Memorandum

May 13, 2021

To:	Mike Saunders, Autocom Manufacturing	Ref. No.:	014584
From:	Matthew Griffin/cb/22		

Subject: **Documentation Report for 2020 Reporting Year**
National Pollutant Release Inventory, Greenhouse Gas and Toxics Reduction Act Report
Autocom Manufacturing Ltd., Guelph, Ontario

This memorandum has been prepared to provide documentation for the National Pollutant Release Inventory (NPRI) Report, Toxics Reduction Act (TRA) and Greenhouse Gas (GHG) for the 2020 reporting year at the Autocom Manufacturing Ltd. facility in Guelph, Ontario.

This memorandum is summarized in the following sections:

1. NPRI Applicability
2. Manufactured, Processed, or Otherwise Used Quantities Determination
3. NPRI Air Emission Release Estimates
4. NPRI Off-Site Transfers and Discharges
5. Environment Canada GHG Summary
6. Ontario Regulation GHG Reporting
7. Toxics Reduction Act Reporting
8. Section A Administrative Information
9. Next Steps -TRA

1. NPRI Applicability

Autocom will be required to calculate and report the emissions of contaminants listed in NPRI only if it meets both of the following two criteria:

- The equivalent of 20,000 hours of labour or more annually (equivalent to 10 full-time employees).
- Any substance in NPRI is manufactured, processed, or otherwise used (MPO) in a quantity equal to or greater than the corresponding threshold.

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The MPO quantities for the Facility were compared with the NPRI MPO thresholds to determine reporting status.

As provided by Autocom, the facility has over 10 full-time employees.

2. Manufactured, Processed, or Otherwise Used Quantities Determination

GHD has evaluated the 2020 inventory of all chemicals used; the quantities of each chemical have been sorted by the Chemical Abstract Service number (CAS No.) and summed to determine the manufactured, processed, or otherwise used (MPO) quantity for each chemical used at the facility. Table 1 provides a summary of chemical product and welding wire usage. Table 2 provides metallurgical parts analysis and Table 3 provides a summary of metal usage.

The MPO quantities have been compared with the NPRI MPO thresholds to determine the reporting status in Table 4. Autocom is reportable to NPRI for copper.

Volatile organic compounds (VOCs) released from chemical usage are identified by cross-referencing chemicals in the 2020 chemicals inventory to those listed as VOCs published by NPRI guidelines.

3. NPRI Air Emission Release Estimates

The welding fume release estimates are calculated using USEPA AP-42 emission factors and the annual usage rate, as summarized in Table 5. The emissions are classified as fugitive because the units exhaust into the building and are released through general ventilation.

The quantities of NPRI Criteria Air Contaminants (CACs) from natural gas and propane combustion are determined by using an emission factor calculation methodology and the monthly natural gas and propane consumption provided by Autocom, as summarized in Tables 6A and 6B, respectively. There are no reportable CACs at the facility.

4. NPRI Off-Site Transfers and Discharges

Autocom is required to report off-site transfers and discharges for NPRI substances that exceed the MPO thresholds. Autocom recycles scrap metal to Gerdau Ameristeel, located in Guelph, Ontario. Metallic off-site transfers were calculated by multiplying the average weight percentage of the substance in the parts specifications by the overall quantity of metal that was recycled.

Table 7 provides the off-site transfer information for all reportable substances.

5. Environment Canada GHG Summary

Federally, Facilities must report their GHG emissions to Environment Canada if they exceed 10,000 tonnes carbon dioxide equivalent (CO_2e).

The federal reporting requirements and sources to include in the reporting are described in the Canada Gazette. Autocom does not exceed the reporting threshold and therefore is not required to report GHG emissions to Environment Canada. The applicability threshold value calculated from the Federal GHG sources are presented in Table 8A.

6. Ontario GHG Reporting

In Ontario, Facilities are required to report if emissions exceed 10,000 tonnes of CO_2e. The regulation sets out sources that must be included in the threshold determination as well as reporting requirements.

Autocom sources do not exceed the reportable threshold and therefore the Facility is not required to report GHG emissions to the Ministry of the Environment. The applicability threshold value calculated from the GHG sources are presented in Table 8B.

7. Toxics Reduction Act Reporting

The TRA Regulation 455/09 applies to manufacturing (NAICS 31-33) and select mining/processing facilities that employ more than an equivalent of 10 full-time persons, and who use or create acetone or materials regulated by the NPRI.

Autocom's NAICS Code is 336390-Other Motor Vehicle Parts Manufacturing and was NPRI Reportable for the 2020 reporting year; therefore, Autocom is currently applicable under the Act.

The TRA metals reporting and TRA reportable quantities are summarized on Tables 9 and 10, respectively. Autocom previously prepared Toxic Substance Reduction Plans for copper.

8. Section A Administrative Information

The administrative information provided by Autocom is summarized in Table 11.

9. Conclusions

Autocom is reportable under NPRI and TRA for copper.

Autocom is not reportable federally or provincially for GHG emissions.

10. Next Steps – TRA

Autocom is required to make available to the public on the internet, and provide to a member of the public upon written request, the information reported to the Toxics Reduction Act in accordance with Section 27 of O. Reg. 455/09.

The TRA Public Reporting Summary is provided as a separate document.

Should you have any questions on the above, please do not hesitate to contact us.

Table 1

Summary of Product Usage
Autocom Manufacturing
Guelph, Ontario

Product Name	SDS Compounds	CAS Number	Weight (%)	Specific Gravity	2020 Usage (L/year)	2020 Usage (kg/year)	2020 by Compound (kg/year)	Table Identification			
								Total VOC	NPRI	NPRI VOC	TRA
Dasco Arc NPD 415	Mineral Oil	64742-52-5	80%	0.94	409	384	308	Total VOC			
Dasco ARC 206-HF	Petroleum Distillate	64742-46-7	20%	0.82	3,123	2,561	512.17	Total VOC			
	Petroleum Hydrocarbon	64742-47-8	80%				2,048.69	Total VOC	NPRI		
Mineral Spirit	Stoddard Solvent	64742-88-7	100%	0.79	48	38	37.9	Total VOC	NPRI		
Spray Clean 6513	Tetrasodium EDTA	13235-36-4	3%	1	11,000	11,000	330.00				
	Tetra potassium pyrophosphate	7320-34-5	3%				330.00				
	Triethanolamine	102-71-6	10%				1,100.00				
	Potassium carbonate	584-08-7	3%				330.00				
Ecocool SYN 6028	Amine Soap (1)	68132-46-7	30%	1.061	60,500	64,191	19,257.15				
Isopropyl Alcohol	Isopropyl Alcohol	67-63-0	100%	0.785	48	38	37.68	Total VOC	NPRI	NPRI-VOC	
Welding Products											
Diamond Slurries	Diamond	7782-40-3	3%	1.04	0	0	0.00				
	Hydroxy Glycol	NA	15%				0.00				
Nitric Acid	Nitric Acid	7697-37-2	65%	1.5	0.00	0	0		NPRI		
Brase 380 (2)	Boric Acid	10043-35-3	100%			0	0				
	Copper	7440-50-8	100%				0		NPRI		
	Potassium fluoborate	14075-53-7	100%				0				
	Potassium fluoride	7789-23-3	100%				0				
	Potassium tetraborate	12045-78-2	100%				0				
	Silver	7440-22-4	100%				0		NPRI		
	Tin	7440-31-5	100%				0				
	Zinc	7440-66-6	100%				0		NPRI		

Notes:

(1) CAS Number estimated by GHD as none was provided in the SDS for the product.
(2) Estimated percentages.

Table 2

Metallurgical Parts Analysis
Autocom Manufacturing
Guelph, Ontario

Product	Part Number	Metallurgy Analysis (Weight %) (1)													
		C	Si	Mn	P	S	Cu	Cr	Ni	Mb	Mg	Sn	Fe	Al	Pb
Reaction Carrier Hub (GM/Ford-6F)	24245787			0.45			0.80	0.80						0.04	
Ford Sterling - Elocker Flange	BC3W4206BD/CA			0.60											
Ford Sterling - Barrel	BC3W4205AA			0.60											
Ford Sterling - Conventional	RFBC3W4206CA	3.563	2.268	0.41	0.0275	0.0041	0.2767	0.036188			0.038				
DCX - Input Carrier - (68RFE)	52119725AA			0.54			0.55	0.50	0.1681804					0.09	< 0.1%
DCX - Reverse Carrier - (68RFE)	52119740AA			0.43			1.07	0.11	0.124466					0.004	
DCX - Reaction Carrier - (68RFE)	52119744AA			0.55			2.8	0.2							< 0.1%
DCX - Reaction Sun - (68RFE)	52119771AA			0.37				0.562	1.63						
Ford - Reaction Carrier hub (6F Mid)	9l8P-7F351			0.80				0.8	0.025						
GKN - Carrier 6R140 - Line#38	BC3P-7G225						3.9								
GM-OutPut Carrier Hub	24241185			0.25			0.30								
GM x23-Reaction hub GEN2	24247699			0.84				0.79						0.04	
GM x23-Reaction hub 6T30 GEN2	24252240			0.84				0.79						0.04	
GM x23-Output hub - SD	24233647			0.50				0.95							
GM x23-Output hub - 6T30 (24283296)	24231788			0.50			0.13	0.89	0.12						
Ford P552 Diff LH	FL3W-4C168 LH	3.9	2.55	1.20	0.05	0.02	3.9	0.4	1		0.06		99.79		
Ford P552 Diff RH	FL3W-4205 RH	3.7	2.8	0.55	0.05	0.02	1	0.15	1		0.06		92.25		
GM 9T Reaction hub (24288146)	24267610			0.84	0.00	0.00	0.00	0.79	0.00	0.00	0.00	0.00	0.00	0.04	
GM x23-Output hub - 6T35 (24283295)	24268944			0.49			0.12	0.88	0.10					0.22	
GM 6T50-Assembly AWD (24267358)	24267358			0.55			0.27	0.53	0.12						
GM 6T50-Assembly FWD (24267357)	24267357			0.52			0.28	0.5	0.11						
GM 6T50-Assembly Short Cover (24279798)	24279798			0.30			0.4	0.035	0.05						
Ford 8F Reaction hub (JM5P-7H351 DA)	JM5P-7H351 AB			1.10			0.175	1.05	0.125						
Ford 8F Output hub (JM5P-7G142 EA)	JM5P-7G142 DA			0.58			0.19	0.98	0.16						
Ford 8F57 Reaction Carrier (K2GP-7H351)	K2GP-7H351			1.20			0.18	0.98	0.08						
Ventilator	-													100	
E Cylinder Housing	-	0.05	0.194	0.82	0.015	0.003	0.02	0.03	0.01	0				0.03	

Notes:

(1) Shaded grey areas are NPRI compounds above the de minimis threshold level.
(2) Material data sheet not available. Assume maximum composition of all existing GM x23 Reaction Hub parts.

Table 3

Summary Of Metals Reporting
Autocom Manufacturing
Guelph, Ontario

Product	Parts Made Per Year	Raw Weight Per Part (lb)	Finished Weight Per Part (lb)	Raw - Finished extra (lb)	Total Annual Weight (kg)	Total Annual Recycled (kg)	Manganese Content (%)	Manganese MPO[(1)] Quantity (kg)	Manganese Recycled (kg)	Nickel Content (%)	Nickel MPO [(1)] Quantity (kg)	Nickel Recycled (kg)	Chromium Content (%)	Chromium MPO[(1)] Quantity (kg)	Chromium Recycled (kg)	Copper Content (%)	Copper MPO[(1)] Quantity (kg)	Copper Recycled (kg)
Reaction Carrier Hub (GM/Ford-6F)	59,245	3.60	1.25	2.35	96,946	63,311	0.45	NA	285	NA	NA	NA	0.8	NA	506	0.8	NA	506
Ford Sterling - Elocker Flange	117,072	56.91	30.28	26.63	3,028,440	1,417,103	0.60	NA	8,503	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ford Sterling - Barrel	124,146	10.68	7.50	3.18	602,672	179,447	0.60	NA	1,077	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ford Sterling - Conventional	7,074	20.45	15.25	5.20	65,756	16,720	0.41	NA	68	NA	NA	NA	0.036188	NA	6	0.3	NA	46
DCX - Input Carrier - (68RFE)	76,290	12.38	9.44	2.95	429,305	102,125	0.54	NA	547	0.168	NA	172	0.50	NA	509	0.6	NA	564
DCX - Reverse Carrier - (68RFE)	76,440	6.58	6.26	0.33	228,625	11,292	0.43	NA	48	0.124	NA	14	0.11	NA	13	1.1	2,441	121
DCX - Reaction Carrier - (68RFE)	71,838	7.86	6.98	0.88	256,494	28,572	0.55	NA	157	NA	NA	NA	0.2	NA	57	2.8	7,182	800
DCX - Reaction Sun - (68RFE)	72,507	3.33	3.26	0.08	109,749	2,472	0.37	NA	9	1.630	1,789	40	0.562	NA	14	NA	NA	NA
Ford - Reaction Carrier hub (6F Mid)	162,396	3.01	2.86	0.15	222,187	11,072	0.80	NA	89	0.025	NA	3	0.8	NA	89	NA	NA	NA
GKN - Carrier 6R140 - Line#38	69,495	12.63	12.27	0.36	398,964	11,372	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.9	15,560	444
GM-OutPut Carrier Hub	0	3.61	1.47	2.13	0	0	0.25	NA	0	NA	NA	NA	NA	NA	NA	0.3	NA	0
GM x23-Reaction hub GEN2	138,240	2.21	0.71	1.50	138,868	94,255	0.84	NA	792	NA	NA	NA	0.79	NA	745	NA	NA	NA
GM x23-Reaction hub 6T30 GEN2	21,899	2.41	0.67	1.74	23,989	17,320	0.84	NA	145	NA	NA	NA	0.79	NA	137	NA	NA	NA
GM x23-Output hub - SD	138,672	3.30	1.46	1.84	208,008	115,980	0.50	NA	580	NA	NA	NA	0.95	NA	1,102	NA	NA	NA
GM x23-Output hub - 6T30 (24283296)	14,656	2.88	1.37	1.51	19,186	10,059	0.50	NA	50	0.120	NA	12	0.89	NA	90	0.1	NA	13
Ford P552 Diff LH	18,900	7.92	6.00	1.92	68,031	16,503	1.20	816	198	1.000	680	165	0.4	NA	66	3.9	2,653	644
Ford P552 Diff RH	128,760	8.00	7.92	0.08	468,101	4,624	0.55	NA	25	1.000	4,681	46	0.15	NA	7	1.0	4,681	46.2
GM 9T Reaction hub (24288146)	627,998	2.72	0.91	1.81	776,434	516,671	0.84	NA	4,340	NA	NA	NA	0.79	NA	4,082	NA	NA	NA
GM x23-Output hub - 6T35 (24283295)	5,763	2.88	1.37	1.51	7,544	3,956	0.49	NA	19	0.103	NA	4	0.88	NA	35	0.1	NA	4.6
GM 6T50-Assembly AWD (24267358)	208	9.00	5.40	3.60	851	340	0.55	NA	1.9	0.120	NA	0.41	0.53	NA	1.8	0.3	NA	0.9
GM 6T50-Assembly FWD (24267357)	0	9.00	5.44	3.56	0	0	0.52	NA	0.0	0.110	NA	0.0	0.5	NA	0.0	0.3	NA	0.0
GM 6T50-Assembly Short Cover (24279798)	35,840	9.00	5.60	3.40	146,618	55,389	0.30	NA	166.2	0.050	NA	27.7	0.035	NA	19.4	0.4	NA	221.6
Ford 8F Reaction hub (JM5P-7H351 DA)	422,287	2.87	0.92	1.95	550,893	374,300	1.10	6,060	4,117.3	0.125	NA	467.9	1.05	5,784	3,930.1	0.2	NA	655.0
Ford 8F Output hub (JM5P-7G142 EA)	432,231	3.14	1.83	1.31	616,912	257,374	0.58	NA	1,492.8	0.160	NA	411.8	0.98	NA	2,522.3	0.2	NA	489.0
Ford 8F57 Reaction Carrier (K2GP-7H351)	20,904	4.26	1.27	2.99	40,478	28,410	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ventilator	9,984	0.37	0.05	0.32	1,679	1,452	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E Cylinder Housing	48,048	5.36	3.60	1.76	117,062	38,438	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2,900,893																	
Total					**8,623,795**	**3,378,559**		**6,876**	**22,711**		**7,150**	**1,364**		**5,784**	**13,930**		**32,516**	**4,555**

Note:

(1) MPO is defined as "Manufactured, Processed, or Otherwise Used" by the NPRI.
There are no air emissions of chromium, copper, and aluminum as the cutting fluids trap all of the potential particulate.

Table 4

Mpo [1] Threshold Table
Autocom Manufacturing
Guelph, Ontario

SDS Compounds	CAS No.	Yearly Usage by Compound (kg/year)	NPRI Identification	MPO Threshold [1] (kg/year)	Report? (Yes/No)
Manganese	7439-96-5	6,876	NPRI	10,000	No
Nickel	7440-02-0	7,150	NPRI	10,000	No
Chromium	7440-47-3	5,784	NPRI	10,000	No
Copper	7440-50-8	32,516	NPRI	10,000	Yes
Aluminum	7429-90-5	deminimus	NPRI	10,000	No [2]
Silver	7440-22-4	0.00	NPRI	10,000	No
Zinc	7440-66-6	0.00	NPRI	10,000	No
Nitric Acid	7697-37-2	0	NPRI	10,000	No
Stoddard Solvent	64742-88-7	38	NPRI	10,000	No
Isopropyl Alcohol	67-63-0	38	NPRI	10,000	No
Acetone	67-64-1	0	2B	3,000	No

SDS Compounds	CAS No.	Yearly Release to Air (kg/year) [4]	NPRI Identification	MPO Threshold [1] (kg/year)	Report? (Yes/No)
VOCs					
Mineral Oil	64742-52-5	31	VOC		
Petroleum Distillate	64742-46-7	51	VOC		
Petroleum Hydrocarbon	64742-47-8	205	VOC		
Stoddard Solvent	64742-88-7	3.8	VOC		
Isopropyl Alcohol	67-63-0	37.7	VOC		
VOCs from Natural Gas Combustion	NA	47	VOC		
		375.2	**TOTAL VOC**	**10,000**	**No (3)**

Notes:

(1) MPO is defined as "Manufactured, Processed, or Otherwise Used" by the NPRI.
(2) Aluminum is not released as a fume or dust, and therefore, is not reportable.
(3) Not required to evaluate NPRI Speciated VOCs since 10,000 kg threshold is not exceeded.
(4) Semi-volatile compounds were assumed to be emit 10% of their total usage to the atmosphere.

Table 5

Estimated Maximum Welding Emissions
Autocom Manufacturing
Guelph, Ontario

Welding wire usage = 17 kg/year [(1)]

Compound	USEPA AP-42 Emission Factor (g/kg)	Data Quality Rating	Estimated Maximum Emission to Atmosphere (kg/yr)
PM-10 (2)	24.1	USEPA "D"	4.16E-01
Cu (3)	N/A	N/A	4.16E-01
Boric Acid (3)	N/A	N/A	4.16E-01
Potassium fluoborate (3)	N/A	N/A	4.16E-01
Potassium fluoride (3)	N/A	N/A	4.16E-01
Potassium tetraborate (3)	N/A	N/A	4.16E-01
Silver (3)	N/A	N/A	4.16E-01
Tin (3)	N/A	N/A	4.16E-01
Zinc (3)	N/A	N/A	4.16E-01
Cr (2)	0.528	USEPA "D"	9.11E-03
Cr(VI) (2)	0.01	USEPA "D"	1.73E-04
Co (2)	0.001	USEPA "C"	1.73E-05
Mn (2)	0.346	USEPA "C"	5.97E-03
Ni (2)	1.25	USEPA "B"	2.16E-02

Notes:

(1) Usage rate of Brase 380 (see Table 1).
(2) Emissions based on yearly usage of weld wire, and USEPA AP-42 emission factors for gas metal arc welding Chapter #12, Section 12.19.
(3) As there are no emission factors for these compounds, emissions calculated by multiplying PM emission rate by the SDS percentage (see table 1).

Table 6a

Combustion Air Emission Release Estimates
Autocom Manufacturing
Guelph, Ontario

Natural Gas Usage (m^3) = 412,307

Compound	USEPA AP-42 Emission Factor ($kg/10^6m^3$) (1)	Annual Emission Rate (kg/yr) (3)	NPRI Threshold (kg/yr)	Report? (Yes/No)	
Carbon Dioxide	1,920,000	858,083	100,000,000	No	
Carbon Monoxide	1,344	594	20,000	No	
Nitrogen Dioxide	1,600	729	20,000	No	
Sulphur Dioxide	9.6	4.0	20,000	No	
Total Particulate Matter (4)	30	14.0	20,000	No	** Includes PM-10 from Welding.
10µm Particulate Matter (4)	30	14.0	500	No	** Includes PM-10 from Welding.
2.5µm Particulate Matter (2)	30	13.6	300	No	
Volatile Organic Compounds	88	41.6	(See Table 4)	No	

Notes:

(1) Emission Factors are from USEPA AP-42 for boilers < 100MMBtu.
(2) AP-42 defines natural gas combustion PM emissions as less than 2.5 µm diameter.
(3) Includes emissions from propane combustion values, as calculated on Table 6B.
(4) Includes 10µm Particulate Matter emissions from welding, as calculated on Table 5.

Table 6b

Propane Combustion Release Estimates
Autocom Manufacturing
Guelph, Ontario

Compound	**USEPA AP-42 Emission Factor ($kg/10^3L$)[(1)]**	**Estimated Annual Emission Rate (kg/yr)**
Carbon Dioxide	1,500	66,453
Carbon Monoxide	0.90	39.87
Oxides of Nitrogen (expressed as NO_2)	1.6	69.11
Nitrous Oxide	0.108	4.78
Sulphur Dioxide	0.012S	0.00 (2)
2.5 µm Particulate Matter	0.02	1.06
Volatile Organic Compounds	0.12	5.32
Methane	0.02	1.06
Previous Year's Propane Usage Rate	**44,302**	**litres**

Notes:

(1) Emission Factors are from USEPA AP-42 for industrial boilers (Chapter 1.5).
(2) Sulphur content of propane is negligible (AP-42 Appendix A).

Table 7

Summary of NPRI Reportable Quantities
Autocom Manufacturing
Guelph, Ontario

Compounds	CAS No.	Reportable Release Quantity	
		Off-Site Recycling (tonnes)	Total Yearly Atmospheric Release (tonnes/year)
Copper	7440-50-8	4.555	0.000

Note:

Metals are shipped to Gerdau Ameristeel

Table 8a

Carbon Dioxide Equivalent Federal Greenhouse Gas Summary
Autocom Manufacturing
Guelph, Ontario

Compound	CAS No.	Annual Emission Rate (kg/yr)	Global Warming Potential Factor	CO_2 Equivalent Emission (kg/yr)
Carbon Dioxide	124-38-9	924,536	1	924,536
Methane	74-82-8	16.2	25	406
Nitrous Oxide	10024-97-2	19.3	298	5,751
HFC-134A	811-97-2	0.0	1,430	0
			Total CO_2 Equivalent	**930,692**
			Federal Reporting Criteria	**10,000,000**
			Reportable (yes/no)?	**No**

Table 8b

Carbon Dioxide Equivalent Provincial Greenhouse Gas Summary
Autocom Manufacturing
Guelph, Ontario

Compound	CAS No.	Annual Emission Rate (kg/yr)	Global Warming Potential Factor	CO_2 Equivalent Emission (kg/yr)
Carbon Dioxide	124-38-9	924,536	1	924,536
Methane	74-82-8	16.2	25	406
Nitrous Oxide	10024-97-2	19.3	298	5,751
HFC-134A	811-97-2	0.0	1,430	0
			Total CO_2 Equivalent	**930,692**
			Ontario Reporting Criteria	**10,000,000**
			Reportable (yes/no)?	**No**

Table 9

Summary of TRA Metals Reporting
Autocom Manufacturing
Guelph, Ontario

Product	Part Number	Parts Made Per Year	Raw Weight Per Part (lb)	Finished Weight Per Part (lb)	Total Annual Weight (kg)	Total Product Weight kg	Total Annual Recycled (kg)	Copper Content (%)	Copper Used in Processes (kg)	Copper Contained in Product (kg)
Reaction Carrier Hub (GM/Ford-6F)	24245787	59,245	3.60	1.25	96,946	33,635	63,311	0.8	776	269
Ford Sterling - Elocker Flange	BC3W4206BD/CA	117,072	56.91	30.28	3,028,440	1,611,336	1,417,103	NA	NA	NA
Ford Sterling - Barrel	BC3W4205AA	124,146	10.68	7.50	602,672	423,225	179,447	NA	NA	NA
Ford Sterling - Conventional	RFBC3W4206CA	7,074	20.45	15.25	65,756	49,036	16,720	0.3	182	136
DCX - Input Carrier - (68RFE)	52119725AA	76,290	12.38	9.44	429,305	327,180	102,125	0.6	2,372	1,807
DCX - Reverse Carrier - (68RFE)	52119740AA	76,440	6.58	6.26	228,625	217,333	11,292	1.1	2,441	2,320
DCX - Reaction Carrier - (68RFE)	52119744AA	71,838	7.86	6.98	256,494	227,922	28,572	2.8	7,182	6,382
DCX - Reaction Sun - (68RFE)	52119771AA	72,507	3.33	3.26	109,749	107,277	2,472	NA	NA	NA
Ford - Reaction Carrier hub (6F Mid)	9l8P-7F351	162,396	3.01	2.86	222,187	211,115	11,072	NA	NA	NA
GKN - Carrier 6R140 - Line#38	BC3P-7G225	69,495	12.63	12.27	398,964	387,593	11,372	3.9	15,560	15,116
GM-OutPut Carrier Hub	24241185	0	3.61	1.47	0	0	0	0.3	0	0
GM x23-Reaction hub GEN2	24247699	138,240	2.21	0.71	138,868	44,614	94,255	NA	NA	NA
GM x23-Reaction hub 6T30 GEN2	24252240	21,899	2.41	0.67	23,989	6,669	17,320	NA	NA	NA
GM x23-Output hub - SD	24233647	138,672	3.30	1.46	208,008	92,028	115,980	NA	NA	NA
GM x23-Output hub - 6T30 (24283296)	24231788	14,656	2.88	1.37	19,186	9,127	10,059	0.1	25	12
Ford P552 Diff LH	FL3W-4C168 LH	18,900	7.92	6.00	68,031	51,528	16,503	3.9	2,653	2,010
Ford P552 Diff RH	FL3W-4205 RH	128,760	8.00	7.92	468,101	463,477	4,624	1.0	4,681	4,635
GM 9T Reaction hub (24288146)	24267610	627,998	2.72	0.91	776,434	259,763	516,671	NA	NA	NA
GM x23-Output hub - 6T35 (24283295)	24268944	5,763	2.88	1.37	7,544	3,589	3,956	0.1	9	4
GM 6T50-Assembly AWD (24267358)	24267358	208	9.00	5.40	851	511	340	0.3	2.3	1.4
GM 6T50-Assembly FWD (24267357)	24267357	0	9.00	5.44	0	0	0	0.3	0.0	0.0
GM 6T50-Assembly Short Cover (24279798)	24279798	35,840	9.00	5.60	146,618	91,229	55,389	0.4	586.5	364.9
Ford 8F Reaction hub (JM5P-7H351 DA)	JM5P-7H351 AB	422,287	2.87	0.92	550,893	176,593	374,300	0.2	964.1	309.0
Ford 8F Output hub (JM5P-7G142 EA)	JM5P-7G142 DA	432,231	3.14	1.83	616,912	359,538	257,374	0.2	1,172.1	683.1
Ford 8F57 Reaction Carrier (K2GP-7H351)	K2GP-7H351	20,904	4.26	1.27	40,478	12,067	28,410	NA	NA	NA
Ventilator	-	9,984	0.37	0.05	1,679	227	1,452	NA	NA	NA
E Cylinder Housing	-	48,048	5.36	3.60	117,062	78,624	38,438	NA	NA	NA
Total					**8,505,053**		**3,338,669**		**38,604**	**34,049**

Notes:

(1) Only NPRI reportable compounds are evaluated for TRA.
(2) Amounts of compounds used in process are different than NPRI due to the inclusion of products with content less than 1%. For NPRI, products that contain compounds that are less than 1% are considered deminimus.

Table 10

Summary of TRA Reportable Quantities
Autocom Manufacturing
Guelph, Ontario

Compounds	CAS No.	Reportable Quantity		
		Total Used in Process [(1)] (tonnes)	Total Created by Process (tonnes)	Total Contained in Product [(2)] (tonnes)
Copper	7440-50-8	38.604	0.000	34.049

Notes:

(1) Includes total amount used in welding products.
(2) Includes total amount used in welding products subtracting the amount emitted to atmosphere.

Table 11

"Section A" Administrative Information
Autocom Manufacturing
Guelph, Ontario

A1.0	**Reporting Year, NPRI ID, Language and Web Site Address**		
	A1.1	NPRI ID	7119
	A1.2	Language	English
	A1.4	Web Site Address	
	A1.5	Dun and Bradstreet (D-U-N-S) Number	
	A1.6	Business Number (first 9 digits)	103333662
A2.0	**Facility Identification and Site Address**		
	A2.1	Company Name	Autocom Manufacturing
	A2.2	Facility Name	
	A2.3	Street Address	375 Masey Rd
	A2.4	(Street Address 2)	
	A2.5	City/District	Guelph
	A2.6	Province or Territory Code	Ontario
	A2.7	Postal Code	N1K 1B2
	A2.11	Does this Facility Have a Rural Address	
	A2.12	MOE ID	7017
A3.0	**Identification of Parent Companies**		
	P1.0	D&B D-U-N-S Number	20-983-1544
	P1.1	% Ownership	100%
	P1.2	Parent Company Name	Linamar Corporation
	P1.3	Address	287 Speedvale Ave
	P1.4	(Address)	
	P1.5	City/District	Guelph
	P1.6	Province/Territory	Ontario
	P1.7	Postal Code	N1H 1C5
	P1.8	State	
	P1.9	ZIP Code	
	P1.10	Country	Canada
	P1.12	Business Number (first 9 digits)	103333662
A4.0	**Facility Public Contact**		
	A4.1	Title (Mr./Ms./etc)	Mr.
	A4.2	First Name	Paul
	A4.3	Last Name	Cluthe
	A4.4	Position	General Manager
	A4.5	Phone	519-822-9008
	A4.6	Phone Extension	
	A4.7	Fax	519-763-4330
	A4.8	e-mail address	paul.cluthe@linamar.com
A5.0	**Facility Public Contact Address**		
	A5.1	Company Name	Autocom Manufacturing
	A5.2	Facility Name	
	A5.3	Mailing Address	same as above
	A5.4	(Mailing Address 2)	
	A5.5	City/District	
	A5.6	Province/Territory	
	A5.7	Postal Code	
	A5.8	State	
	A5.9	ZIP Code	
	A5.10	Country	

Table 11

"Section A" Administrative Information
Autocom Manufacturing
Guelph, Ontario

A6.0	**Facility Technical Contact**		
	A6.1	Title (Mr./Ms./etc)	Mr.
	A6.2	First Name	Mike
	A6.3	Last Name	Saunders
	A6.4	Position	Plant Engineer
	A6.5	Phone	519-822-9008
	A6.6	Phone Extension	38297
	A6.7	Fax	519-763-4330
	A6.8	e-mail address	Mike.Saunders@Linamar.com
A7.0	**Facility Technical Contact Address**		
	A7.1	Company Name	Autocom Manufacturing
	A7.2	Facility Name	
	A7.3	Mailing Address	same as above
	A7.4	(Mailing Address 2)	
	A7.5	City/District	
	A7.6	Province/Territory	
	A7.7	Postal Code	
	A7.8	State	
	A7.9	ZIP Code	
	A7.10	Country	
A8.0	**Company Coordinator**		
	A8.1	Title (Mr./Ms./etc)	Mr.
	A8.2	First Name	Mike
	A8.3	Last Name	Saunders
	A8.4	Position	Plant Engineer
	A8.5	Phone	519-822-9008
	A8.6	Phone Extension	38297
	A8.7	Fax	519-763-4330
	A8.8	e-mail address	Mike.Saunders@Linamar.com
A9.0	**Company Coordinator Address**		
	A9.1	Company Name	Autocom Manufacturing
	A9.2	Facility Name	
	A9.3	Mailing Address	same as above
	A9.4	(Mailing Address 2)	
	A9.5	City/District	
	A9.6	Province/Territory	
	A9.7	Postal Code	
	A9.8	State	
	A9.9	ZIP Code	
	A9.10	Country	
A10.0	**Industrial Classification Codes**		
	A10.1	Two-digit Canadian SIC Code	32
	A10.2	Four-digit Canadian SIC Code	3259
	A10.3	Four-digit U.S. SIC Code	3714
	A10.4	Two-digit NAICS Code	31-33
	A10.5	Four-digit NAICS Code	3363
	A10.6	Six-digit NAICS Canada Code	336390

Table 11

"Section A" Administrative Information
Autocom Manufacturing
Guelph, Ontario

A11.0	**Full-time Employees**		
= total worker hours per year/2,000 hrs per worker			
	A11.1	Number of (Eq.) Full-time Employees	254
	A11.2	Activities to Which the 20 000 hr Employee Threshold does not Apply	
A12.0	**Activities Relevant to the Reporting of Dioxins/Furans and HCB**		
	A12.1	Facility Used for Wood Preservation (PCP)	None
A13.0	**Activities Relevant to the Reporting of PAH**		
	A13.1	Facility Used for Wood Preservation (creosote)	None
A14.0	**Other Environmental Regulations or Permits (optional)**		
	A14.1	Other Environmental Reporting/Permits	
A15.0	**Comments**		
	A15.1	Comments (Facility)	
	A15.2	Comments (Pollution Prevention)	
A16.0	**Company Official Certifying this Submission**		
	A16.1	Title (Mr./Ms./etc)	Mr.
	A16.2	First Name	Mike
	A16.3	Last Name	Saunders
	A16.4	Position	Plant Engineer
	A16.5	Phone	519-822-9008
	A16.6	Phone Extension	38297
	A16.7	Fax	519-763-4330
	A16.8	e-mail address	Mike.Saunders@Linamar.com
A17.0	**Company Official Address**		
	A17.1	Company Name	Autocom Manufacturing
	A17.2	Facility Name	
	A17.3	Mailing Address	same as above
	A17.4	(Mailing Address)	
	A17.5	City/District	
	A17.6	Province/Territory	
	A17.7	Postal Code	
	A17.8	State	
	A17.9	ZIP Code	
	A17.10	Country	
A19.0	**Facility Latitude and Longitude**		
	A19.1	Facility Latitude (decimal degrees)	
	A19.2	Facility Longitude (decimal degrees)	
A20.0	**Table 2A Applicability Criteria**		
	A20.1	Y/N - greater than 3 mmbtu/hr	Y
A21.0	**Independent Contractor**		
	A21.1	Title/First Name	Mr. Matthew
	A21.3	Last Name	Griffin
	A21.4	Position	Environmental Consultant
	A21.5	Telephone	519-340-3794
	A21.7	Facsimile No.	519-884-0525
	A21.8	Email Address	matthew.griffin@ghd.com

Table 11

"Section A" Administrative Information
Autocom Manufacturing
Guelph, Ontario

A22.0	**Independent Contractor Address**		
	A22.1	Company Name	GHD Limited
	A22.2	Facility Name	
	A22.3	Mailing Address	455 Phillip Street
	A22.4	(Mailing Address 2)	
	A22.5	City	Waterloo
	A22.6	Province/Territory	ON
	A22.10	Country	Canada

Table 12

Annual Comparison of NPRI Reportable Quantities
Autocom Manufacturing
Guelph, Ontario

Compounds	CAS No.	2019 MPO Quantity (tonnes)	2020 MPO Quantity (tonnes)	2019 Off-Site Recycling (tonnes)	2020 Off-Site Recylcing (tonnes)	2019 Total Yearly Atmospheric Release (tonnes/year)	2020 Total Yearly Atmospheric Release (tonnes/year)
Copper	7440-50-8	131.959	38.604	15.412	4.555	0.001	0.000