Toxics Reduction Act – Public Summary Report – 2020 Reporting Year

Ford Essex Engine Plant

A. FACILITY INFORMATION

The Essex Engine Plant machines and assembles engine components to produce complete automotive engine assemblies, including the 5.0L V8 engine. The main facility processes consist of machining, assembly, and engine research, development and testing.

Address	1 Quality Way Windsor, Ontario N9A 6X3
Spatial Coordinates	340918 m E, 4684629 m N
NPRI/MECP IDs	NPRI = 3886 MECP = 6376
No. of Employees	822
Primary Operation	Engine Machining and Assembly Plant, Engine Research, Development and Testing
NAICS Code	33 – Manufacturing 3363 – Motor Vehicle Parts Manufacturing 336310 – Motor Vehicle Gasoline Engine and Engine Parts 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
Parent Company	Ford Motor Company of Canada, Limited 100 The Canadian Road Oakville, Ontario L6J 5E4

B. TOXIC SUBSTANCE ACCOUNTING

Substances Reported	CAS#	Primary Use/Source
NPRI Part 1 Substances		
Copper (and its compounds)	n/a	Machining/assembly
Manganese (and its compounds)	n/a	Machining/assembly
NPRI Part 4 Substances		
Oxides of Nitrogen	11104-93-1	Dynamometer testing/fuel combustion
Carbon Monoxide	630-08-0	Dynamometer testing/fuel combustion
Particulate Matter ≤ 10 micron (PM10)	n/a	Machining/assembly/dynamometer testing/fuel combustion/cooling towers
Particulate Matter ≤ 2.5 micron (PM2.5)	n/a	Machining/assembly/dynamometer testing/fuel combustion/cooling towers

Accounting Details

Substance/Category	Accounting Quantities				Reason for Change
	2019	2020	Annual Comparison		
	(tonne)	(tonne)	(tonne)	(%)	
Copper (and its compounds)					
Used	407.0	292.6	114.4	↓28%	Decreased production due to COVID-19 Pandemic.
Created	0	0	0	0%	n/a
Contained in Product	323.2	240.0	83.2	↓26%	Decreased production due to COVID-19 Pandemic.
Released to Air	0.085	0.063	0.022	↓26%	Decreased production due to COVID-19 Pandemic.

Substance/Category	Accounting Quantities				Reason for Change
	2019	2020	Annual Comparison		
	(tonne)	(tonne)	(tonne)	(%)	
Released to Water	0	0	0	0%	n/a
Transfer for Disposal	0.105	0.043	0.062	↓59%	Decreased volume of ferrous metal dust sent to landfill and decreased discharge sent to OWTP.
Transfer for Recycle	61.8	47.0	14.8	↓24%	Decreased production due to COVID-19 Pandemic.
Manganese (and its compounds)					
Used	181.6	129.6	52	↓29%	Decreased production due to COVID-19 Pandemic.
Created	0	0	0	0%	n/a
Contained in Product	135.0	97.2	37.8	↓28%	Decreased production due to COVID-19 Pandemic.
Released to Air	0.031	0.022	0.009	↓29%	Decreased production due to COVID-19 Pandemic.
Released to Water	0	0	0	0%	n/a
Transfer for Disposal	1.685	0.707	0.978	↓58%	Decreased volume of ferrous metal dust sent to landfill and decreased discharge sent to OWTP.
Transfer for Recycle	48.55	34.51	14.04	↓29%	Decreased production due to COVID-19 Pandemic.
Oxides of Nitrogen					
Used	0	0	0	n/a	n/a
Created	50.48	73.06	22.58	↑45%	Increased diesel usage compared to 2019.
Released to Air	50.48	73.06	22.58	↑45%	Increased diesel usage compared to 2019.
Carbon Monoxide					
Used	0	0	0	n/a	n/a
Created	500.1	319.8	180.3	↓36%	Decreased production due to COVID-19 Pandemic.
Released to Air	500.1	319.8	180.3	↓36%	Decreased production due to COVID-19 Pandemic.

Substance/Category	Accounting Quantities				Reason for Change
	2019	2020	Annual Comparison		
	(tonne)	(tonne)	(tonne)	(%)	
Particulate Matter ≤ 10 micron (PM10)					
Used	0	0	0	n/a	n/a
Created	83.35	60.86	22.48	↓27%	Decreased production due to COVID-19 Pandemic.
Released to Air	9.792	6.802	2.990	↓31%	Decreased production due to COVID-19 Pandemic.
Particulate Matter ≤ 2.5 micron (PM2.5)					
Used	0	0	0	n/a	n/a
Created	44.35	32.09	12.26	↓28%	Decreased production due to COVID-19 Pandemic.
Released to Air	9.508	6.481	3.027	↓32%	Decreased production due to COVID-19 Pandemic.

C. TOXIC SUBSTANCE REDUCTION PLANNING

Objectives & Targets

Substance	Objectives & Targets	Reduction Option Progress
Copper (and its compounds)	Reduce the use of Copper (and its compounds) by implementing improved operating procedures and training efforts with a goal of improving department specific first time through numbers.	All team leaders and process coaches participated in the Ford Production System (FPS) training which included a review of all FPS elements (safety, quality, delivery, cost, people, maintenance and environment).
Manganese (and its compounds)	Reduce the use of Manganese (and its compounds) by implementing improved operating procedures and training efforts with a goal of improving department specific first time through numbers.	

Substance	Objectives & Targets	Reduction Option Progress
Oxides of Nitrogen and Carbon Monoxide	Reduce the creation of Oxides of Nitrogen and Carbon Monoxide by investigating reduced temperature set points for natural gas equipment and instituting operating practices to reduce run-time.	Adjustment of run time based on indoor and outdoor temperatures and forecasts is completed continuously. Large boilers are being shut down earlier in the year and re-started later in the year than has typically been done in the past. Small door heaters are used for supplemental heat if needed. Doors are monitored to ensure they remain closed.
Particulate Matter ≤ 10 micron (PM10) and Particulate Matter ≤ 2.5 micron (PM2.5)	Reduce the creation of PM10 and PM2.5 by replacing/upgrading a cooling tower (CT-1 or CT-3) at the site and by implementing improved operating procedures and training efforts with a goal of improving department specific first time through numbers.	All team leaders and process coaches participated in the Ford Production System (FPS) training which included a review of all FPS elements (safety, quality, delivery, cost, people, maintenance and environment).

Annual Report Certification Statement

As of September 21, 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.

Thomas Reeber, Site Operations Manager

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