies in preparation for painting	10 to 100	-33%	-14	N/A	N/A	N/A	0 to 1	-39%	<1	0 to 1	-164%	<1	10 to 100	-16%	-3	10 to 100	-19%	<1	Production related	1
Ethylene glycol	107-21-1	The primary ingredient in long life coolant added to the assembled vehicle.	1,000 to 10,000	-15%	-196	N/A	N/A	N/A	0 to 1	-22%	<1	>0 to 1	100%	1	1 to 10	4%	<1	1,000 to 10,000	0%	N/A	Increased material usage	1
4,4'-Isopropylidenediphenol	80-05-7	A component in adhesives used on the vehicle body	0 to 1	-25%	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0 to 1	-13%	-1	0 to 1	100%	<1	Decreased material usage	1B
Nitrate ion in solution at pH >=6	*	Byproduct of wastewater treatment operations; contained in engine coolant added to assembled vehicles	1 to 10	-15%	<1	10 to 100	-16%	-7	N/A	N/A	N/A	10 to 100	-81%	<1	0 to 1	4407%	<1	1 to 10	-15%	<1	Material reformulation	1
Butyl acetate (all isomers) Except CAS (540-88-5)	*	A VOC which is a component of vehicle paint and materials used in the painting process	100 to 1,000	-8%	49	N/A	N/A	N/A	100 to 1,000	-24%	<1										New reportable	5
NPRI Other Glycol Ethers and Acetates (isomers)	*	A VOC which is a component of vehicle paint and materials used in the painting process	10 to 100	-14%	12	N/A	N/A	N/A	10 to 100	-94%	3										New reportable	5
Ethanol	64-17-5	A VOC which is a component of vehicle paint and materials used in the painting process	100 to 1,000	-10%	<1	N/A	N/A	N/A	1 to 10	-29%	<1										Production related	5
Propyl alcohol	71-23-8	A VOC which is a component of vehicle paint and materials used in the painting process	1 to 10	-63%	<1	N/A	N/A	N/A	1 to 10	-64%	<1										New reportable	5
Methyl ethyl ketone	78-93-3	A VOC which is a component of vehicle paint and materials used in the painting process	1 to 10	-4%	0	N/A	N/A	N/A	1 to 10	-13%	-1										Production related	5
Propylene glycol methyl ether acetate	108-65-6	A VOC which is a component of vehicle paint and materials used in the painting process	10 to 100	-17%	<1	N/A	N/A	N/A	10 to 100	13%	5										Increased material usage	5
Toluene	108-88-3	A VOC which is a component of vehicle paint and materials used in the painting process	1 to 10	-8%	<1	N/A	N/A	N/A	1 to 10	-11%	<1										Decreased material usage	5
n-Butyl acetate	123-86-4	A VOC which is a component of vehicle paint and materials used in the painting process	100 to 1,000	-28%	-55	N/A	N/A	N/A	100 to 1,000	-13%	<1										Material reformulation	5
Ethyl acetate	141-78-6	A VOC which is a component of vehicle paint and materials used in the painting process	10 to 100	-13%	<1	N/A	N/A	N/A	10 to 100	10%	1										Increased material usage	5
Stoddard solvent	8052-41-3	A VOC which is a component of vehicle paint and materials used in the painting process	10 to 100	16%	2	N/A	N/A	N/A	1 to 10	127%	1										Material reformulation	5
Hydrotreated light distillate	64742-47-8	A VOC which is a component of vehicle paint and materials used in the painting process	10 to 100	-25%	-15	N/A	N/A	N/A	1 to 10	-6%	-1	Data for disposal, transfer and contained in product are not required under O. Reg 455 for substances belonging to Part 4 and Part 5 of NPRI.									Production related	5
Hydrotreated heavy naphtha	64742-48-9	A VOC which is a component of vehicle paint and materials used in the painting process	10 to 100	-15%	-8	N/A	N/A	N/A	1 to 10	-18%	-1										Production related	5
Odorless Mineral spirits	64741-65-7	A VOC which is a component of vehicle paint and materials used in the painting process	1 to 10	55%	1	N/A	N/A	N/A	1 to 10	16%	0										Material reformulation	5
Solvent naphtha medium aliphatic	64742-88-7	A VOC which is a component of vehicle paint and materials used in the painting process	1 to 10	-15%	<1	N/A	N/A	N/A	1 to 10	8%	<1										Decreased material usage	5
Solvent naphtha light aliphatic	64742-89-8	A VOC which is a component of vehicle paint and materials used in the painting process	10 to 100	-32%	-17	N/A	N/A	N/A	1 to 10	-67%	-20										Material reformulation	5
Heavy aromatic solvent naphtha	64742-94-5	A VOC which is a component of vehicle paint and materials used in the painting process	1 to 10	6%	0	N/A	N/A	N/A	1 to 10	20%	0										Decreased material usage	5
Light aromatic solvent naphtha	64742-95-6	A VOC which is a component of vehicle paint and materials used in the painting process	10 to 100	-10%	-9	N/A	N/A	N/A	10 to 100	-7%	-4										Production related	5
Heptane (all isomers)	*	A VOC which is a component of vehicle paint and materials used in the painting process	1 to 10	-53%	-3	N/A	N/A	N/A	1 to 10	-54%	<1										Production related	5
Trimethylbenzene	25551-13-7	A VOC which is a component of vehicle paint and materials used in the painting process	1 to 10	-13%	<1	N/A	N/A	N/A	1 to 10	-11%	<1										Production related	5
Pentane (all isomers)	*	Byproduct of stationary combustion units	N/A	N/A	N/A	1 to 10	0	<1	1 to 10	4%	<1										Production related	5

2017 Toxic Substance Plan Summary

Toyota Motor Manufacturing Canada (Cambridge)

The Ontario Ministry of Environment and Climate Change (MOECC) has passed a new Act. The purpose of this Act, and supporting regulation, is to:
1) Prevent pollution and protect human health and environment by reducing the use and creation of specific substances and
2) Inform the public.

Substances with Prepared Plans
Substance and CAS number:

Sulphuric acid CAS No.:(7664-93-9)
Nitric acid CAS No.:(7697-37-2)
Manganese (and its compounds) CAS No.:(N/A)
CO CAS No.:(630-08-0)
NOX CAS No.:(N/A)
PM-2.5 CAS No.:(N/A)
PM-10 CAS No.:(N/A)
Butane isomers CAS No.:(N/A)
Pentane isomers CAS No.:(N/A)
Sodium nitrite CAS No.:(7632-00-0)
Hydrogen fluoride CAS No.:(7664-39-3)
Phosphorus CAS No.:(N/A)
Nitrate ion CAS No.: (N/A)
Zinc (and its compounds) CAS No.:(N/A)
Toluene CAS No.:(108-88-3)
Methanol CAS No.:(67-56-1)
Acetone CAS No.:(67-64-1)
Methylenebis(phenylisocyanate) CAS No.:(101-68-8)
Polymethylene polypehenyl isocyanate CAS No.:(9016-87-9)
Butyl benzyl phthalate CAS No.:(85-68-7)
Isopropyl alcohol CAS No.:(67-63-0)
n-Butyl alcohol CAS No.:(71-36-3)
Heavy alkylate naphtha CAS No.: (64741-65-7)
1,2,4-Trimethylbenzene CAS No.:(95-63-6)
Methyl Isobutyl Ketone CAS No.:(108-10-1)
Butyl cellosolve CAS No.:(111-76-2)
Xylene Isomers CAS No.:(1330-20-7)
Ethylene Glycol CAS No.:(107-21-1)
Ethyl alcohol CAS No.:(64-17-5)
Propylene glycol methyl ether acetate CAS No.:(108-65-6)
Diethylene glycol mono ethyl ether acetate CAS No.:(112-15-2)
n-Butyl acetate CAS No.:(123-86-4)
Ethyl acetate CAS No.:(141-78-6)
Methyl Ethyl Ketone CAS No.:(78-93-3)
1-Butoxy-2-propanol CAS No.:(5131-66-8)
VM & P Naphtha CAS No.:(8032-32-4)
Stoddard Solvent CAS No.:(8052-41-3)
Petroleum distillate, hydrotreated light CAS No.:(64742-47-8)
Naphtha, hydrotreated heavy CAS No.:(64742-48-9)
Solvent naphtha, middle aliphatic CAS No.:(64742-88-7)
Solvent naphtha, light aliphatic CAS No.:(64742-89-8)
Solvent naphtha, heavy aromatic CAS No.:(64742-94-5)
Solvent naphtha, light aromatic CAS No.:(64742-95-6)
Trimethylbenzene isomers CAS No.:(N/A)
Heptane isomers CAS No.:(N/A)
Bisphenol A CAS No.:(80-05-7)

Facility Information

Site:	Toyota Motor Manufacturing Canada (Cambridge)
Address:	1055 Fountain Street North, P.O. Box 5002 Cambridge ON N3H 5K2

General Information

National Pollutant Release Inventory (NPRI) ID:	3790
Ministry of Environment (MOE) ID:	5793
Full time employees:	5300
NAICS 2-digit code:	Transportation Equipment Industries (32)
Canada SIC 4-digit code:	Motor Vehicle Ind (3231)
U.S. SIC Code:	Motor Vehicles and Car Bodies (3711)
NAICS 6-digit code:	Automobile & Light-Duty Motor Vehicle Mfg. (336110)
UTM coordinates:	550668 (easting), 4807266 (northing), Zone 17
Public Contact:	Mr. Scott Mackenzie Manager, Government Affairs (519) 653-1111 ext 2380 Scott.Mackenzie@toyota.com
Toxic Substance Reduction Planner License No. (Recommendations & Certifying):	Beth Rhyno, P.Eng. TRSP0273

Toxic Reduction Plan Information

Reduction Plan Objectives
TMMC is committed to protecting the environment and ensuring that its automobile manufacturing operations are safe for its team members, the community and the environment. To support this commitment, TMMC will continue to lead pollution prevention and continual improvement activities for each reportable substance.

Reduction Plan Statement of Intent
In accordance with TMMC's ISO 14001 Environmental Management System (EMS) and Corporate Objectives, the facility will continue to set and regularly assess environmental objectives and targets in order to ensure the continuation of proactive environmental procedures and practices. Through these practices, the facility will strive to reduce the use of toxic substances, whenever technically and economically feasible. It is also TMMC's policy to actively promote environmental awareness among team members through continual education and training and strive to comply with all municipal, provincial and federal legislation as well as other requirements related to the environment.

Substance Name	CAS Number	Description of Primary Use in the Facility	Statement of Intent for Implementation
Sulphuric acid	7664-93-9	Sulphuric acid is used to treat wastewater primarily generated by painting operations to meet municipal discharge quality requirements. It is completely neutralized and it therefore not released.	In accordance with s. 4(1)6 of the Toxics Reduction Act, the facility does not intend to implement any options because currently there are no known alternative options that achieve the treatment levels necessary to meet the municipal discharge criteria. In accordance with TMMC's ISO 14001 Environmental Management System and Environmental Policy, potential opportunities for reduction will continue to be evaluated on a regular basis
Nitric acid	7697-37-2	Nitric acid is used to treat wastewater primarily generated by painting operations to meet municipal discharge quality requirements. It is completely neutralized and it therefore not released.	
Manganese (and its compounds)	*	Manganese is a component in the steel used to make the vehicle body.	In accordance with s. 4(1)6 of the Toxics Reduction Act, the facility does not intend to implement any options because manganese is a core component of the steel used for the vehicle body and is required to maintain the quality and safety of the product. Additionally, re-design of the vehicle is not within the control of the facility. In accordance with TMMC's ISO 14001 Environmental Management System and Environmental Policy, potential opportunities for reduction will continue to be evaluated on a regular basis.
CO	630-08-0	Created by as a byproduct of diesel combustion equipment at the facility.	In accordance with s. 4(1)6 of the Toxics Reduction Act, the facility does not intend to implement any options identified through the Toxic Reduction Act Plan as no technically feasible options were identified. As by-products of natural gas and diesel combustion, the creation of these substances cannot be avoided by the use of natural gas and diesel generators. In accordance with TMMC's ISO 14001 Environmental Management System and Environmental Policy, potential opportunities for reduction will continue to be evaluated on a regular basis
NOX	*		

PM-2.5	*	Created from production emissions and combustion equipment at the facility. Emissions are discharged to air.	In accordance with s. 4(1)6 of the Toxics Reduction Act, the facility does not intend to implement any options identified through the Toxic Reduction Act Plan as no technically feasible options were identified. As by-products of diesel combustion, the creation of these substances cannot be avoided by the use of diesel generators. PM is also generated as a by-product of automotive manufacturing processes. In accordance with TMMC's ISO 14001 Environmental Management System and Environmental Policy, potential opportunities for reduction will continue to be evaluated on a regular basis
PM-10	*		
Butane isomers	*	Created by as a byproduct of natural gas combustion equipment at the facility.	In accordance with s. 4(1)6 of the Toxics Reduction Act, the facility does not intend to implement any options identified through the Toxic Reduction Act Plan as no technically feasible options were identified. As by-products of natural gas combustion, the creation of these substances cannot be avoided by the use of natural gas for energy. In accordance with TMMC's ISO 14001 Environmental Management System and Environmental Policy, potential opportunities for reduction will continue to be evaluated on a regular basis
Pentane isomers	*		
Sodium nitrite	7632-00-0	Sodium nitrite is a component in the materials used to maintain the pH of the phosphate pre-treatment process	In accordance with s. 4(1)6 of the Toxics Reduction Act, the facility does not intend to implement any options identified through the Toxic Reduction Act Plan as no technically feasible options were identified. This substance is required to maintain the pH of the paint pre-treatment process. In accordance with TMMC's ISO 14001 Environmental Management System and Environmental Policy, potential opportunities for reduction will continue to be evaluated on a regular basis.
Hydrogen fluoride	7664-39-3	Hydrogen fluoride is a component in the materials used to maintain the pH of the phosphate pre-treatment process	
Phosphorus Total	*	Phosphorous is a component in the materials used in the coating process to pretreat the steel body prior to applying the paint	In accordance with s. 4(1)6 of the Toxics Reduction Act, the facility does not intend to implement any options identified through the Toxic Reduction Act Plan as no technically feasible options were identified. This substance is the critical component required to prepare the surface of the vehicle in the industry standard method for the painting pre-treatment process. In accordance with TMMC's ISO 14001 Environmental Management System and Environmental Policy, potential opportunities for reduction will continue to be evaluated on a regular basis.
Nitrate ion	*	Nitrate ion is a component in the materials used in the coating process to pretreat the steel body prior to applying the paint	
Bisphenol A	80-05-7	Bisphenol A is a component in the adhesives used on the vehicle body during the manufacture process.	In accordance with s. 4(1)6 of the Toxics Reduction Act, the facility does not intend to implement any options identified through the Toxics Reduction Act Plan because zinc is a critical element in both the steel used in the automotive bodies and in the paint pre-treatment process. Zinc is required to maintain the operational safety and quality of the vehicle including corrosion resistance and paint adhesion to the body. In accordance with TMMC's ISO 14001 Environmental Management System and Environmental Policy, potential opportunities for reduction will continue to be evaluated on a regular basis.
Zinc compounds	*	Car bodies are made of steel. Zinc is a critical component in the steel for its corrosion prevention properties. It is also used in the coating process to pre-treat the steel body prior to applying the paint.	In accordance with s. 4(1)6 of the Toxics Reduction Act, the facility does not intend to implement any options identified through the Toxics Reduction Act Plan because zinc is a critical element in both the steel used in the automotive bodies and in the paint pre-treatment process. Zinc is required to maintain the operational safety and quality of the vehicle including corrosion resistance and paint adhesion to the body. In accordance with TMMC's ISO 14001 Environmental Management System and Environmental Policy, potential opportunities for reduction will continue to be evaluated on a regular basis.
Toluene	108-88-3	Toluene is a VOC which is a component of the vehicle paint.	In accordance with s. 4(1)6 of the Toxics Reduction Act, the facility does not intend to implement any options identified through the Toxics Reduction Act Plan as no new technically feasible options were identified. The feasible options noted in the plan have been previously identified through existing ISO 14001 programs at the Facility. In accordance with TMMC's ISO 14001 Environmental Management System and Environmental Policy, potential opportunities for reduction will continue to be evaluated on a regular basis
Methanol	67-56-1	Primary ingredient in windshield washer fluid which is topped up in each vehicle.	
Acetone	67-64-1	Acetone is a VOC which is a component of the vehicle paint.	
Methylenebis(phenylisocyanate)	101-68-8	Methylenebis(phenylisocyanate) is a component in the material used to manufacture instrumentation panels	
Polymethylene polypehenyl isocyanate	9016-87-9	Polymethylene polyphenyl isocyanate is a component in the material used to manufacture instrumentation panels	
Butyl benzyl phthalate	85-68-7	Butyl benzyl phthalate is a component of the vehicle sealer.	
Isopropyl alcohol	67-63-0	Isoproyl alcohol is a VOC which is a component of the vehicle paint.	
n-Butyl alcohol	71-36-3	n-Butyl alcohol is a VOC which is a component of the vehicle paint.	
1,2,4-Trimethylbenzene	95-63-6	1,2,4-Trimethylbenzene is a VOC which is a component of the vehicle paint.	
Methyl Isobutyl Ketone	108-10-1	Methyl isobutyl ketone is a VOC which is a component of the vehicle paint.	
Butyl cellosolve	111-76-2	Butyl cellosolve is a VOC which is a component of the vehicle paint.	
Xylene Isomers	1330-20-7	Xylene is a VOC which is a component of the vehicle paint.	
Ethylene Glycol	107-21-1	Primary ingredient in the long life coolant which is added to the engine of each vehicle.	
Ethyl alcohol	64-17-5	Ethyl alcohol is a VOC which is a component of the vehicle paint.	
Propylene glycol methyl ether acetate	108-65-6	Propylene glycol methyl ether acetate is a VOC which is a component of the vehicle paint.	
Diethylene glycol mono ethyl ether acetate	112-15-2	Diethylene glycol mono ethyl ether acetate is a VOC which is a component of the vehicle paint.	
n-Butyl acetate	123-86-4	n-Butyl acetate is a VOC which is a component of the vehicle paint.	
Ethyl acetate	141-78-6	Ethyl acetate is a VOC which is a component of the vehicle paint.	
1-Butoxy-2-propanol	5131-66-8	1-Butoxy-2-propanol is a VOC which is a component of the vehicle paint.	
VM & P Naphtha	8032-32-4	VM & P Naptha is a VOC which is a component of the vehicle paint.	
Stoddard Solvent	8052-41-3	Stoddard solvent is a VOC which is a component of the vehicle paint.	
Heavy alkylate naphtha	64741-65-7	A VOC which is a component of vehicle paint and materials used in the painting process	
Petroleum distillate, hydrotreated light	64742-47-8	Naptha, hydrotreated heavy is a VOC which is a component of vehicle paint and sealers.	
Methyl Ethyl Ketone	78-93-3	Methyl ethyl ketone is a VOC which is a component of the vehicle paint.	
Naphtha, hydrotreated heavy	64742-48-9	Naptha, hydrotreated heavy is a VOC which is a component of vehicle paint and sealers.	
Solvent naphtha, middle aliphatic	64742-88-7	Solvent naptha, middle aliphatic is a VOC which is a component of the vehicle paint.	

Solvent naphtha, light aliphatic	64742-89-8	Solvent naptha, light aliphatic is a VOC which is a component of the vehicle paint.
Solvent naphtha, heavy aromatic	64742-94-5	Solvent naptha, heavy aromatic is a VOC which is a component of the vehicle paint.
Solvent naphtha, light aromatic	64742-95-6	Solvent naptha, light aromatic is a VOC which is a component of the vehicle paint.
Trimethylbenzene isomers	*	Trimethylbenzene isomers are a VOC which is a component of the vehicle paint.
Heptane isomers	*	Heptane Isomers is a VOC which is a component of the vehicle paint.

Additional Actions Undertaken Outside of the Plan

In addition to the facility's ISO 14001 certified systems and corporate objectives, Toyota has also prioritized environmental programs for its operations worldwide through the Toyota Global Vision and Guiding Principles and Earth Charter. Toyota's Earth Charter has been in place since 1992 and exemplifies the company's comprehensive approach to environmental programs. Environmental improvements at the facility are guided by the Policies and Action Guidelines stated within the charter, which is adhered to by all Toyota's operations worldwide. Within North America, Toyota's Action Plan highlights the environmental key performance indicators for energy, VOC emissions, waste, and water reduction. Toyota Motor Manufacturing Canada's targets for reduction are incorporated within the North American Action Plan. For more information on Toyota's Environmental Sustainability Report and Earth Charter please visit the following sites:

1) http://www.toyota.com/usa/environmentreport2016/
2) http://www.toyota-global.com/sustainability/

Plan Summary Statement

This Plan Summary accurately reflects the content of the toxic substance reduction plans, prepared by Karina Kenigsberg for the following substances:

- Sulphuric Acid, 13 December 2013
- Nitric Acid, 13 December 2013
- Manganese (and its compounds), 30 November 2015
- CO, 13 December 2013
- NOX, 13 December 2013
- PM-2.5, 13 December 2013
- PM-10, 13 December 2013
- Butane Isomers, 13 December 2013
- Pentane Isomers, 13 December 2013
- Sodium Nitrite, 13 December 2013
- Hydrogen fluoride, 13 December 2013
- Phosphorus (and its compounds), 13 December 2013
- Nitrate ion, 30 November 2015
- Zinc (and its compounds), 30 November 2015
- Toluene, 13 December 2013
- Methanol, 13 December 2013
- Acetone, 13 December 2013
- Methylenebis(phenylisocyanate), 30 November 2015
- Polymethylene Polypehenyl Isocyanate, 30 November 2015
- Butyl Benzyl Phthalate, 13 December 2013
- Isopropyl Alcohol, 13 December 2013
- n-Butyl Alcohol, 30 November 2015
- **Heavy alkylate naphtha, 17 June 2019**
- 1,2,4-Trimethylbenzene, 2 December 2016
- Methyl Isobutyl Ketone, 13 December 2013
- Butyl Cellosolve, 13 December 2013
- Xylene Isomers, 13 December 2013
- Ethylene Glycol, 13 December 2013
- Ethyl Alcohol, 30 November 2015
- Propylene glycol methyl ether acetate, 13 December 2013
- Diethylene glycol mono ethyl ether acetate, 13 December 2013
- n-Butyl acetate, 13 December 2013
- Ethyl acetate, 13 December 2013
- 1-Butoxy-2-propanol, 30 November 2015
- VM & P Naphtha, 13 December 2013
- Stoddard Solvent, 13 December 2013
- Petroleum distillate, hydrotreated light, 13 December 2013
- Naphtha, hydrotreated heavy, 30 November 2015
- Solvent naphtha, middle aliphatic, 30 November 2015
- Solvent naphtha, light aliphatic, 13 December 2013
- Solvent naphtha, heavy aromatic, 13 December 2013
- Solvent naphtha, light aromatic, 13 December 2013
- Trimethylbenzene isomers, 30 November 2015
- Heptane isomers, 13 December 2013
- Methyl Ethyl Ketone, 2 December 2016
- **Bisphenol A, 17 June 2019**

Certification by Highest Ranking Employee

As of **June 20, 2019 I, Derek Kidnie**, certify that I have read the toxic substance reduction plans for the toxic substances referred to below and am familiar with their contents, and to my knowledge the plans are factually accurate and comply with the Toxics Reduction Act, 2009 and Ontario Regulation 455/09 (General) made under that Act.

- Sulphuric Acid, 13 December 2013
- Nitric Acid, 13 December 2013
- Manganese (and its compounds), 30 November 2015
- CO, 13 December 2013
- NOX, 13 December 2013
- PM-2.5, 13 December 2013
- PM-10, 13 December 2013
- Butane Isomers, 13 December 2013
- Pentane Isomers, 13 December 2013
- Sodium Nitrite, 13 December 2013
- Hydrogen fluoride, 13 December 2013
- Phosphorus (and its compounds), 13 December 2013
- Nitrate ion, 30 November 2015
- Zinc (and its compounds), 30 November 2015
- Toluene, 13 December 2013
- Methanol, 13 December 2013
- Acetone, 13 December 2013
- Methylenebis(phenylisocyanate), 30 November 2015
- Polymethylene Polypehenyl Isocyanate, 30 November 2015
- Butyl Benzyl Phthalate, 13 December 2013
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- **Heavy alkylate naphtha, 17 June 2019**
- 1,2,4-Trimethylbenzene, 2 December 2016
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- Butyl Cellosolve, 13 December 2013
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- Ethyl Alcohol, 30 November 2015
- Propylene glycol methyl ether acetate, 13 December 2013
- Diethylene glycol mono ethyl ether acetate, 13 December 2013
- n-Butyl acetate, 13 December 2013
- Ethyl acetate, 13 December 2013
- 1-Butoxy-2-propanol, 30 November 2015
- VM & P Naphtha, 13 December 2013
- Stoddard Solvent, 13 December 2013
- Petroleum distillate, hydrotreated light, 13 December 2013
- Naphtha, hydrotreated heavy, 30 November 2015
- Solvent naphtha, middle aliphatic, 30 November 2015
- Solvent naphtha, light aliphatic, 13 December 2013
- Solvent naphtha, heavy aromatic, 13 December 2013
- Solvent naphtha, light aromatic, 13 December 2013
- Trimethylbenzene isomers, 30 November 2015
- Heptane isomers, 13 December 2013
- Methyl Ethyl Ketone, 2 December 2016
- **Bisphenol A, 17 June 2019**

Signed by:

Certification by Licensed Planner

As of **June 19, 2019**, **I, Beth Rhyno (TRSP#0273)** , certify that I am familiar with the processes at Toyota Motor Manufacturing Canada that use or create the toxic substances referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the Toxics Reduction Act, 2009 that are set out in the toxic substance reduction plans referred to below for the toxic substances and that the plans comply with that Act and Ontario Regulation 455/09 (General) made under that Act.

- Sulphuric Acid, 13 December 2013
- Nitric Acid, 13 December 2013
- Manganese (and its compounds), 30 November 2015
- CO, 13 December 2013
- NOX, 13 December 2013
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- PM-10, 13 December 2013
- Butane Isomers, 13 December 2013
- Pentane Isomers, 13 December 2013
- Sodium Nitrite, 13 December 2013
- Hydrogen fluoride, 13 December 2013
- Phosphorus (and its compounds), 13 December 2013
- Nitrate ion, 30 November 2015
- Zinc (and its compounds), 30 November 2015
- Toluene, 13 December 2013
- Methanol, 13 December 2013
- Acetone, 13 December 2013
- Methylenebis(phenylisocyanate), 30 November 2015
- Polymethylene Polypehenyl Isocyanate, 30 November 2015
- Butyl Benzyl Phthalate, 13 December 2013
- Isopropyl Alcohol, 13 December 2013
- n-Butyl Alcohol, 30 November 2015
- **Heavy alkylate naphtha, 17 June 2019**
- 1,2,4-Trimethylbenzene, 2 December 2016
- Methyl Isobutyl Ketone, 13 December 2013
- Butyl Cellosolve, 13 December 2013
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- Trimethylbenzene isomers, 30 November 2015
- Heptane isomers, 13 December 2013
- Methyl Ethyl Ketone, 2 December 2016
- **Bisphenol A, 17 June 2019**

Signed by: