

**GHG EMISSIONS
PERFORMANCE STANDARDS
AND METHODOLOGY FOR THE
DETERMINATION OF THE
TOTAL ANNUAL EMISSIONS
LIMIT**

JULY 2019

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1 Introduction

This Methodology is incorporated by reference into O. Reg 241/19 Greenhouse Gas Emissions Performance Standards (the Regulation). The Methodology must be read in conjunction with the requirements set out in Part III of the Regulation (Compliance). Part III of the Regulation will apply when the federal Cabinet removes Ontario from the application of the federal output-based pricing system (Industrial Emissions Charge) under Part II of the *Greenhouse Gas Pollution Pricing Act* by publishing a notice of an order under that Act deleting Ontario from the list of provinces and areas set out in Part 2 of Schedule 1.

Part III of the Regulation requires the calculation of the Total Annual Emissions Limit (TAEL) in respect of each covered facility owned or operated by the owner or operator. The calculation must be done in accordance with this Methodology. Section 3 of this Methodology sets out the calculations that must be used by the owner or operator in the calculation of the TAEL of a covered facility.

Where the Methods in this document set out the GHG ID or GHGRP ID number of a facility, see Table A.1 in Appendix A for details on how to determine GHG ID, GHGRP ID, Company Name, Facility Name, Facility Address, Facility City or Town, and Facility Postal Code.

2 Definitions

For the purposes of this Methodology:

“Covered facility” means a facility that is registered under the Regulation or in respect of which registration is required under the Regulation.

“Facility with no access to natural gas” means a covered facility that is located in a geographic area, whether in a municipality or an unorganized territory, that is not covered by a certificate of public convenience and necessity under the *Municipal Franchises Act* for the supply of natural gas;

“GHG ID” means the number assigned to a covered facility by the Ministry for the purposes of reporting greenhouse gas emissions;

“GHGRP ID” means the number assigned to a covered facility by Environment and Climate Change Canada for the purposes of reporting greenhouse gas emissions to the federal government;

“Guideline” has the same meaning as in the Reporting Regulation;

“Methodology” has the same meaning as in the Regulation;

“**Ministry**” means the Ministry of Environment, Conservation and Parks;

“**Regulation**” means Ontario Regulation 241/19 (Greenhouse Gas Emissions Performance Standards), made under the *Environmental Protection Act*,

“**Reporting Regulation**” means Ontario Regulation 390/18 (Greenhouse Gas Emissions: Quantification, Reporting and Verification) made under the *Environmental Protection Act*;

All definitions in the **Regulation**, the **Guideline** and the **Reporting Regulation** also apply to this **Methodology**.

3 Total Annual Emissions Limit

The owner or operator shall calculate the TAEI for a covered facility using Formula 3-1. For any Annual Activity Emissions Limit (AAEL) that is calculated using a Method that the owner or operator is not permitted to use or where the Method is permitted to be used and the owner or operator has not used the method, the value shall be 0.

If the number that results from the application of Formula 3-1 is not a whole number, the TAEI shall be the number that results from the application of Formula 3-1 rounded down to the nearest whole number.

$$TAEI = \left(\begin{array}{l} AAEL_A + AAEL_B + AAEL_C + AAEL_D + \\ AAEL_E + AAEL_F + AAEL_G + AAEL_H \end{array} \right)$$

Formula 3-1

Where:

AAEL_A = Annual Activity Emissions Limits calculated using Method A in accordance with section 3.1.1

AAEL_B = Annual Activity Emissions Limits calculated using Method B in accordance with section 3.1.2

AAEL_C = Annual Activity Emissions Limits calculated using Method C in accordance with section 3.1.3

AAEL_D = Annual Activity Emissions Limits calculated using Method D in accordance with section 3.1.4

AAEL_E = Annual Activity Emissions Limits calculated using Method E in accordance with section 3.1.5

AAEL_F = Annual Activity Emissions Limits calculated using Method F in accordance with section 3.1.6

AAEL_G = Annual Activity Emissions Limits calculated using Method G in accordance with section 3.1.7

AAEL_H = Annual Activity Emissions Limits calculated using Method H in accordance with section 3.1.8

3.1 Annual Activity Emissions Limits

The owner or operator of a covered facility shall calculate the AAELs for the covered facility in respect of a compliance period using all methods that are required to be used and such methods that the owner or operator elects to use (where a method is permitted to be used), as set out in subsections 3.1.1 to 3.1.8 below (Methods A through H).

3.1.1 Method A: Sector Performance Standard

The owner or operator of a covered facility at which an Industrial Activity set out in Column 1 of Table A and a Sub-activity set out in Column 2 of Table A is engaged in shall use Formula 3.1.1-1 to calculate the facility AAEL_A, in respect of each Sub-activity, unless one of the following applies:

1. The Sub-activity is producing steel in an electric arc furnace and the facility is identified with one of the following GHG IDs:
 - a. 1055
 - b. 1084
2. The Sub-activity is producing gold and the facility is not identified with one of the following GHG IDs:
 - a. 1056
 - b. 1193
 - c. 1198

$$AAEL_{A,y} = \sum_{i=1}^n [(PS_{A,i,y,FPE} + PS_{A,i,y,nonFPE}) \times Production_{i,y}]$$

Formula 3.1.1-1

Where,

n = the number of production parameters set out in column 3 of Table A that apply to the covered facility

i = a production parameter set out in column 3 of Table A for the Sub-activity in column 2 of Table A in respect of the Industrial Activity in column 1 of Table A

y = year of the compliance period

PS_{A,i,y,FPE} = Fixed Process Emissions Sector Performance Standard for the production parameter “i” in year “y” expressed in tonnes of CO2e per unit of production calculated in accordance with Formula 3.1.1-2

PS_{A,i,y,nonFPE} = Non-Fixed Process Emissions Sector Performance Standard for the production parameter “i” in year “y” expressed in tonnes of CO2e per unit of production calculated in accordance with Formula 3.1.1-3

Production_{i,y} = Annual production of Production Parameter ‘i’ in year ‘y’ reported in accordance with the Reporting Regulation and Guideline

Table A

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Industrial Activity	Sub-activity	Production Parameter	BEI _{A,FPE}	BEI _{A,nonFPE}	BEI Units
Producing cement from clinker. (Item 8 of Schedule 2 of the Regulation)	Producing intermediate clinker	Tonnes of Intermediate Clinker produced	0.533	0.355	t CO2e/t intermediate clinker
Producing cement from clinker. (Item 8 of Schedule 2 of the Regulation)	Producing grey cement from clinker produced at the covered facility For greater certainty, a tonne of clinker that is counted as production of intermediate clinker, shall not be counted again as part of the production of grey cement, even when the grey cement is produced in a different compliance period	Tonnes of Grey Cement produced from clinker produced at the covered facility	0.490	0.326	t CO2e/t grey cement

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Industrial Activity	Sub-activity	Production Parameter	BEI _{A,FPE}	BEI _{A,nonFPE}	BEI Units
Petroleum refining through, <ul style="list-style-type: none"> i. the distillation of crude oil, or ii. cracking, rearranging or reforming unfinished petroleum derivatives. (Item 4 of Schedule 2 of the Regulation)	Refining crude oil, including bitumen, heavy crude oil, light crude oil and synthetic crude oil	CAN-CWB	0	0.0046	t CO ₂ e/ CAN-CWB
Producing iron or steel from smelted iron ore or producing metallurgical coke. (Item 17 of Schedule 2 of the Regulation)	Producing metallurgical coke in a coke oven battery	Tonnes of Coke produced from Coke Oven	0	0.491	t CO ₂ e/t coke
Producing iron or steel from smelted iron ore or producing metallurgical coke. (Item 17 of Schedule 2 of the Regulation)	Producing iron from smelted iron ore	Tonnes of Iron produced from blast furnace	1.034	0.324	t CO ₂ e/t liquid iron
Producing iron or steel from smelted iron ore or producing metallurgical coke. (Item 17 of Schedule 2 of the Regulation)	Producing steel in a basic oxygen furnace (BOF)	Tonnes of Steel produced from BOF	0.149	0	t CO ₂ e/ t BOF steel
Producing steel from feedstock that comes primarily from iron or scrap steel. (Item 16 of Schedule 2 of the Regulation)	Producing of steel in an electric arc furnace (EAF)	Tonnes of Steel produced from EAF	0.0844	0	t CO ₂ e/t EAF steel

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Industrial Activity	Sub-activity	Production Parameter	BEI _{A,FPE}	BEI _{A,nonFPE}	BEI Units
Petroleum refining through, <ul style="list-style-type: none"> i. the distillation of crude oil, or ii. cracking, rearranging or reforming unfinished petroleum derivatives. (Item 4 of Schedule 2 of the Regulation)	Producing hydrogen using steam hydrogen carbon reforming or partial oxidation of hydrocarbon at a petroleum refinery.	Tonnes of Hydrogen produced	$5.5 \times (1 - SF_{y,nonFPE})$	0	t CO2e/t hydrogen
Producing hydrogen gas using steam hydrocarbon reforming or partial oxidation of hydrocarbons. (Item 7 of Schedule 2 of the Regulation)	Producing hydrogen gas at a facility dedicated to the production of hydrogen gas, and not at a covered facility that carries out the activity described in paragraphs 4, 13 and 24 of Schedule 2 of the Regulation	Tonnes of Hydrogen produced	5.5	5.4	t CO2e/t hydrogen
Producing metal or diamonds from the mining or milling of ore or kimberlite. (Item 20 of Schedule 2 of the Regulation)	Producing gold	Kg of Gold produced	0	7.21	t CO2e/kg gold
Producing nitric acid by the catalytic oxidation of ammonia. (Item 23 of Schedule 2 of the Regulation)	Producing nitric acid	Tonnes of Nitric Acid produced	0.0239	0.289	t CO2e/t nitric acid
Producing anhydrous ammonia or aqueous ammonia by the steam reforming of a hydrocarbon. (Item 24 of Schedule 2 of the Regulation)	Producing anhydrous ammonia or aqueous ammonia	Tonnes of Ammonia produced	1.28	0.438	t CO2e/t ammonia

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Industrial Activity	Sub-activity	Production Parameter	BEI _{A,FPE}	BEI _{A,nonFPE}	BEI Units
Producing anhydrous ammonia or aqueous ammonia by the steam reforming of a hydrocarbon. (Item 24 of Schedule 2 of the Regulation)	Producing urea liquor at facilities that produce ammonia	Tonnes of Urea produced	0	0.123	t CO2e/t urea

$$PS_{A,i,y,FPE} = BEI_{A,i,FPE} \times SF_{y,FPE}$$

Formula 3.1.1-2

Where,

i = a production parameter set out in column 3 of Table A for the Sub-activity in column 2 of Table A in respect of the Industrial Activity in column 1 of Table A

y = year of the compliance period

BEI_{A,i,FPE} = Fixed Process Baseline Emissions Intensity for the Sub-activity for production parameter “i” expressed in tonnes of CO2e per unit of production as set out in column 4 of Table A

SF_{y,FPE} = Fixed Process Emissions Stringency Factor for the Industrial Activity in year “y” as determined in accordance with Section 4.1

$$PS_{A,i,y,nonFPE} = BEI_{A,i,nonFPE} \times SF_{y,nonFPE}$$

Formula 3.1.1-3

Where,

i = a production parameter set out in column 3 of Table A for the Sub-activity in column 2 of Table A in respect of the Industrial Activity in column 1 of Table A

y = year of the compliance period

BEI_{A,i,nonFPE} = Non-Fixed Process Baseline Emissions Intensity for the Sub-activity for production parameter “i” in tonnes of CO2e per unit of production as set out in column 5 of Table A

SF_{y,nonFPE} = Non-Fixed Process Emissions Stringency Factor for the Industrial Activity in year “y” as determined in accordance with Section 4.2

3.1.2 Method B: Electricity Generation Sector Performance Standard

Subject to what is set out below following paragraph 5, an owner or operator of a covered facility engaging in the Industrial Activity of Generating Electricity Using Fossil Fuels may use Formula 3.1.2-1 to calculate the $AAEL_B$, unless any of the following applies:

1. The owner or operator used Formula 3.1.4-1 in respect of the electricity generation from a cogeneration unit at the facility
2. The owner or operator engaged in the Sub-activity of producing gold set out in Column 2 of Table A and the facility is identified with one of the following GHG IDs:
 - a. 1056
 - b. 1193
 - c. 1198
3. The owner or operator engaged in the Sub-activity of producing grey cement from clinker or producing intermediate clinker set out in Column 2 of Table A
4. The covered facility is one set out in Table E or F unless the facility is identified with one of the following GHG IDs:
 - a. 1060
 - b. 1075
 - c. 1076
 - d. 1079
 - e. 1081
 - f. 1082
 - g. 1085
5. The owner or operator used coke oven gas or blast furnace gas in a combustion device for the production of the electricity

Despite paragraph 1, the owner or operator may use Formula 3.1.2-1 in respect of the amount of electricity generated (in GWh) at the facility that the owner or operator has not included in the electricity generation from the cogeneration unit ($EO_{elec,y}$) entered in Formula 3.1.4-3 or in any other Formula.

$$AAEL_{B,y} = \sum_{i=1}^n PS_{B,i,y} \times Production_{B,i,y}$$

Formula 3.1.2-1

Where,

n = the number of applicable combustion devices that generate electricity at the covered facility

i = an applicable combustion device that generates electricity

y = year of the compliance period

PS_{B,i,y} = Electricity Generation Sector Performance Standard expressed in tonnes of CO₂e per Gigawatt hour (tCO₂e/GWh) of electricity generated from the combustion device “i” in year “y”, calculated in accordance with Formula 3.1.2-2

Production_{B,i,y} = Annual electricity generated from the combustion device “i” for the production of electricity in year “y” expressed in Gigawatt hours (GWh), reported in accordance with the Reporting Regulation and Guideline

$$PS_{B,i,y} = BEI_B \times NBF_{i,y} \times SF_{y,nonFPE}$$

Formula 3.1.2-2

Where,

i = an applicable combustion device that generates electricity

y = year of the compliance period

BEI_B = 420 tonnes of CO₂e per Gigawatt hour (tCO₂e/GWh)

NBF_{i,y} = the non-biomass fraction of the total energy input into the combustion device “i” that generates the electricity, calculated by dividing the Gigajoules (GJ) of non-biomass fuel input into the combustion device by the total GJ of all fuels input into the combustion device

SF_{y,nonFPE} = Non-Fixed Process Emissions Stringency Factor for the Industrial Activity in year “y” as determined in accordance with Section 4.2

3.1.3 Method C: Thermal Energy Sector Performance Standard

Subject to what is set out below following paragraph 5, an owner or operator of a covered facility engaging in one of the following Industrial Activities:

1. Producing hydrogen gas using steam hydrocarbon reforming or partial oxidation of hydrocarbons
2. Producing grain ethanol for use in an industrial or fuel application
3. Generating electricity using fossil fuels

and engaging in the generation and transfer of useful thermal energy may use Formula 3.1.3-1 to calculate the $AAEL_C$, unless any of the following applies:

1. The owner or operator used Formula 3.1.4-1 in respect of the useful thermal energy generated from a cogeneration unit at the facility
2. The owner or operator engaged in one of the following sub-activities set out in Column 2 of Table A:
 - a. producing grey cement from clinker
 - b. producing intermediate clinker
 - c. refining crude oil, including bitumen, heavy crude oil, light crude oil and synthetic crude oil
 - d. producing hydrogen using steam hydrogen carbon reforming or partial oxidation of hydrocarbon at a petroleum refinery
 - e. producing nitric acid
 - f. producing anhydrous ammonia or aqueous ammonia
 - g. producing urea liquor at a facility that produces ammonia
3. The owner or operator engaged in the Sub-activity of producing gold set out in Column 2 of Table A and the facility is identified with one of the following GHG IDs:
 - a. 1056
 - b. 1193
 - c. 1198
4. The covered facility is a facility set out in Table E or F unless the facility is identified with the GHG ID 1163:
5. The owner or operator used coke oven gas or blast furnace gas in a combustion device for the production of the useful thermal energy transferred

Despite paragraph 1, the owner or operator may use Formula 3.1.3-1 in respect of the amount of useful thermal energy generated at the facility and transferred (in GJ) that the owner or operator has not included in respect of the useful thermal energy output from the cogeneration unit ($EO_{\text{therm},i,y}$) in Formula 3.1.4-3 or any other Formula.

$$AAEL_{C,y} = \sum_{i=1}^n PS_{C,i,y} \times Production_{C,i,y}$$

Formula 3.1.3-1

Where,

n = the number of applicable combustion devices that generate useful thermal energy at the covered facility

i = an applicable combustion device that generates useful thermal energy

y = year of the compliance period

PS_{C,i,y} = Thermal Energy Sector Performance Standard expressed in tonnes of CO₂e per Gigajoule (tCO₂e/GJ) of useful thermal energy transferred from the combustion device “i” in year “y”, calculated in accordance with Formula 3.1.3-2

Production_{C,i,y} = Annual useful thermal energy that is generated from a combustion device “i” and transferred to any other covered facility or non-covered facility in year “y” expressed in Gigajoules (GJ), reported in accordance with the Reporting Regulation and Guideline

$$PS_{C,i,y} = BEI_C \times NBF_{i,y} \times SF_{y,nonFPE}$$

Formula 3.1.3-2

Where,

i = an applicable combustion device that generates useful thermal energy

y = year of the compliance period

BEI_C = 0.063 tonnes of CO₂e per Gigajoule (tCO₂e/GJ)

NBF_{i,y} = the non-biomass fraction of the total energy input into the combustion device “i” that generates the thermal energy, calculated by dividing the Gigajoules (GJ) of non-biomass fuel input into the combustion device by the total GJ of all fuels input into the combustion device

SF_{y,nonFPE} = Non-Fixed Process Emissions Stringency Factor for the Industrial Activity in year “y” as determined in accordance with Section 4.2

3.1.4 Method D: Cogeneration Sector Performance Standard

Subject to what is set out below following paragraph 5, an owner or operator of a covered facility at which a cogeneration unit is used may use Formula 3.1.4-1 to calculate the AAEL_D, unless any of the following applies:

1. The owner or operator used Formula 3.1.2-1 in respect of the electricity generation at the facility or the owner or operator used Formula 3.1.3-1 in respect of the thermal energy generation at the facility
2. The owner or operator engaged in the Sub-activity of producing grey cement from clinker or producing intermediate clinker set out in Column 2 of Table A

3. The covered facility is one that is set out in Table E or F unless the facility is identified with one of the following GHG IDs:
 - a. 1060
 - b. 1075
 - c. 1076
 - d. 1079
 - e. 1081
 - f. 1082
 - g. 1085
4. The owner or operator used coke oven gas or blast furnace gas as a fuel in a combustion device of a cogeneration unit
5. The owner or operator engaged in the Sub-activity of producing gold and the facility is identified with one of the following GHG IDs:
 - a. 1056
 - b. 1193
 - c. 1198

Despite paragraph 1, the owner or operator may use Formula 3.1.4-1 in respect of (i) the amount of electricity generation that the owner or operator has not included in **Production_{B,i,y}** (Annual electricity generated) in Formula 3.1.2-1 or any other Formula; and, (ii) the amount of useful thermal energy generated and transferred that the owner or operator has not included in **Production_{C,i,y}** (Annual useful thermal energy transferred) in Formula 3.1.3-1 or any other Formula.

$$AAEL_{D,y} = \sum_{i=1}^n PS_{D,i,y} \times Production_{D,i,y}$$

Formula 3.1.4-1

Where,

n = the number of applicable cogeneration units at the covered facility

i = an applicable cogeneration unit

y = year of the compliance period

PS_{D,i,y} = Cogeneration Performance Standard expressed in tonnes of CO₂e per Gigajoule (tCO₂e/GJ) of total energy (electricity plus thermal energy) generated

from the cogeneration unit “i” in year “y”, calculated in accordance with Formula 3.1.4-2

Production_{D,i,y} = Annual total energy output from the cogeneration unit “i” in year “y” expressed in Gigajoules (GJ), calculated in accordance with Formula 3.1.4-3

$$PS_{D,i,y} = BEI_D \times NBF_{i,y} \times SF_{D,y}$$

Formula 3.1.4-2

Where,

i = an applicable cogeneration unit

y = year of the compliance period

BEI_D = 0.063 tonnes of CO₂e per Gigajoule (tCO₂e/GJ)

NBF_{i,y} = the non-biomass fraction of the total energy input into the combustion device associated with cogeneration unit “i” in year “y”, calculated by dividing the Gigajoules (GJ) of non-biomass fuel input into the combustion device by the total GJ of all fuels input into the combustion device

SF_{D,y} = Cogeneration stringency factor in year “y” as determined in accordance with Section 4.3

$$Production_{D,i,y} = EO_{elec,i,y} + EO_{therm,i,y}$$

Formula 3.1.4-3

Where,

EO_{elec,y} = Annual electrical energy output from the cogeneration unit “i” in year “y” expressed in Gigajoules (GJ), reported in accordance with the Reporting Regulation and Guideline

EO_{therm,y} = Useful thermal energy output from the cogeneration unit “i” in year “y” expressed in Gigajoules (GJ), reported in accordance with the Reporting Regulation and Guideline

3.1.5 Method E: Facility Specific Performance Standard

The owner or operator of a covered facility set out in Table E shall use Formula 3.1.5-1 to calculate the AAEL_E.

$$AAEL_{E,y} = \sum_{i=1}^n [(PS_{E,i,y,FPE} + PS_{E,i,y,nonFPE}) \times Production_{E,i,y}] - (TET_y \times 0.063) \times SF_{y,nonFPE}$$

Formula 3.1.5-1

Where,

y = year of the compliance period

n = the number of production parameters set out in column 2 of Table E that apply to the covered facility

i = a production parameter set out in column 2 of Table E

PS_{E,i,y,FPE} = Fixed Process Emissions Facility Performance Standard for the production parameter “i” in year “y” expressed in tonnes of CO₂e per unit of production calculated in accordance with Formula 3.1.5-2

PS_{E,i,y,nonFPE} = Non-Fixed Process Emissions Sector Performance Standard for the production parameter “i” in year “y” expressed in tonnes of CO₂e per unit of production calculated in accordance with Formula 3.1.5-3

SF_{y,nonFPE} = Non-Fixed Process Emissions Stringency Factor for the Industrial Activity in year “y” as determined in accordance with Section 4.2

Production_{E,i,y} = Annual production of production parameter “i” in year “y” expressed in the units set out in column 3 of Table E reported in accordance with the Reporting Regulation and Guideline

TET_y = any thermal energy transferred in year “y” from any other covered facility or non-covered facility to the covered facility with the GHG ID listed below; or from a cogeneration unit to the production processes for all production parameters “i” within the same facility. This applies to a facility that is identified with one of the following GHG IDs:

- 1) 1060
- 2) 1073
- 3) 1075
- 4) 1076
- 5) 1079
- 6) 1081
- 7) 1082
- 8) 1085
- 9) 1132

For any other facilities, the thermal energy transfer (**TET_y**) shall be zero.

$$PS_{E,i,y,FPE} = BEI_{E,i,FPE} \times SF_{y,FPE}$$

Formula 3.1.5-2

Where,

i = a production parameter set out in column 2 of Table E

BEI_{E,i,FPE} = Fixed Process Baseline Emissions Intensity for the facility for the production parameter “i” as set out in a notice by the Director given to the owner or operator of the facility within 90 days of Part III of the Regulation applying to the facility, which amount is calculated based on emissions information, energy use information, and production parameter information for the years set out in Table E, which information has been provided to the Ministry by the owner or operator of the facility on or before May 31, 2019 or obtained by the Ministry from publicly available information on or before that date

SF_{y,FPE} = Fixed Process Emissions Stringency Factor for the Industrial Activity in year “y” as determined in accordance with Section 4.1

$$PS_{E,i,y,nonFPE} = BEI_{E,i,nonFPE} \times SF_{y,nonFPE}$$

Formula 3.1.5-3

Where,

i = a production parameter set out in column 2 of Table E

BEI_{E,i,nonFPE} = Non-Fixed Process Baseline Emissions Intensity for the facility for the production parameter “i” as set out in a notice by the Director given to the owner or operator of the facility within 90 days of Part III of the Regulation applying to the facility, which amount is calculated based on emissions information, energy use information, and production parameter information for the years set out in Table E, which information has been provided to the Ministry by the owner or operator of the facility on or before May 31, 2019 or obtained by the Ministry from publicly available information on or before that date

SF_{y,nonFPE} = Non-Fixed Process Emissions Stringency Factor for the Industrial Activity in year “y” as determined in accordance with Section 4.2

y = year of the compliance period

Table E

Column 1	Column 2	Column 3	Column 4
GHG ID /GHGRP ID	Production Parameter	Production Parameter Units	FPE and Non-FPE Intensity years
G10765	Mined material	Megatonnes	2015 to 2017
G10920	Nepheline syenite produced	Tonnes	2015 to 2017
1001	Finished Oilseed Product(s) produced	Tonnes	2015 to 2017
1006	Finished product(s) produced	Tonnes	2016 to 2018
1011	Brick or other products made from clay or shale using a kiln	Tonnes	2015 to 2017
1016	Beans and Seeds Crushed	Tonnes	2015 to 2017
1017	Carbon Black produced	Tonnes	2015 to 2017
1018	Gypsum panels produced	Thousand square feet	2015 to 2017
1020	High Calcium Lime produced	Tonnes	2015 to 2017
1020	Cal-85 produced	Tonnes	2015 to 2017
1020	Lime Kiln Dust + Waste Lime produced	Tonnes	2015 to 2017
1021	Dolomitic Lime produced	Tonnes	2015 to 2017
1021	Double Burnt Lime produced	Tonnes	2015 to 2017
1021	Iron Coated Dolime produced	Tonnes	2015 to 2017
1021	Lime Kiln Dust + Waste Lime produced	Tonnes	2015 to 2017
1022	High Calcium Lime produced	Tonnes	2015 to 2017
1022	Lime Kiln Dust + Waste Lime produced	Tonnes	2015 to 2017
1023	Finished product(s) produced	Tonnes	2016 to 2018
1024	Gypsum panels produced	Thousand square feet	2015 to 2017
1126	Finished product(s) produced	Tonnes	2015 to 2017
1127	Finished product(s) produced	Tonnes	2015 to 2017
1030	Carbon Black produced	Tonnes	2015 to 2017
1032	Finished product(s) produced	Tonnes	2016 to 2018
1033	Finished product(s) produced	Tonnes	2016 to 2018
1038	Megawatt hours produced	Megawatt hours	2015 to 2017
1042	Dolomitic Lime produced	Tonnes	2015 to 2017
1042	High Calcium Lime produced	Tonnes	2015 to 2017
1045	White Cement produced from clinker produced at the covered facility	Tonnes	2015 to 2017

Column 1	Column 2	Column 3	Column 4
GHG ID /GHGRP ID	Production Parameter	Production Parameter Units	FPE and Non-FPE Intensity years
1054	Hot rolled steel produced	Tonnes	2014, 2015, 2017
1055	Steel produced from electric arc furnace	Tonnes	2014 to 2017
1055	Hot rolled steel produced	Tonnes	2014 to 2017
1060	Fuel ethanol produced	Kilolitres of absolute ethanol	2016 to 2017
1060	Industrial ethanol produced	Kilolitres of absolute ethanol	2016 to 2017
1061	Fuel ethanol produced	Kilolitres of absolute ethanol	2014 to 2016
1065	Brick or other products made from clay or shale using a kiln	Tonnes	2015 to 2017
1066	Brick or other products made from clay or shale using a kiln	Tonnes	2015 to 2017
1068	Beverage Ethanol produced	Kilolitres of absolute ethanol	2015 to 2017
1073	Products from Steam Cracker	Tonnes	2015 to 2017
1073	Products not from Steam Cracker	Tonnes	2015 to 2017
1075	Corn milled and corn germ processed	Tonnes (air dried)	2018
1076	Corn milled	Tonnes (air dried)	2015 to 2017
1079	Fuel ethanol produced	Kilolitres of absolute ethanol	2015 to 2017
1080	Finished product(s) produced	Tonnes	2015 to 2017
1081	Nylon Resins produced	Tonnes	2015 to 2017
1081	Nylon Fibres produced	Tonnes	2015 to 2017
1082	MPMD produced	Tonnes	2016 to 2017
1083	Finished product(s) produced	Tonnes	2016 to 2018
1084	Steel from an electric arc furnace	Tonnes	2016 to 2018
1084	Hot rolled steel produced	Tonnes	2016 to 2018
1085	Glucose produced	Tonnes	2016 to 2018
1085	Citric acid produced	Tonnes	2016 to 2018
1094	Finished product(s) produced	Tonnes	2015 to 2017
1100	Ethylene produced	Tonnes	2014 to 2016
1101	Polyethylene produced	Tonnes	2014 to 2016
1102	Polyethylene produced	Tonnes	2014 to 2016
1103	Glass produced	Tonnes	2015 to 2017

Column 1	Column 2	Column 3	Column 4
GHG ID /GHGRP ID	Production Parameter	Production Parameter Units	FPE and Non-FPE Intensity years
1111	Refinery Feed	Kilolitres	2015 to 2017
1113	Propane and Butane produced	Cubic metres	2015 to 2017
1118	Raw Sugar Processed	Tonnes	2015 to 2017
1120	Finished product(s) produced	Tonnes	2015 to 2017
1121	Mineral wool insulation produced	Tonnes	2015 to 2017
1122	Used Oil Feed produced	Kilolitres	2015 to 2017
1131	Finished product(s) produced	Tonnes	2015 to 2017
1132	Styrene produced	Tonnes	2015 to 2017
1134	Fuel ethanol produced	Kilolitres of absolute ethanol	2015 to 2017
1135	Finished product(s) produced	Tonnes	2016 to 2018
1136	Seamless steel tubes produced	Tonnes	2015 to 2017
1138	Finished product(s) produced	Tonnes	2016 to 2018
1147	Megawatt hours produced	Megawatt hours	2014 to 2016
1150	Megawatt hours produced	Megawatt hours	2015 to 2017
1163	Fuel ethanol produced	Kilolitres of absolute ethanol	2015 to 2017
1163	Industrial ethanol produced	Kilolitres of absolute ethanol	2015 to 2017
1167	Fuel ethanol produced	Kilolitres of absolute ethanol	2015 to 2017
1175	Malic Acid produced	Tonnes	2015 to 2017
1175	Fumaric Acid produced	Tonnes	2015 to 2017
1207	Beverage Ethanol produced	Kilolitres of absolute ethanol	2015 to 2017
1234	Finished product(s) produced	Tonnes	2016 to 2018
1252	Finished product(s) produced	Tonnes	2016 to 2018
1261	Glass produced	Tonnes	2015 to 2017
1263	Glass produced	Tonnes	2015 to 2017
1406	Glass produced	Tonnes	2015 to 2017

3.1.6 Method F: Historical Facility Emissions Limit Standard

The owner or operator of a covered facility set out in Table F shall use Formula 3.1.6-1 to calculate the $AAEL_F$.

$$AAEL_{F,y} = BL_{F,FPE} \times SF_{y,FPE} + BL_{F,nonFPE} \times SF_{y,nonFPE}$$

Formula 3.1.6-1

Where,

BL_{F,FPE} = Baseline fixed process emissions for the facility as set out in column 3 of Table F

SF_{y,FPE} = Fixed Process Emissions Stringency Factor for the Industrial Activity in year “y” as determined in accordance with Section 4.1

BL_{F,nonFPE} = Baseline Non-Fixed Process Emissions for the facility as set out in column 4 of Table F

SF_{y,nonFPE} = Non-Fixed Process Emissions Stringency Factor for the Industrial Activity in year “y” as determined in accordance with Section 4.2

y = year of the compliance period

Table F

Column 1	Column 2	Column 3	Column 4	Column 5
GHG ID	Industrial Activity	BL _{F,FPE}	BL _{F,nonFPE}	Units
1168	Smelting or refining, from feedstock that comes primarily from ore, of at least one of the following metals: nickel, copper, zinc, lead, or cobalt. (Item 1 of Schedule 2)	102,804	352,132	Tonnes CO ₂ e
1189	Smelting or refining, from feedstock that comes primarily from ore, of at least one of the following metals: nickel, copper, zinc, lead, or cobalt. (Item 1 of Schedule 2)	5,081	12,256	Tonnes CO ₂ e
1158	Smelting or refining, from feedstock that comes primarily from ore, of at least one of the following metals: nickel, copper, zinc, lead, or cobalt. (Item 1 of Schedule 2)	90,964	35,837	Tonnes CO ₂ e

3.1.7 Method G: Energy Use Standard

Subject to what is set out below following paragraph 3 the owner or operator of a covered facility may use Formula 3.1.7-1 to calculate the AAEL_G for fuel use at the covered facility other than use in mobile equipment operation, unless any of the following applies:

1. The fuel is one of the following fuels and is used as follows:
 - a. Coal used in a coke oven battery to produce coke

- b. Coal, coke or other carbon material charged into a blast furnace as a reductant
 - c. Coke oven gas and blast furnace gas and basic oxygen furnace gas used in an industrial activity
 - d. Coal, coke or other carbon material charged into an electric arc furnace or natural gas used for shell cooling in a basic oxygen furnace or electric arc furnace
 - e. Natural gas used in a Steam Methane Reformer (SMR) to produce hydrogen
2. The fuel is used in one of the following Industrial Activities at the facility:
- a. Petroleum refining through,
 - i. the distillation of crude oil, or
 - ii. cracking, rearranging or reforming unfinished petroleum derivatives.
 - b. Producing cement from clinker.
3. The covered facility is one of the following:
- a. A facility set out in Table F
 - b. A facility set out in Table E
 - c. A facility with GHG IDs:
 - i. 1056
 - ii. 1137
 - iii. 1193
 - iv. 1198

Despite paragraph 3b, the following facilities set out in Table E may use Formula 3.1.7-1 in respect of fuel used at the covered facilities with GHG ID 1020, 1021, 1022, 1042, 1081, and 1082, other than fuel used in mobile equipment operation or in the activities specified below that are engaged in at the specified facility:

- 1. fuel used in the Industrial Activity of Producing lime from limestone using a kiln.
- 2. fuel used in the Industrial Activity of Producing 2-methylpenta-methylenediamine (MPMD).
- 3. Fuel used in the Industrial Activity of Producing resins or fibres of Nylon 6 or Nylon 6,6.

$$AAEL_{G,y} = G_{1,y} + G_{2,y}$$

Formula 3.1.7-1

Where:

G_{1,y} = Calculation of Annual Activity Emissions Limit under Method G for covered facilities with access to natural gas in year “y” calculated in accordance with Formula 3.1.7-2

G_{2,y} = Calculation of Annual Activity Emissions Limit under Method G for covered facilities with no access to natural gas as defined in Section 2, in year “y” calculated in accordance with Formula 3.1.7-3

$$G_{1,y} = EI_{total,y} \times EF_{NG} \times SF_{y,nonFPE}$$

Formula 3.1.7-2

Where:

EI_{total,y} is

- 1) 0 if the facility is a facility with no access to natural gas as defined in Section 2; or
- 2) if the facility is a facility with access to natural gas, the amount of energy input used in year “y” in an Industrial Activity at the facility, expressed in GJ, and excluding energy:
 - a. used in electricity generation or in a cogeneration unit;
 - b. used in a combustion device associated with useful thermal energy transferred; or
 - c. from biomass fuel

EF_{NG} = 0.0504 tonnes CO₂e/GJ energy input

SF_{y,nonFPE} = Non-Fixed Process Emissions Stringency Factor for the Industrial Activity in year “y” as determined in accordance with Section 4.2

$$G_{2,y} = \sum_{i=1}^n [EI_{i,y} \times EF_i] \times SF_{y,nonFPE}$$

Formula 3.1.7-3

Where:

n = the number of applicable fuel types set out in column 1 of Table G that are used at the covered facility

i = an applicable fuel type set out in column 1 of Table G that is used at the covered facility

El_{i,y} is

- 1) 0 if the facility is a facility with access to natural gas; or
- 2) if the facility is a facility with no access to natural gas as defined in Section 2, the amount of energy input from fuel “i” used in year “y” in an Industrial Activity or at the facility, expressed in tonnes of CO₂e per unit of fuel as set out in Table G, and excluding energy:
 - a. used in electricity generation or in a cogeneration unit;
 - b. used in a combustion device associated with useful thermal energy transferred; or
 - c. from biomass fuel

EF_i = the emission factor for fuel “i” used at the facility expressed in tonnes of CO₂e per unit of fuel as set out in Table G

SF_{y,nonFPE} = Non-Fixed Process Emissions Stringency Factor for the Industrial Activity in year “y” as determined in accordance with Section 4.2

y = year of the compliance period

Table G

Fuel Type	EF – tonnes of CO₂e/unit of fuel	Unit of Fuel
Ethane, Propane and Butane	tCO₂e/kL	
Ethane	1.019	kL
Propane used in:		
General stationary combustion	1.548	kL
Mobile equipment operation	1.557	kL
Butane	1.780	kL
Refined Petroleum Products	tCO₂e/kL	
Diesel used in:	-	-
General stationary combustion	2.804	kL
Mobile equipment operation, <19kW	2.689	kL
Mobile equipment operation, >=19kW	2.751	kL
Gasoline used in:	-	-
General stationary combustion	2.315	kL
Mobile equipment operation	2.576	kL
Light Fuel Oil used in:	-	-
General stationary combustion	2.762	kL
Heavy Fuel Oil used in:	-	-
General stationary combustion	3.178	kL
Kerosene used in:	-	-
General stationary combustion	2.569	kL
Other Mobile Equipment Sources	tCO₂e/kL	
Natural Gas Vehicles	0.0021	kL
Railways		
Diesel Train	2.983	kL

3.1.8 Method H: Mobile Equipment Operation Standard

The owner or operator of a covered facility may use Formula 3.1.8-1 to calculate the AAEL_H for fuel that is used in mobile equipment operation, unless the facility is one of the following:

1. A facility set out in Table E identified with one of the following Federal GHGRP ID numbers:

- a. G10765
 - b. G10920
2. A facility set out in Table E identified with one of the following GHG ID numbers:
 - a. 1054
 - b. 1055
 - c. 1084
 3. A facility set out in Table F
 4. A facility identified with one of the following GHG ID numbers:
 - a. 1056
 - b. 1137
 - c. 1193
 - d. 1198

$$AAEL_{H,y} = \sum_{i=1}^n [EI_{i,y} \times EF_i] \times SF_{y,nonFPE}$$

Formula 3.1.8-1

Where,

n = the number of applicable fuel types set out in column 1 of Table G that are used at the covered facility

i = an applicable fuel type set out in column 1 of Table G that is used at the covered facility

EF_i = the emission factor for fuel “i” used at the facility expressed in tonnes of CO₂e per unit of fuel as set out in Table G

SF_{y,nonFPE} = Non-Fixed Process Emissions Stringency Factor for the Industrial Activity in year “y” as determined in accordance with Section 4.2

y = year of the compliance period

4 Calculation of Stringency Factor (SF)

4.1 Fixed Process Emissions Stringency Factor

An owner or operator of a covered facility at which an Industrial Activity set out in Column 1 of Table 4.1 is engaged in shall use the Fixed Process Emissions Stringency Factor in year “y” ($SF_{y,FPE}$) that is set out in Table 4.1,

Where,

y = year of the compliance period (2019-2022)

Table 4.1

Column 1	Column 2	Column 3	Column 4	Column 5
Industrial Activity	$SF_{2019,FPE}$	$SF_{2020,FPE}$	$SF_{2021,FPE}$	$SF_{2022,FPE}$
All Industrial Activities	1.0	1.0	1.0	1.0

4.2 Non-Fixed Process Emissions Stringency Factor

An owner or operator of a covered facility at which an Industrial Activity set out in Column 1 of Table 4.2 is engaged in shall use Formula 4.2-1 to calculate the Non-Fixed Process Emissions Stringency Factor in year “y” ($SF_{y,nonFPE}$) that is set out in Table 4.2

$$SF_{y,nonFPE} = 1 - (1 - SF_{base,y}) \times NBF_y$$

Formula 4.2-1

Where:

$SF_{base,y}$ = the stringency factor without adjustment based on biomass fuel use as set out in Table 4.2 for the year “y”

y = year of the compliance period (2019-2022)

NBF_y = non-biomass fraction in year “y” calculated in accordance with Formula 4.2-2

$$NBF_y = 1 - \left(\frac{EI_{biomass,y}}{EI_{AllFuels,y}} \right)$$

Formula 4.2-1

Where:

EI_{biomass,y} = energy input from biomass fuel at the covered facility in year “y”

EI_{AllFuels,y} = total energy input from all fuel, including biomass fuel, at the covered facility in year “y”

Table 4.2

Column 1	Column 2	Column 3	Column 4	Column 5
Industrial Activity	SF_{base,2019}	SF_{base,2020}	SF_{base,2021}	SF_{base,2022}
Transmitting natural gas. (Item 6 of Schedule 2 of the Regulation)	0.95	0.90	0.85	0.80
Generating electricity using fossil fuels. (Item 38 of Schedule 2 of the Regulation)	1.0	1.0	1.0	1.0
All other Industrial Activities	0.98	0.96	0.94	0.92

4.3 Stringency Factor For Cogeneration (SF_{D,y})

An owner or operator of a covered facility at which Method D is used shall use Formula 4.3-1 to calculate the ratio of electrical output to total energy input in year “y” (**Ratio_{elec,y}**) for the cogeneration unit:

$$Ratio_{Elec,y} = \frac{EO_{elec,y}}{EI_{total,y}}$$

Formula 4.3-1

Where,

EO_{elec,y} = Annual electrical energy output from the cogeneration unit in year “y” expressed in Gigajoules (GJ) reported in accordance with the Reporting Regulation and Guideline

EI_{total,y} = Annual total energy input to the cogeneration unit in year “y” expressed in Gigajoules (GJ) reported in accordance with the Reporting Regulation and Guideline

y = year of the compliance period (2019-2022)

Where there is insufficient data to determine the **Ratio_{Elec,y}**, **Ratio_{Elec,y}** shall be 0.

If **Ratio_{elec,y}** is greater than or equal to 0.1 then the Cogeneration Stringency Factor in year “y” (**SF_{D,y}**) is set out in Table 4.3.1 for the year “y”

If **Ratio_{elec,y}** is less than 0.1 then the Cogeneration Stringency Factor in year “y” (**SF_{D,y}**) is set out in Table 4.3.2 for the year “y”

Table 4.3.1

Column 1	Column 2	Column 3	Column 4
SF_{D,2019}	SF_{D,2020}	SF_{D,2021}	SF_{D,2022}
1.0	1.0	1.0	1.0

Table 4.3.2

Column 1	Column 2	Column 3	Column 4
SF_{D,2019}	SF_{D,2020}	SF_{D,2021}	SF_{D,2022}
0.98	0.96	0.94	0.92

Appendix A

Where there is a conflict between Company Name, Facility Name, Facility Address, Facility City or Town, Facility Postal Code, and the GHG ID or GHGRP ID number of the facility then the GHG ID or GHGRP ID prevails. This approach is intended to recognize that the other information set out in the table that is intended to identify a covered facility may change.

Table A.1

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
GHG ID /GHGRP ID	Company Name	Facility Name	Facility Address	Facility City or Town	Facility Postal Code
G10765	Detour Gold Corporation	Detour Lake Mine	End of Highway 652	Cochrane	P0L1C0
G10920	Covia Canada Limited	Nepheline Syenite Operations	260 Unimin Road	Havelock	K0L1Z0
1001	ADM Agri-Industries Company	ADM AGRI-INDUSTRIES - ADM Windsor	5550 Maplewood Drive	Windsor	N9C0B9
1006	Atlantic Packaging Products Ltd.	111 Progress	111 Progress Avenue	Scarborough	M1P2Y9
1011	Brampton Brick Limited	Brampton Brick Limited	225 Wanless Drive	Brampton	L7A1E9
1016	Bunge Canada	Bunge Canada Holdings I ULC	515 Victoria Avenue	Hamilton	L8G3G7
1017	Cabot Canada Limited	Cabot Canada Limited	800 Tashmoo Avenue	Sarnia	N7T7N4
1018	CGC Inc.	CGC Hagersville Plant	55 Third Line Road	Hagersville	N0A1H0
1020	Carmeuse Lime Canada	Beachville Operation	374681 Oxford County 6 Road	Ingersoll	N5C3K5
1021	Carmeuse Lime Canada	Dundas Operations	600 Highway # 5 Highway	Dundas	L9H3S9
1022	Carmeuse Lime Canada	Northern Lime Limited	17 Highway 17 Highway	Blind River	P0R1B0
1023	Cascades Canada ULC	Cascades Containerboard Packaging, A Division of Cascades Canada ULC.	300 Marmora Street	Trenton	K8V5R8

1024	CertainTeed Gypsum Canada, Inc.	Toronto Board Plant	2424 Lakeshore Road	Mississauga	L5J1K4
1030	Columbian Chemicals Canada Ltd.	Hamilton (Birla Carbon)	755 Parkdale Avenue	Hamilton	L8H7N5
1032	Domtar Inc.	Dryden Mill	1 Duke Street	Dryden	P8N2Z7
1033	Domtar Inc.	Espanola Mill	1 Station Road	Espanola	P5E1R6
1038	Enbridge Gas Distribution Inc.	Enbridge Gas Distribution Inc.	500 Consumers Road	North York	M2J1P8
1042	Essar Steel Algoma Inc.	Essar Steel Algoma Inc	105 West Street	Sault Ste. Marie	P6A7B4
1045	Federal White Cement Ltd.	Woodstock Plant	3551551 35th Line	Woodstock	N0J1J0
1054	Gerdau Ameristeel Corporation	Gerdau Ameristeel Corporation, Cambridge Mill	160 Orion Place	Cambridge	N1T1R9
1055	Gerdau Ameristeel Corporation	Gerdau Ameristeel Corporation, Whitby Mill	1 Gerdau Court	Whitby	L1N5T1
1056	GOLDCORP CANADA LTD	Musselwhite Mine	N/A	Kenora District	P7B4A3
1060	Greenfield Global Inc.	Chatham	275 Bloomfield Road	Chatham	N7M5J5
1061	Greenfield Global Inc.	Johnstown	141 Commerce Drive	Johnstown	K0E1T0
1065	Meridian Brick	Meridian Brick - Aldershot	1570 Yorkton Court	Aldershot	L7P5B7
1066	Meridian Brick	Meridian Brick - Burlington	5155 Dundas Street	Burlington	L7R3Y2
1068	Hiram Walker & Sons Ltd.	Walkerville	2072 Riverside Drive	Windsor	N8Y4S5
1073	Imperial Oil	Sarnia Chemical Plant	602 Christina Street	Sarnia	N7T7M5
1075	Ingredion Canada Corporation	Ingredion Canada Corporation	4040 James Street	Cardinal	K0E1E0
1076	Ingredion Canada Corporation	Ingredion Canada Incorporated - London Plant	1100 Green Valley Road	London	N6N1E3

1079	Integrated Grain Processors Co-operative Incorporated	IGPC Ethanol Inc. - Aylmer Plant	89 Progress Drive	Aylmer	N5H2R9
1080	Interlake Acquisition Corporation Limited	Dunn Paper	45 Merritt Street	St. Catharines	L2T1J4
1081	INVISTA (Canada) Company	INVISTA (Canada) Company	455 Front Road	Kingston	K7L4Z6
1082	INVISTA (Canada) Company	INVISTA (Canada) Company- Maitland Site	1400 County #2 Road	Maitland	K0E1P0
1083	Irving Consumer Products Limited	Irving Consumer Products Limited	1551 Weston Road	Toronto	M6M4Y4
1084	Ivaco Rolling Mills 2004 L. P.	Ivaco Rolling Mills	1040 County Rd 17 Road	L'Orignal	K0B1K0
1085	Jungbunzlauer Canada Incorporated	Jungbunzlauer Canada Inc.	1555 Elm Street	Port Colborne	L3K5V5
1094	New Forest Paper Mills LP	New Forest Paper Mills LP	333 Progress Avenue	Scarborough	M1P2Z7
1100	NOVA Chemicals (Canada) Ltd.	Corunna Site	785 Petrolia Line	Corunna	N0N1G0
1101	NOVA Chemicals (Canada) Ltd.	Moore Site	510 Moore Line	Mooretown	N0N1M0
1102	NOVA Chemicals Corporation	St. Clair River Site	285 Albert Street	Corunna	N0N1G0
1103	O-I Canada Corp.	Plant #31 Brampton	100 West Drive	Brampton	L6T2J5
1111	Petro-Canada Lubricants Inc.	Mississauga Lubricants Centre	385 Southdown Road	Mississauga	L5J2Y3
1113	Plains Midstream Canada	Sarnia Fractionation Plant	1182 Plank Road	Sarnia	N7T7H9
1118	Redpath Sugar Ltd	Toronto Refinery	95 Queen's Quay	Toronto	M5E1A3

1120	Produits forestiers Résolu	Resolute Forest Products - Thunder Bay Operations	2001 Neebing Avenue	Thunder Bay	P7E6S3
1121	ROXUL Inc.	ROXUL Inc.	805 Steeles Avenue	Milton	L9T5H3
1122	Safety-Kleen Canada Inc.	Oil Recovery Division	300 Woolwich Street	Breslau	N0B1M0
1126	Sonoco Canada Corporation	Sonoco Brantford	33 Park Avenue	Brantford	N3T5T5
1127	Sonoco Canada Corporation	Sonoco - Trent Valley Mill	5 Bernard Long Road	Trenton	K8V5P6
1131	Strathcona Paper GP Inc.	Strathcona Paper LP	77 County Road 16, RR 7	Napanee	K7R3L2
1132	INEOS Styrolution Canada Ltd.	INEOS Styrolution	872 Tashmoo Avenue	Sarnia	N7T7H5
1134	Suncor Energy Inc.	St. Clair Ethanol Plant	535 Rokeby Line	Mooretown	N0N1M0
1135	Tembec	Kapuskasing Operations	1 Government Road	Kapuskasing	P5N2Y2
1136	Algoma Tubes Inc.	Tenaris Algoma Tubes	547 Wallace Terrace Street	Sault Ste. Marie	P6C1L9
1137	Terra International (Canada) Inc.	CF Industries Courtright Nitrogen Complex	161 Bickford Line	Courtright	N0N1H0
1138	AV Terrace Bay Inc.	AV Terrace Bay	21 Mill Road	Terrace Bay	P0T2W0
1147	TransCanada PipeLines Ltd.	TransCanada Pipeline, Ontario	1644 Veterans Drive	Kenora	P9N0C1
1150	Union Gas Limited	Natural Gas Transmission and Distribution	50 Keil Drive	Chatham	N7M5M1
1158	Glencore Canada Corporation	Sudbury Integrated Nickel Operations Smelter	2 Longyear Drive	Falconbridge	P0M1S0
1163	Greenfield Global Inc.	Tiverton	99 Farrell Drive	Tiverton	N0G2T0
1167	Kawartha Ethanol Inc.	Kawartha Ethanol Inc.	6830 7 Highway	Havelock	K0L1Z0

1168	Vale Canada Limited	Copper Cliff Mining, Smelting and Refining Complex	18 Rink Street	Copper Cliff	P0M1N0
1175	Bartek Ingredients Inc.	Plant #1	421 Seaman Street	Stoney Creek	L8E3J4
1189	Vale Canada Limited	Port Colborne Refinery	187 Davis Street	Port Colborne	L3K5W2
1193	Goldcorp Canada Limited - Red Lake Gold Mines	Red Lake Gold Mines	10 Mine Road	Balmertown	P0V1C0
1198	GOLDCORP CANADA LTD	Porcupine Gold Mines	4315 Gold Mine Road	South Porcupine	P0N1H0
1207	Canadian Mist Distillers Ltd.	Canadian Mist Distillers Limited	202 MacDonald Road	Collingwood	L9Y4J2
1234	Kimberly-Clark Inc.	Kimberly Clark, Huntsville Mill	570 Ravenscliffe Road	Huntsville	P1H2A1
1252	Hartmann Canada Inc.	Hartmann North America	58 Frank Street	Brantford	N3T5T6
1261	Owens Corning Insulating Systems Canada LP	Toronto Plant	3450 McNicoll Avenue	Toronto	M1V 1Z5
1263	Owens Corning Composite Materials Canada LP	Guelph Glass Plant	247 York Road	Guelph	N1H6P6
1406	CertainTeed Corp Insulation Group	CertainTeed Insulation Ottawa	3985 Belgreen Drive	Ottawa	K1G3N2