Toxics Reduction Act – Public Summary Report – 2020 Reporting Year

Ford Motor Company – Oakville Assembly Complex

A. FACILITY INFORMATION

The Oakville Assembly Complex operates as an automotive assembly plant for the production of the Ford Edge and Lincoln MKX. The main facility processes consist of body building, painting and assembly.

Address	The Canadian Road Oakville, Ontario L6J 5C9
Spatial Coordinates	Zone 17, 607468 m E, 4816131 m N
NPRI/MOECC IDs	NPRI = 3419 MECP = 6763
No. of Employees	3,600
Primary Operation	Automobile Assembly Plant
NAICS Code(s)	33 – Manufacturing 3361 – Motor Vehicle Manufacturing 336110 - Automobile and Light Duty Motor Vehicle Manufacturing
Facility Contact	Mr. Cary Holt Ford Motor Company Environmental Quality Office 290 Town Center Drive Suite 800 Dearborn, Michigan 48126 Phone: (313) 938-6055 Email: cholt2@ford.com
Parent Company	Ford Motor Company of Canada, Limited The Canadian Road Oakville, Ontario L6J 5E4

B. TOXIC SUBSTANCE ACCOUNTING

Substances Reported	CAS#	Primary Use/Source
NPRI Part 1 Substances		
Di-2-ethylhexyl phthalate	117-81-7	Sealers
Ethylbenzene	100-41-4	Solvents
Ethylene glycol	107-21-1	Radiator coolant
Ethylene glycol monobutyl ether	111-76-2	Solvents / E-coat
Isopropanol	67-63-0	Paints / solvents
Methyl alcohol	67-56-1	Windshield wash solution
Methyl isobutyl ketone	108-10-1	Solvents / E-coat
Nitric acid	7697-37-2	Phosphate coating
n-Butyl alcohol	71-36-3	Solvents
Sodium nitrite	7632-00-0	Phosphate coating
1,2,4-Trimethylbenzene	95-63-6	Paints / solvents
Xylene	1330-20-7	Paints / solvents
Zinc (and its compounds)	n/a	Vehicle body / sealers
NPRI Part 4 Substances		
NO_x	11104-93-1	Fuel combustion
CO	630-08-0	Fuel combustion
PM_{10}	n/a	Spray coating / fuel combustion
$PM_{2.5}$	n/a	Spray coating / fuel combustion
NPRI Part 5 Substances		
Butane	n/a	Fuel combustion
Heavy aromatic solvent naphtha	64742-94-5	Paints / solvents
Hydrotreated heavy naphtha	64742-48-9	Paints / solvents
Hydrotreated light distillate	64742-47-8	Paints / solvents

Substances Reported	CAS#	Primary Use/Source
Light aromatic solvent naphtha	64742-95-6	Paints / solvents
n-Butyl acetate	123-86-4	Paints / solvents
n-Heptane	142-82-5	Paints / solvents
Pentane	n/a	Fuel combustion
Trimethylbenzene	25551-13-7	Paints / solvents

Accounting Details

Substance/Category	Accounting Quantities				Reason for Change
	2019	2020	Annual Comparison		
	(tonne)	(tonne)	(tonne)	(%)	
Di-2-ethylhexyl phthalate					
Used	>10 to 100	>10 to 100	(-)>1 to 10	-35%	Decrease in production and sealer use.
Created	n/a	n/a	n/a	n/a	
Contained in Product	n/a	n/a	n/a	n/a	
Released to Air	0.907	0.588	-0.319	-35%	
Released to Water	n/a	n/a	n/a	n/a	
Transfer for Disposal	0.229	0.148	-0.081	-35%	
Transfer for Recycle	n/a	n/a	n/a	n/a	
Ethylbenzene					
Used	>10 to 100	>10 to 100	(-)>10 to 100	-46%	Decrease in production and usage of purge solvent.
Created	0	0	n/a	n/a	
Contained in Product	0	0	n/a	n/a	
Released to Air	21.59	2.454	-19.13	-89%	
Released to Water	0	0	n/a	n/a	
Transfer for Disposal	0.003	0.002	-0.001	-22%	Decrease in general use products containing ethylbenzene.
Transfer for Recycle	59.28	41.61	-17.67	-30%	Decrease in production and purge solvent usage.
Ethylene glycol					
Used	>1,000 to 10,000	>100 to 1,000	(-)>100 to 1000	-46%	Decreased production and usage of engine coolant.
Created	0	0	n/a	n/a	
Contained in Product	>1,000 to 10,000	>100 to 1,000	(-)>100 to 1000	-46%	
Released to Air	0	0	n/a	n/a	No significant change in air releases.
Released to Water	0	0	n/a	n/a	
Transfer for Disposal	0.118	0.063	-0.054	-46%	Decreased production and usage of engine coolant.

Transfer for Recycle	0	0	n/a	n/a	No change in off-site recycles.
Ethylene glycol monobutyl ether					
Used	>10 to 100	>10 to 100	(-)>10 to 100	-34%	Decreased usage of products containing EGME.
Created	0	0	n/a	n/a	
Contained in Product	0	0	n/a	n/a	
Released to Air	6.577	4.642	-1.935	-29%	
Released to Water	0	0	n/a	118%	Increase in usage for one spray coating containing EGME in which a portion is captured by the water curtain and released to MSTP.
Transfer for Disposed	0.118	0.091	-0.027	-23%	Decrease in production.
Transfer for Recycle	0	0	n/a	n/a	No change in off-site recycles.
Isopropanol					
Used	>10 to 100	>10 to 100	(-)>10 to 100	-49%	Decrease in production and usage of products containing iso-propanol.
Created	0	0	n/a	n/a	
Contained in Product	0	0	n/a	n/a	
Released to Air	21.97	13.06	(-)4.049	-41%	
Released to Water	0.00	0	n/a	n/a	
Transfer for Disposal	0.507	0.244	(-)0.024	-52%	Decrease in general use products containing iso-propanol.
Transfer for Recycle	6.96	1.817	-5.147	-74%	Decrease in production and purge solvent usage.
Methyl alcohol					
Used	>100 to 1,000	>100 to 1,000	(-)>100 to 1000	-53%	Decrease in production and usage of products containing methanol.
Created	0	0	n/a	n/a	
Contained in Product	>100 to 1,000	>100 to 1,000	(-)>100 to 1000	-53%	
Released to Air	2.026	1.769	(-)0.790	-13%	Decrease in the quantity of methanol in spray coatings.
Released to Water	0.000	0	n/a	n/a	
Transfer for Disposal	0.053	0.048	(-)0.029	-10%	Decrease in production and usage of products containing methanol.
Transfer for Recycle	3.139	0.864	(-)0.209	-72%	Decrease in production and usage of products containing

					methanol.
Methyl isobutyl ketone					
Used	>10 to 100	>10 to 100	(-)>10 to 100	-34%	Decreased production and usage of purge solvents containing MIBK.
Created	0	0	n/a	n/a	
Contained in Product	0	0	n/a	n/a	
Released to Air	4.430	8.202	(-)5.708	85%	Decreased recovery in spent purge solvent, results in increase in air release due to mass balance calculation.
Released to Water	0.00	0	n/a	n/a	
Transfer for Disposal	0.00	0	n/a	n/a	
Transfer for Recycle	42.16	22.80	-19.36	-46%	Decreased recovery of spent purge solvent
Nitric acid					
Used	>1 to 10	>10 to 100	n/a	n/a	Nitric Acid usage triggers reporting for 2020 year, but did not in 2019.
Created	0	0	n/a	n/a	
Contained in Product	0	0	n/a	n/a	
Released to Air	0	0	n/a	n/a	
Released to Water	0	0	n/a	n/a	
Transfer for Disposal	0	0	n/a	n/a	
Transfer for Recycle	0	0	n/a	n/a	
n-Butyl alcohol					
Used	>100 to 1,000	>100 to 1,000	(-)>10 to 100	-45%	Decrease in production and usage of products containing n-Butyl alcohol.
Created	0	0	n/a	n/a	Decrease in production and usage of products containing n-Butyl alcohol.
Contained in Product	0	0	n/a	n/a	
Released to Air	98.00	65.57	(-)15.27	-33%	
Released to Water	0.0	0	n/a	n/a	
Transfer for Disposal	2.620	1.373	-1.246	-48%	Decrease in production and usage of products containing n-butyl alcohol resulted in a decrease in disposal.
Transfer for Recycle	64.03	23.07	-40.96	-64%	Decrease in production and usage of products containing n-Butyl alcohol.

Sodium nitrite					
Used	>10 to 100	>10 to 100	(-)>1 to 10	-19%	Decreased usage of sodium nitrite.
Created	0	0	n/a	n/a	
Contained in Product	>0 to 1	>0 to 1	(-)>0 to 1	-98%	
Released to Air	n/a	n/a	n/a	n/a	No significant change in air releases.
Released to Water	9.720	7.904	(-)1.060	-19%	Decrease in production and usage of sodium nitrite in phosphate coat and released to water.
Transfer for Disposal	0.002	0.000	(-)0.001	-98%	Decrease in production and general use products containing sodium nitrite.
Transfer for Recycle	n/a	n/a	n/a	n/a	No significant change in off-site recycles.
1,2,4-Trimethylbenzene					
Used	>100 to 1,000	>100 to 1,000	(-)>10 to 100	-31%	Decreased production and usage of spray coatings, purge solvents and general use products containing 1,2,4-trimethylbenzene.
Created	n/a	n/a	n/a	n/a	
Contained in Product	n/a	n/a	n/a	n/a	
Released to Air	136.7	96.95	-39.76	-29%	
Released to Water	n/a	n/a	n/a	n/a	
Transfer for Disposal	2.471	0.832	-1.639	-66%	
Transfer for Recycle	78.39	60.37	-18.02	-23%	Decrease in production and decrease in quantity of purge solvent sent to Gage for recycling.
Xylene					
Used	>100 to 1,000	>100 to 1,000	(-)>100 to 1000	-38%	Decreased production and usage of products containing xylene.
Created	0	0	n/a	n/a	
Contained in Product	0	0	n/a	n/a	
Released to Air	87.79	33.83	-53.96	-61%	
Released to Water	n/a	n/a	n/a	n/a	
Transfer for Disposal	0.104	0.055	-0.049	-47%	
Transfer for Recycle	253.6	178.1	-75.54	-30%	Decreased in production and usage of products containing xylene.

Zinc (and its compounds)					
Used	>1,000 to 10,000	>1,000 to 10,000	>10 to 100	-43%	Decrease in production.
Created	0	0	n/a	n/a	
Contained in Product	>1,000 to 10,000	>1,000 to 10,000	>1 to 10	-44%	
Released to Air	0.0002	0.0001	-0.0001	-43%	Decrease in production.
Released to Water	0.137	0.054	(-)0.002	-61%	Decrease in wastewater released.
Transfer for Disposal	0.173	0.175	(-)0.043	1%	No significant change in disposal quantities.
Transfer for Recycle	8.293	5.672	(-)1.656	-32%	Decrease in production.
NO_x					
Used	0	0	n/a	n/a	Decreased production and natural gas usage.
Created	>10 to 100	>10 to 100	(-)>10 to 100	-27%	
Released to Air	70.06	52.83	-17.23	-25%	
CO					
Used	0.0	0	n/a	n/a	Decreased production and natural gas usage.
Created	>10 to 100	>10 to 100	(-)>10 to 100	-27%	
Released to Air	60.57	45.41	-15.16	-25%	
PM_{10}					
Used	0	0	n/a	n/a	Decreased Production.
Created	>100 to 1,000	>10 to 100	(-)>10 to 100	-44%	
Released to Air	13.69	7.901	(-)0.786	-42%	
$PM_{2.5}$					
Used	0	0	n/a	n/a	Decreased Production.
Created	>10 to 100	>10 to 100	(-)>10 to 100	-44%	
Released to Air	3.868	2.413	(-)0.085	-38%	
Butane					
Used	0	0	n/a	n/a	Decreased production and natural gas usage.

Created	>1 to 10	>1 to 10	>0 to 1	0%	
Released to Air	1.452	1.452	n/a	0%	
Heavy aromatic solvent naphtha					
Used	>10 to 100	>10 to 100	(-)>10 to 100	-45%	Decreased production and usage of products containing HASN.
Created	>0 to 1	>0 to 1	n/a	n/a	
Released to Air	9.124	5.012	-4.112	-45%	
Hydrotreated heavy naphtha					
Used	>10 to 100	>10 to 100	(-)>10 to 100	-54%	Decreased production and usage of products containing HHN.
Created	0	0	n/a	n/a	
Released to Air	6.062	2.996	-3.066	-51%	
Hydrotreated light distillate					
Used	>1 to 10	>1 to 10	(-)>0 to 1	-15%	Decreased production, but increased usage of general use products as a result of a product formulation re-assessment.
Created	n/a	n/a	n/a	n/a	
Released to Air	1.485	2.082	0.598	40%	
Isopropanol					
Used	>10 to 100	>10 to 100	(-)>10 to 100	-49%	Decreased production and usage of products containing IPA.
Created	0	0	n/a	n/a	
Released to Air	21.97	13.06	(-)4.049	-41%	
Light aromatic solvent naphtha					
Used	>100 to 1,000	>100 to 1,000	(-)>100 to 1000	-37%	Decrease in production and usage of spray coatings, purge solvents and general use products containing LASN.
Created	0	0	n/a	n/a	
Released to Air	44.94	31.29	-13.65	-30%	
n-Butyl acetate					
Used	>100 to 1,000	>100 to 1,000	(-)>10 to 100	-36%	Decreased production and usage of products containing Butyl acetate.
Created	0	0	n/a	n/a	
Released to Air	51.46	29.42	(-)4.000	-43%	

n-Heptane					
Used	>10 to 100	>10 to 100	(-)>10 to 100	-47%	Decreased production and usage of products containing n-heptane.
Created	0	0	n/a	n/a	
Released to Air	12.61	6.693	-5.918	-47%	
Pentane					
Used	0	0	n/a	n/a	Decreased production and natural gas usage.
Created	>1 to 10	>1 to 10	>0 to 1	-24%	
Released to Air	1.106	1.363	-0.434	-24%	
Trimethylbenzene					
Used	>10 to 100	>10 to 100	(-)>1 to 10	-19%	Decreased production and usage of spray coatings and purge solvents containing TMB.
Created	0	0	n/a	n/a	
Released to Air	43.47	39.09	-4.388	-10%	

C. TOXIC SUBSTANCE REDUCTION PLANNING

Objectives & Targets

Substance	Objectives & Targets	Reduction Option Progress
Asbestos	n/a – no options identified	Asbestos was not reportable for 2015, 2016, 2017, 2018, 2019 and 2020 reporting years.
Di-2-ethylhexyl phthalate	n/a – no options identified	
Ethylbenzene	– Continue to transition to low VOC booth cleaners. – Continue to increase block size. – Continue to implement "lockout" practice on all valves in the paint booths.	The planned steps were completed.
Ethylene glycol	n/a – no options identified	
Ethylene glycol monobutyl ether	– Continue to transition to low VOC booth cleaners. – Continue to increase block size. – Continue to implement "lockout" practice on all valves in the paint booths.	The planned steps were completed.
Isobutyl alcohol	– Continue to transition to low VOC booth cleaners. – Continue to increase block size. – Continue to implement "lockout" practice on all valves in the paint booths.	The planned steps were completed. Isobutyl alcohol was not reportable for 2016, 2017, 2018, 2019 and 2020 reporting years.
Isopropanol	– Continue to transition to low VOC booth cleaners. – Continue to increase block size. – Continue to implement "lockout" practice on all valves in the paint booths.	The planned steps were completed.
Manganese (and its compounds)	n/a – no options identified	Manganese (and its compounds) was not reportable for 2015, 2016, 2017, 2018, 2019, and 2020 reporting years.
Methyl alcohol	n/a – no options identified	
Methyl isobutyl ketone	– Continue to transition to low VOC booth cleaners. – Continue to increase block size. – Continue to implement "lockout" practice on all valves in the paint booths.	The planned steps were completed.
Nitric acid	n/a – no options identified	
n-Butyl alcohol	– Continue to transition to low VOC booth cleaners. – Continue to increase block size.	The planned steps were completed.

Substance	Objectives & Targets	Reduction Option Progress
	– Continue to implement "lockout" practice on all valves in the paint booths.	
Sodium nitrite	n/a – no options identified	
Sulphuric acid	n/a – no options identified	Sulphuric acid was not reportable in the 2020 reporting year.
Toluene	– Continue to transition to low VOC booth cleaners. – Continue to increase block size. – Continue to implement "lockout" practice on all valves in the paint booths.	The planned steps were completed. Toluene was not reportable as a Part 1 substance for 2016, 2017, 2018, 2019, and 2020 reporting years, and is not reportable as a Part 5 VOC in the 2020 reporting year.
1,2,4-Trimethylbenzene	– Continue to transition to low VOC booth cleaners. – Continue to increase block size. – Continue to implement "lockout" practice on all valves in the paint booths.	The planned steps were completed.
Xylene	– Continue to transition to low VOC booth cleaners. – Continue to increase block size. – Continue to implement "lockout" practice on all valves in the paint booths.	The planned steps were completed.
Zinc (and its compounds)	n/a – no options identified	
NO_x	– Reduce the use of natural gas in process and heating combustion equipment.	Continued to implement the steps in the plan.
CO	– Reduce the use of natural gas in process and heating combustion equipment.	Continued to implement the steps in the plan.
PM_{10}	– Reduce the use of spray coatings.	Continued to increase block size.
$PM_{2.5}$	– Reduce the use of spray coatings.	Continued to increase block size.
Butane	– Reduce the use of natural gas in process and heating combustion equipment.	Continued to implement the steps in the plan.
Diethylene glycol monobutyl ether	– Continue to transition to low VOC booth cleaners. – Continue to increase block size. – Continue to implement "lockout" practice on all valves in the paint booths.	The planned steps were completed. Diethylene glycol monobutyl ether was not reportable for 2016 2017, 2018 2019, and 2020 reporting years.
Ethylene glycol monobutyl ether acetate	– Continue to transition to low VOC booth cleaners. – Continue to increase block size.	The planned steps were completed. EGMEA is no longer an NPRI and TRA substance.

Substance	Objectives & Targets	Reduction Option Progress
	– Continue to implement "lockout" practice on all valves in the paint booths.	
Heavy aromatic solvent naphtha	– Continue to transition to low VOC booth cleaners. – Continue to increase block size. – Continue to implement "lockout" practice on all valves in the paint booths.	The planned steps were completed.
Hexane	– Reduce the use of natural gas in process and heating combustion equipment.	Continued to implement the steps in the plan. Hexane was not reportable for the 2020 reporting year.
Hydrotreated heavy naphtha	– Continue to transition to low VOC booth cleaners. – Continue to increase block size. – Continue to implement "lockout" practice on all valves in the paint booths.	The planned steps were completed.
Hydrotreated light distillate	– Continue to transition to low VOC booth cleaners. – Continue to increase block size. – Continue to implement "lockout" practice on all valves in the paint booths.	The planned steps were completed.
Light aromatic solvent naphtha	– Continue to transition to low VOC booth cleaners. – Continue to increase block size. – Continue to implement "lockout" practice on all valves in the paint booths.	The planned steps were completed.
Methyl ethyl ketone	– Continue to transition to low VOC booth cleaners. – Continue to increase block size. – Continue to implement "lockout" practice on all valves in the paint booths.	The planned steps were completed. Methyl ethyl ketone was not reportable for the 2020 reporting year.
n-Butyl acetate	– Continue to transition to low VOC booth cleaners. – Continue to increase block size. – Continue to implement "lockout" practice on all valves in the paint booths.	The planned steps were completed.
n-Heptane	– Continue to transition to low VOC booth cleaners. – Continue to increase block size. – Continue to implement "lockout" practice on all valves in the paint booths.	The planned steps were completed.
Pentane	– Reduce the use of natural gas in process and heating	Continued to implement the steps in the plan.

Substance	Objectives & Targets	Reduction Option Progress
	combustion equipment.	
Propane	– Reduce the use of natural gas in process and heating combustion equipment.	Continued to implement the steps in the plan. Propane was not reportable for the 2020 reporting year.
Solvent naphtha medium aliphatic	– Continue to transition to low VOC booth cleaners. – Continue to increase block size. – Continue to implement "lockout" practice on all valves in the paint booths.	Continued to implement the steps in the plan. Solvent naphtha medium aliphatic was not reportable for the 2020 reporting year.
Tetrahydrofuran	– Continue to transition to low VOC booth cleaners. – Continue to increase block size. – Continue to implement "lockout" practice on all valves in the paint booths.	The planned steps were completed. Tetrahydrofuran was not reportable for the 2014 through 2020 reporting years.
Trimethylbenzene	– Continue to transition to low VOC booth cleaners. – Continue to increase block size. – Continue to implement "lockout" practice on all valves in the paint booths.	The planned steps were completed.
Acetone	– Continue to transition to low VOC booth cleaners. – Continue to increase block size. – Continue to implement "lockout" practice on all valves in the paint booths.	The planned steps were completed. Acetone was not reportable for 2016, 2017 and 2018 reporting years. O. Reg. 127 was rescinded in 2019 and acetone is no longer a reportable substance under TRA.

Annual Report Certification Statement

As of September 1, 2021, I certify that I have read the report(s) on the toxic substance reduction plan(s) for the toxic substances included above, and am familiar with its/their contents and to my knowledge the information contained in the report(s) is factually accurate and the report complies/reports comply with the Toxics Reduction Act, 2009 and Ontario Regulation 455/09 (General) made under the Act.

Tony Savoni, Plant Manager

_____

(Digital signature on file)