Draft Regulation

Environment Quality Act (chapter Q-2)

Mandatory reporting of certain emissions of contaminants into the atmosphere — Amendment

Notice is hereby given, in accordance with sections 10 and 11 of the Regulations Act (chapter R-18.1) and sections 2.2 and 46.2 of the Environment Quality Act (chapter Q-2), that the Regulation to amend the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere, appearing below, may be made by the Minister of the Environment and the Fight Against Climate Change on the expiry of 45 days following this publication.

The draft Regulation provides that persons or municipalities required to declare emissions under the Regulation must notify the Minister when they cease operations.

The draft Regulation also determines the method to be used when an emitter is unable to obtain the manufacturer's instructions for calibrating the measurement equipment to the parameters required by the Regulation.

The draft Regulation amends, for harmonization purposes with the federal system for the monitoring of discharges of substances into the environment, the threshold applicable to the report for total reduced sulphur.

The draft Regulation also provides various technical adjustments, corrections to the methods for calculating greenhouse gas emissions and an update of the table concerning default greenhouse gas emission factors relating to electricity for Canadian provinces and certain North American markets.

Lastly, the amendments made by the draft Regulation make it easier to identify the person who is an emitter distributing fuel and charged with declaring emissions. The draft Regulation also enriches the list of information to be provided along with the report, amends the methods for calculating CO_2 emissions related to the distribution of fuel and sets out the rule that must apply to the accounting of the fuel when the storage method used does not allow to identify its origin.

Study of the matter has shown no considerable cost associated with the amendments proposed by the draft Regulation.

Further information may be obtained by contacting Vicky Leblond, Direction générale de la réglementation carbone et des données d'émission, Ministère de l'Environnement et de la Lutte contre les changements climatiques; telephone: 418 521-3868, extension 4386; email: vicky.leblond@environnement.gouv.qc.ca; fax: 418 646-0001.

Any person wishing to comment on the draft Regulation is requested to submit written comments within the 45-day period to France Delisle, Director General, Direction générale de la réglementation carbone et des données d'émission, Ministère de l'Environnement et de la Lutte contre des changements climatiques, édifice Marie-Guyart, 675, boulevard René-Lévesque Est, 5^e étage, boîte 30, Québec (Québec) G1R 5V7; email: france. delisle@environnement.gouv.qc.ca.

BENOIT CHARETTE, Minister of the Environment and the Fight Against Climate Change

Regulation to amend the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere

Environment Quality Act (chapter Q-2, ss. 2.2, 46.2, 115.27, 115.34 and 124.1)

1. The Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere (chapter Q-2, r. 15) is amended in section 6.1 by replacing the sixth paragraph by the following:

"A person or municipality that ceases to operate an enterprise, a facility or an establishment or that cedes its operation must so notify the Minister as soon as possible. The emissions report for the current year must be made by the new operator. The previous operator must provide the new operator with all the data required for the report for the period of the year for which the enterprise, facility or establishment was under his or her responsibility.".

2. Section 7.1 is amended by adding the following paragraph at the end:

"If the emitter is unable to obtain the manufacturer's calibration instructions, the emitter must establish and use a procedure allowing to maintain accuracy of the equipment of plus or minus 5%. The procedure must have been certified by an engineer."

- **3.** Section 9.2 is amended
- (1) by inserting ", 6.6.1" after "section 6.6" in paragraph 1;
- (2) by adding the following paragraph:

"(4) to calibrate equipment in accordance with the second paragraph of section 7.1 or to establish or use a procedure allowing to maintain accuracy of the equipment in accordance with the third paragraph of that section.".

4. Section 9.6 is amended by inserting ", 6.6.1" after "section 6.6." in the portion before paragraph 1.

- **5.** Schedule A is amended
- (1) in Part I, by replacing the table by the following:

Types	Contaminants		Reporting thresholds
	Identification	CAS ⁽¹⁾	
Contaminants	Total fluorides (tF)		10 tons
that cause toxic	Polycyclic aromatic		50 kg on an annual
pollution	hydrocarbons (PAHs)		basis for all the
	Fluorene	86-73-7	contaminants in the
	Phenanthrene	85-01-8	PAH category
	Anthracene	120-12-7	
	Pyrene	129-00-0	
	Fluoranthene	206-44-0	
	Chrysene	218-01-09	
	Benzo (a) anthracene	56-55-3	
	Benzo (a) pyrene	50-32-8	
	Benzo (e) pyrene	192-97-2	
	Benzo (b) fluoranthene	205-99-2	
	Benzo (j) fluoranthene	205-82-3	
	Benzo (k) fluoranthene	207-08-09	
	Benzo (g, h, i) perylene	191-24-2	
	Indeno (1, 2, 3, -cd)	193-39-5	
	pyrene		
	Dibenzo (a, h)	53-70-3	
	anthracene		
			»».

(2) in Part II, by replacing the table by the following:

"

Types	Contaminants		Reporting
	Identification	CAS ⁽¹⁾	thresholds ⁽²⁾
Contaminants	Sulphur dioxyde	7446-09-05	
that cause acid	Nitrogen oxides	11104-93-1	
rain and smog	Volatile organic		
	compounds		
	Carbon monoxide	630-08-0	
	Total particulate matter		
	PM10		
	PM2.5		
	Ammonia	7664-41-7	

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Contaminants	Mercury and its		
that cause toxic	compounds		
pollution	Lead and its compounds		
	Cadmium and its		
	compounds		
	Dioxines		
	Furanes		
	Benzene	71-43-2	
	Hexachlorobenzene	118-74-1	
	Formaldehyde	50-00-0	
	Arsenic and its compounds		
	Hexavalent chromium and		
	its compounds		
	Total reduced sulphur ⁽³⁾		

⁽¹⁾ The numbers entered in respect of the contaminants listed in this Schedule correspond to the identification code assigned by the Chemical Abstract Services division of the American Chemical Society.

⁽²⁾ The reporting threshold applicable for a contaminant in Part II of this Schedule is the reporting threshold provided for that contaminant in the public notice given by the Minister of the Environment of Canada pursuant to section 46 of the Canadian Environmental Protection Act (1999)(S.C. 1999, c. 33).

⁽³⁾ Expressed in the form of hydrogen sulphide.

".

- **6.** Schedule A.2 is amended
- (1) in protocol QC.1, by replacing in QC.1.7:
- (*a*) Table 1-1 by the following:

"Table 1-1. High heat value by fuel type

(QC.1.3.1(1), QC.1.4.1(1), QC.1.5.2(2), QC.17.3.1(2))

Liquid fuels	High heat value (GJ/kl)
Asphalt and road oil	44.46
Aviation gasoline	33.52
Diesel	38.30
Aviation turbo fuel	37.40
Kerosene	37.68
Propane	25.31
Ethane	17.22
Butane	28.44
Lubricants	39.16
Motor gasoline	34.87
Light fuel oil No. 1	38.78
Light fuel oil No. 2	38.50

Residual fuel oil (Nos. 5 and 6)	42.50
Crude oil	39.16
Naphtha	35.17
Petrochemical feedstocks	35.17
Liquid petroleum coke	46.35
Ethanol-100%	23.41
Biodiesel-100%	35.67
Rendered animal fat	34.84
Vegetable oil	33.44
Solid fuels	High heat value (GJ/t)
Anthracite coal	27.70
Bituminous coal	26.33
Foreign bituminous coal	29.82
Sub-bituminous coal	19.15
Lignite	15.00
Coal coke	28.83
Solid petroleum coke	34.89
Wood waste (wood residue) dry basis	19.20
Spent pulping liquor (dry basis)	14.20
Municipal solid waste	11.57
Peat	9.30
Tires	32.80
Agricultural by-products ¹	9.59
Biomass by-products ²	30.03
Gaseous fuels	High heat value (GJ/10 ³ m ³)
Natural gas	38.32
Coke oven gas	19.14
Still gas	36.08
Landfill gas (methane portion)	39.82
Biogas (methane portion)	31.50
Acetylene	54.80

⁽¹⁾ By-products not intended for consumption.
⁽²⁾ Animal and vegetable waste, excluding wood waste and spent pulping liquor.";

(*b*) Table 1-3 by the following:

"Table 1-3. Emission factors by fuel type

(QC.1.3.1(1), QC.1.3.2, QC.1.4.1(1), QC.1.4.4, QC.17.3.1(2))

Liquid fuels and biofuels	CO ₂	CO ₂	CH ₄	CH ₄	N ₂ O	N ₂ O
	(kg/l)	(kg/GJ)	(g/l)	(g/GJ)	(g/l)	(g/GJ)
Aviation gasoline	2.342	69.87	2.200	65.630	0.230	6.862
Diesel	2.663	69.53	0.133	3.473	0.400	10.44
Aviation turbo fuel	2.534	67.75	0.080	2.139	0.230	6.150
Kerosene						
- Electric utilities	2.534	67.25	0.006	0.159	0.031	0.823
- Industrial	2.534	67.25	0.006	0.159	0.031	0.823
- Producer consumption	2.534	67.25	0.006	0.159	0.031	0.823
- Forestry, construction and						
commercial and institutional	2.534	67.25	0.026	0.690	0.031	0.823
Propane						
- Residential	1.510	59.66	0.027	1.067	0.108	4.267
- Others	1.510	59.66	0.024	0.948	0.108	4.267
Ethane	0.976	56.68	N/A	N/A	N/A	N/A
Butane	1.730	60.83	0.024	0.844	0.108	3.797
Lubricants	1.410	36.01	N/A	N/A	N/A	N/A
Motor gasoline	2.289	65.40	2.700	77.140	0.050	1.429
Light fuel oil						
- Electric utilities	2.725	70.23	0.180	4.639	0.031	0.799
- Industrial	2.725	70.23	0.006	0.155	0.031	0.799
- Producer consumption	2.643	68.12	0.006	0.155	0.031	0.799
- Forestry, construction and						
commercial and institutional	2.725	70.23	0.026	0.670	0.031	0.799
Residual fuel oil (Nos. 5 and 6)						
- Electric utilities	3.124	73.51	0.034	0.800	0.064	1.506
- Industrial	3.124	73.51	0.12	2.824	0.064	1.506
- Producer consumption	3.158	74.31	0.12	2.824	0.064	1.506
- Forestry, construction and						
commercial and institutional	3.124	73.51	0.057	1.341	0.064	1.820
Naphtha	0.625	17.77	N/A	N/A	N/A	N/A
Petrochemical feedstocks	0.556	14.22	N/A	N/A	N/A	N/A
Liquid petroleum coke	3.826	82.55	0.12	2.589	0.0265	0.572
Ethanol (100%)	1.519	64.9	N/A	N/A	N/A	N/A
Biodiesel (100%)	2.497	70	N/A	N/A	N/A	N/A
Rendered animal fat	2.348	67.4	N/A	N/A	N/A	N/A
Vegetable oil	2.585	77.3	N/A	N/A	N/A	N/A

Biomass and other solid fuels	CO ₂	CO ₂	CH ₄	CH ₄	N ₂ O	N ₂ O
	(kg/kg)	(kg/GJ)	(g/kg)	(g/GJ)	(g/kg)	(g/GJ)
Wood waste (wood residue) dry	1 700	02.7	0.576	20	0.077	4
Spent pulping liquor (dry basis)	1.799	91.8	0.370	2.9	0.077	4
Agricultural by-products ¹	1.074	112	N/A	N/A	N/A	N/A
Biomass by-products ²	3.000	100	N/A	N/A	N/A	N/A
Coal coke	2.480	86.02	0.03	1.041	0.02	0.694
Solid petroleum coke	3.386	97.07	1.058	30.33	0.139	3.98
Tires	2.650	80.8	N/A	N/A	N/A	N/A
Gaseous fuels and biofuels	CO ₂	CO ₂	CH ₄	CH ₄	N ₂ O	N ₂ O
	(kg/m3)	(kg/GJ)	(g/m3)	(g/GJ)	(g/m3)	(g/GJ)
Coke oven gas	0.879	45.92	0.037	1.933	0.0350	1.829
Still gas	1.75	48.50	N/A	N/A	0.0222	0.615
Landfill gas (methane portion)	2.175	54.63	0.040	1.0	0.004	0.1
Biogas (methane portion)	1.556	49.4	N/A	N/A	N/A	N/A
Acetylene	3.7193	67.87	N/A	N/A	N/A	N/A

(2) in protocol QC.3:

(*a*) in QC.3.3:

i. by replacing the portion preceding equation 3-1 in QC.3.3.1 by the following:

"The annual CO₂ emissions attributable to the consumption of prebaked anodes must be calculated using equation 3-1 or 3-1.1:";

ii. by adding the following after equation 3-1:

"Equation 3-1.1

$$CO_2 = \sum_{i=1}^{12} [NAC \times MP \times CC \times 3.664]_i$$

Where:

 CO_2 = Annual CO_2 emissions attributable to the consumption of prebaked anodes, in metric tons;

i = Month;

NAC = Net anode consumption for aluminum production for month i, in metric tons of anodes per metric ton of liquid aluminum;

MP = Production of liquid aluminum for month *i*, in metric tons;

CC = Carbon content of prebaked anodes for month*i*, in kilograms of carbon per kilogram of prebaked anodes;

3.664 = Ratio of molecular weights, CO₂ to carbon.";

(*b*) in QC.3.6, by adding the following at the end:

"(7) in the case of the average carbon content of prebaked anodes used in the calculation in equation 3-1.1 in QC.3.3, the emitter may measure the content in accordance with the most recent version of ASTM D5373 "Standard Test Methods for Determination of Carbon, Hydrogen and Nitrogen in Analysis Samples of Coal and Carbon in Analysis Samples of Coal and Coke", the most recent version of ISO 29541 "Solid mineral fuels — Determination of total carbon, hydrogen and nitrogen content — Instrumental method", or any other analysis method published by a body referred to in QC.1.5.";

(3) in protocol QC.9, by replacing the definition of factor " Q_{BP} " in equation 9-7 in QC.9.3.3 by the following:

"QBP = Quantity of bituminous product blown, in millions of barrels;";

(4) in protocol QC.17, by replacing Table 17-1 in QC.17.4 by the following:

"Table 17-1. Default greenhouse gas emission factors for Canadian provinces and	
certain North American markets, in metric tons CO2 equivalent per megawatt-hour	•

Canadian provinces and North American	Default emission factor
markets	(metric ton GHG/MWh)
Newfoundland and Labrador	0.040
Novia Scotia	0.674
New-Brunswick	0.312
Québec	0.001
Ontario	0.017
Manitoba	0.002
Vermont	0.007
New England Independent System Operator	
(NE-ISO), including all or part of the	
following states:	
- Connecticut	
- Massachusetts	0.260
- Maine	
- Rhode Island	
- Vermont	
- New Hampshire	
New York Independant System Operator	0 233
(NY-ISO)	0.235

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- Louisiana - Mississippi Southwest Power Pool (SPP), including all or part of the following states: - Kansas - Oklahoma - Nebraska - New Mexico - New Mexico - Texas - Louisiana - Missouri - Mississippi - Arkansas	- Texas	
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Southwest Power Pool (SPP), including all or part of the following states: - Kansas - Oklahoma - Nebraska - New Mexico - New Mexico - Texas - Louisiana - Missouri - Mississippi - Arkansas	- Mississippi	
or part of the following states: - Kansas - Oklahoma - Nebraska - New Mexico - Texas - Louisiana - Missouri - Mississippi - Arkansas	Southwest Power Pool (SPP), including all	
- Kansas - Oklahoma - Nebraska - New Mexico - Texas - Louisiana - Missouri - Mississippi - Arkansas	or part of the following states:	
- Oklahoma - Nebraska - New Mexico - Texas - Louisiana - Missouri - Mississippi - Arkansas	- Kansas	
- Nebraska - New Mexico - Texas - Louisiana - Missouri - Mississippi - Arkansas	- Oklahoma	
- New Mexico 0.543 - Texas - Louisiana - Missouri - Mississippi - Arkansas	- Nebraska	
- Texas - Louisiana - Missouri - Mississippi - Arkansas	- New Mexico	0.543
- Louisiana - Missouri - Mississippi - Arkansas	- Texas	
- Missouri - Mississippi - Arkansas	- Louisiana	
- Mississippi - Arkansas	- Missouri	
- Arkansas ,	- Mississinni	
211Au11945	- Arkansas	
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(5) in protocol QC.19, by replacing subparagraph 4 of the first paragraph in QC.19.2 by the following:

"(4) the annual CO₂, CH₄ and N₂O emissions attributable to the use of biomass in electric arc furnaces, other than biomass used as reducing agent, calculated and reported in accordance with QC.1, in metric tons;";

(6) in protocol QC.29:

(a) by replacing "inlet shut-off valves" in paragraph 6 in QC.29.1 by "inlet valves";

(*b*) in the first paragraph in QC.29.2:

i. by replacing "for onshore pipeline transmission" in paragraph 3 by "and onshore pipelines";

ii. by adding "continuous" before "high bleed" in subparagraph i of subparagraph *a* of paragraph 3;

iii. by replacing subparagraph ii of subparagraph *a* of paragraph 3 by the following:

"ii. emissions from natural gas pneumatic continuous low bleed and intermittent bleed devices, including emissions from pneumatic devices during compressor startups, calculated in accordance with QC.29.3.2;";

iv. by inserting "or incinerators" after "flaring" in subparagraph *c* of paragraph 3;

v. by replacing subparagraph *e* of paragraph 3 by the following:

"(*e*) annual fugitive CO₂ and CH₄ emissions from above ground meters and regulators and all custody transfer gate station equipment, such as connectors, block valves, control valves, pressure relief valves, orifice meters, regulators and open ended lines, calculated in accordance with QC.29.3.7 or QC.29.3.8;";

vi. by replacing "including station equipment leaks" in subparagraph f of paragraph 3 by "including equipment components";

vii. by replacing "pipeline flaring" in subparagraph g of paragraph 3 by "pipeline flaring or incinerators";

viii. by replacing subparagraph *i* of paragraph 3 by the following:

"(*i*) other annual fugitive CO_2 and CH_4 emissions from transmission pipeline not covered in subparagraphs *e* to *h*, emissions attributable to pressure reduction stations, emissions attributable to tubing systems less than 2.54 cm in diameter and emissions attributable to customer meters, calculated in accordance with QC.29.3.11;"; ix. by replacing "from the pipeline system" in subparagraph *j* of paragraph 3 by "transmission pipelines";

x. by inserting "or incinerators" after "flares" in subparagraph *c* of paragraph 4";

xi. by adding the following after subparagraph iii of subparagraph *a* of paragraph 5:

"iv. emissions from screw compressors, calculated in accordance with QC.29.3.6;";

xii. by inserting "or incinerators" after "flares" in subparagraph *c* of paragraph 5;

xiii. by inserting "or incinerators" after "flares" in subparagraph *c* of paragraph 6;

xiv. by replacing paragraph 7 by the following:

"(7) annual CO₂, CH₄ and N₂O emissions attributable to natural gas distribution, in metric tons, specifying:

(*a*) annual CO₂ and CH₄ fugitive emissions from above ground meters and regulators and all custody transfer gate station equipment, such as connectors, block valves, control valves, pressure relief valves, orifice meters, regulators and open ended lines, calculated in accordance with QC.29.3.7 or QC.29.3.8, but excluding fugitive emissions from customer meters;

(*b*) annual CO₂ and CH₄ fugitive emissions from above ground meters and regulators at non-custody transfer gate stations, including station equipment, calculated in accordance with QC.29.3.7 or QC.29.3.8, but excluding fugitive emissions from customer meters;

(b.1) (subparagraph revoked);

(*c*) annual CO₂ and CH₄ fugitive emissions from below ground meters, regulators and other underground station equipment, calculated in accordance with QC.29.3.7 or QC.29.3.8;

(*d*) annual CO_2 and CH_4 fugitive emissions from distribution pipelines, calculated in accordance with QC.29.3.7 or QC.29.3.8;

(*e*) annual CO₂ and CH₄ fugitive emissions from service pipes, calculated in accordance with QC.29.3.7 or QC.29.3.8;

(*f*) annual CO₂, CH₄ and N₂O fugitive emissions from flares or incinerators of distribution system and equipment, calculated in accordance with QC.29.3.4;

(g) (subparagraph revoked);

(*h*) other annual CO_2 and CH_4 fugitive emissions from distribution pipelines, including emissions attributable to pressure reduction connections and emissions attributable tubing systems less than 2.54 cm in diameter, calculated in accordance with QC.29.3.11;

(*i*) annual CO₂ and CH₄ fugitive emissions from connection equipment, calculated in accordance with QC.29.3.7 or QC.29.3.8;

(*j*) annual CH₄ emissions attributable to third party pipeline hits, calculated in accordance with QC.29.3.9;

(k) annual venting emissions, namely:

i. emissions from continuous high bleed pneumatic devices and natural gas pumps, calculated in accordance with QC.29.3.1;

ii. emissions from continuous low bleed and intermittent bleed pneumatic devices, calculated in accordance with QC.29.3.2;

iii. venting emissions from other sources of emissions, calculated in accordance with QC.29.3.11;";

i. by inserting "continuous" before "high bleed" in the heading;

ii. by inserting "continuous" before "high bleed" in the portion before equation 29-1;

iii. by inserting "continuous" before "high bleed" in the definition of factors "GHG_i" and "GHG_{m,l}" in equation 29-1;

iv. by inserting "continuous" before the first "high bleed" in the definition of factor " $GHG_{n-m,l}$ " in equation 29-1;

v. by inserting "continuous" before "high bleed" in the definition of factors " $GHG_{m,l}$ " and " V_{NG} " in equation 29-2;

(d) by inserting "continuous" before "low bleed" in the heading of QC.29.3.2;

(e) by inserting "continuous" before "low bleed" in the portion before equation 29-5;

(f) by replacing the portion before equation 29-6 by the following:

"The CO₂ and CH₄ emissions attributable to natural gas emissions to the atmosphere from equipment blowdown vent stacks to reduce pressure during planned or emergency shutdowns or the maintenance of equipment, except emissions during depressurization to a flare, over-pressure relief, operating pressure control venting and purging of gases other than greenhouse gases, must be calculated in accordance with equation 29-6:";

(g) in QC.29.3.4:

i. by inserting "or incinerators" after "flares" in the heading;

ii. by inserting "or incinerators" after "flares" in the portion before paragraph 1 and in paragraphs 1, 2 and 3;

⁽c) in QC.29.3.1:

iii. by inserting "or incinerators" after "flares" in the definition of factor " N_2O " in equation 29-9;

(*h*) by replacing "system" in subparagraph d of paragraph 1 in QC.29.3.8 by "pipelines";

(*i*) by replacing paragraph 1 in QC.29.4.3 by the following:

"(1) calculate the volume of gas in blowdown equipment chambers, between isolation valves of each equipment type using a recognized estimation method based on the best data available;";

- (*j*) in QC 29.4.4:
- i. by inserting "or incinerators" after "Flares" in the heading;

ii. by inserting "or incinerators" after "flares" in the portion before paragraph 1;

iii. by replacing paragraph 1 by the following:

"(1) determine the volume of gas directed to flares or incinerators, using one of the following methods:

(*a*) using the volumetric gas flow when the flare or incinerator is equipped with a continuous flow monitoring and recording system;

(b) estimating the unmeasured gas flow using a recognized estimation method based on the best data available when part or all of the gas is not measured by a system referred to in subparagraph a;";

iv. by replacing subparagraph b of paragraph 2 by the following:

"(*b*) when the flare is not equipped with a continuous gas composition monitoring and recording system, by determining, using a recognized estimation method based on the best data available or from the supplier's information:

i. the mole fraction of CO_2 and CH_4 of the gas when the stream going to the flare is natural gas;

ii. the mole fraction of the methane, ethane, propane, butane, pentane, hexane and hexaneplus when the stream going to the flare is a hydrocarbon product stream.";

(*k*) by replacing paragraphs 1 and 2 in QC.29.4.5 by the following:

"(1) determine the volume of gas from a wet seal or dry seal oil degassing tank sent to an atmospheric vent and the volume of gas sent to a flare or an incinerator and the volume of emissions from isolation and drain valve vents using one of the methods described in subparagraph a of paragraph 1 of QC.29.4.6, for each operating mode, namely:

(*a*) the centrifugal compressor is in operating mode and the emissions are from wet seal or dry seal vents and leaks in drain valves through the blowdown vent stack;

(*b*) the centrifugal compressor is in standby or pressurized mode, the emissions are from wet seal or dry seal vents and leaks in drain valves through the blowdown vent stack;

(c) the centrifugal compressor is not operating and is depressurized and the emissions are from isolation valve leakage through the blowdonwn vent stack. In that case:

i. a centrifugal compressor that is not equipped with a blind flange must be sampled at least once in every 3 consecutive years;

ii. sampling is not required if a centrifugal compressor has been equipped with a blind flange for at least 3 consecutive years;

(2) when a centrifugal compressor is used for peaking purposes for less than 200 hours per year and is not equipped with a flow meter, determine the flow using a calculation method based on a device having similar specifications and operating conditions or using the emission factors of the most recent version of "Methodology Manual: Estimation of Air Emissions from the Canadian Natural Gas Transmission, Storage and Distribution System" published by Clearstone Engineering Ltd determined using equivalent sources based on the operating mode;";

- (*l*) in QC.29.4.6:
- i. by replacing subparagraph iii of subparagraph *a* of paragraph 1 by the following:

"iii. for through-valve leakage to open ended vents, such as deactivated unit isolation valves and depressurized compressors and blowdown valves on pressurized compressors, using an acoustic detection device in accordance with paragraph 2 of QC.29.4;";

ii. by replacing subparagraphs *a* and *b* of paragraph 2 by the following:

"(*a*) the reciprocating compressor is in operating mode and the emissions from rod-packing vents and leaks in drain valves through the blowdown vent stack;

(b) the reciprocating compressor is in standby pressurized mode and the emissions are from rod-packing vents and leaks in drain valves through the blowdown vent stack;";

iii. by replacing subparagraph *d* of paragraph 2 by the following:

"(*d*) the reciprocating compressor is used for peaking purposes for no more than 200 hours per year and is not equipped with a meter; the flow must be determined using one of the calculation method based on a device having similar specifications and operating conditions or using the emission factors of the most recent version of "Methodology Manual: Estimation of Air Emissions from the Canadian Natural Gas Transmission, Storage and Distribution System"published by Clearstone Engineering Ltd determined using equivalent sources based on the operating mode;";

iv. by adding the following paragraph at the end:

"For the purposes of subparagraph a of subparagraph 1 of the first paragraph, the flow measurements taken may be used for a maximum period of 3 years. If one of the measurements cannot be taken for safety reasons, use the emission factors of the most recent version of "Methodology Manual: Estimation of Air Emissions from the Canadian Natural Gas Transmission, Storage and Distribution System" published by Clearstone Engineering Ltd determined using equivalent sources based on the operating mode.";

- (*m*) in QC.29.4.8:
- i. by replacing subparagraph *c* of paragraph 1 by the following:

"(*c*) using enterprise-specific data. The instrumentation and process plans may be used to obtain a representative average of the number of components of a piece of equipment;

(*d*) using the number of average components mentioned in the forms of the most recent version of "Methodology Manual: Estimation of Air Emissions from the Canadian Natural Gas Transmission, Storage and Distribution System" published by Clearstone Engineering Ltd. when the equipment is difficult to inventory;";

ii. by replacing subparagraph *b* of paragraph 3 by the following:

"(*b*) using the emission factors published in the most recent version of "Methodology Manual: Estimation of Air Emissions from the Canadian Natural Gas Transmission, Storage and Distribution System" published by Clearstone Engineering Ltd.;";

- (7) in protocol QC.30:
- (*a*) in QC.30.1:

i. by inserting "butane, kerosene, coal coke, petroleum coke, coal, distillation gas, ethanol, biodiesel, biomethane" after "propane," in the portion before subparagraph 1 of the first paragraph;

ii. by striking out subparagraph 3 of the first paragraph;

iii. by inserting the following paragraphs after the second paragraph:

"For the purposes of subparagraph 1.1 of the second paragraph, the sale is considered made in Québec when the fuels brought into Québec are owned by a seller from outside Québec.

For the purposes of subparagraph 2 of the second paragraph, the importation is considered made in Québec

(1) where the fuels come from outside Canada, when they are owned by a buyer in Québec who imports within the meaning of the Customs Act (R.S.C. 1985, c. 1 (2nd Suppl.)) at the time they are brought into Québec; and

(2) where the fuels come from another province or a territory of Canada, when they are owned by a buyer in Québec at the time they are brought into Québec.

Despite the foregoing, the buyer and the seller referred to in the third and fourth paragraphs may enter into an agreement in which they identify which of them is considered an emitter distributing fuel for the purposes of the emissions report referred to in the third paragraph of section 6.1 and for the purposes of this protocol. The person thus designated must comply with all the requirements imposed on a fuel distributor under this Regulation. If the designated person fails to declare the emissions covered by the agreement, the person who should have declared the emissions under this Regulation if no agreement had been entered into is required to remedy the situation as soon as possible.";

(*b*) by replacing QC.30.2 by the following:

"QC.30.2 Particular information to be declared concerning greenhouse gas emissions

The greenhouse gas emissions report referred to in section 6.2 must include the following information and documents:

(1) the annual emissions attributable to the use of fuel distributed for consumption in Québec, in metric tons CO₂ equivalent, calculated using equation 30-1;

(2) in the case of natural gas and biomethane distributed by a natural gas distributor within the meaning of section 2 of the Act respecting the Régie de l'énergie (chapter R-6.01) and referred to in subparagraph 3 of the second paragraph of QC30.1:

(*a*) the total annual quantity distributed;

(b) the total annual quantity distributed for consumption outside Québec;

(c) the total annual quantity distributed in Québec for use in air transport;

(d) the total annual quantity distributed in Québec for use in water transport;

(*e*) the total annual quantity distributed to an emitter for its establishments referred to in the first paragraph of section 2 or section 2.1 of the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances (chapter Q-2, r. 46.1) and required to cover its greenhouse gas emissions under this Regulation, except the quantity used for transport purposes;

(f) any other total annual quantity distributed in Québec and subtracted in equation 30-2;

(g) the total net annual quantity distributed for consumption in Québec;

(3) in the case of fuel other than natural gas or biomethane distributed for consumption in Québec by a natural gas distributor within the meaning of section 2 of the Act respecting the Régie de l'énergie (chapter R-6.01) and referred to in subparagraph 3 of the second paragraph of QC.30.1, for each fuel distributed that has been refined, manufactured, mixed, prepared or distilled in Québec by the emitter, for each fuel from outside Québec distributed by the emitter and for any other fuel acquired in Québec:

(a) the total annual quantity distributed;

(b) the total annual quantity distributed for consumption outside Québec;

(c) the total annual quantity distributed in Québec for use in air navigation;

(*d*) the total annual quantity distributed in Québec for use in water navigation;

(*e*) the total annual quantity distributed to emitters referred to in the first paragraph of section 2 or section 2.1 of the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances that is required to cover greenhouse gas emissions (chapter Q-2, r. 46.1) and required to cover its greenhouse gas emissions under this Regulation, except the quantity used for transport purposes;

(*f*) any other total annual quantity distributed in Québec and subtracted in equations 30-4 and 30-5;

(g) the total net annual quantity distributed for consumption in Québec;

(4) the name and contact information of the establishments of each emitter referred to in the first paragraph of section 2 or section 2.1 of the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances that is required to cover greenhouse gas emissions (chapter Q-2, r. 46.1) and required to cover its greenhouse gas emissions under this Regulation to which the emitter covered by this Regulation has distributed fuel during the year and the total annual quantity distributed to each establishment, per type of fuel, except the quantity used for transport purposes;

(5) for each fuel from outside Québec distributed by the emitter and for any other fuel acquired in Québec, the name and contact information of the suppliers including, for each of them, the total annual quantity acquired, per type of fuel;

(6) for biomethane distributed for consumption in Québec by a natural gas distributor within the meaning of section 2 of the Act respecting the Régie de l'énergie (chapter R-6.01), the name and contact information of the production location including, for each, the annual quantity of biomethane distributed;

(7) where an agreement has been entered into between the seller and the buyer under the fifth paragraph of QC.30.1, the name and contact information of the parties, the date on which the agreement was entered into, the total annual quantity of fuel covered by the agreement and a copy of the agreement signed by both parties;

(8) the number of times that the methods for estimating the missing data provided for in QC.30.5 were used;

For the purposes of the first paragraph, the quantities must be expressed in thousands of cubic metres at standard conditions in the case of fuel the quantity of which is expressed as a volume of gas, in kilolitres in the case of fuel the quantity of which is expressed as a volume of liquid and in bone dry metric tons in the case of fuel the quantity of which is expressed as a mass.";

(c) by replacing QC.30.3 by the following:

"QC.30.3. Calculation methods for CO₂ emissions

The annual CO₂ equivalent emissions attributable to the use of fuel distributed for consumption in Québec must be calculated using equation 30-1:

Equation 30-1

$$CO_2 = \sum_{i=1}^n [Q_i \times EF_i]$$

Where:

 CO_2 = Annual emissions attributable to the use of fuel distributed for consumption in Québec, in metric tons CO_2 equivalent;

n = Number of fuels distributed for consumption in Québec;

i = Fuel;

 Q_i = Total net annual quantity of fuel *i* distributed for consumption in Québec, calculated using equation 30-2 in the case of natural gas and biomethane distributed by a natural gas distributor within the meaning of section 2 of the Act respecting the Régie de l'énergie and calculated in other cases using equation 30-3, expressed

— in thousands of cubic metres at standard conditions, in the case of fuels the quantity of which is expressed as a volume of gas;

- in kilolitres, in the case of fuels the quantity of which is expressed as a volume of liquid;

— in bone dry metric tons, in the case of fuels the quantity of which is expressed as a mass;

 EF_i = Emission factor for fuel *i*, as indicated in Table 30-1 in QC.30.6, expressed

— in metric tons of CO₂ equivalent per thousand cubic metre at standard conditions, in the case of fuels the quantity of which is expressed as a volume of gas;

— in metric tons of CO₂ equivalent per kilolitre, in the case of fuels the quantity of which is expressed as a volume of liquid;

— in metric tons of CO_2 equivalent per tonnes métriques sèches, in the case of fuels the quantity of which is expressed as a mass;

Equation 30-2

$$\boldsymbol{Q}_{i} = \boldsymbol{Q}_{i}^{T} - \boldsymbol{Q}_{i}^{OQ} - \boldsymbol{Q}_{i}^{A} - \boldsymbol{Q}_{i}^{W} - \boldsymbol{Q}_{i}^{GV} - \boldsymbol{Q}_{i}^{Other}$$

Where:

 Q_i = Total net annual quantity of fuel *i* distributed for consumption in Québec in thousands of cubic metres at standard conditions;

 Q_i^T = Total annual quantity of fuel *i* distributed, mesured in accordance with QC.30.4 in thousands of cubic metres at standard conditions;

 Q_i^{OQ} = Total annual quantity of fue *i* distributed for consumption outside Québec, measured in accordance with QC-30.4 in thousands of cubic metres at standard conditions;

 Q_i^A = Total annual quantity of fuel *i* distributed in Québec for use in air navigation, measured in accordance with QC.30.4 in thousands of cubic metres at standard conditions;

 Q_i^W = Total annual quantity of fuel *i* distributed in Québec for use in water navigation, measured in accordance with QC.30.4 in thousands of cubic metres at standard conditions;

 Q_i^{GV} = Total annual quantity of fuel *i*, other than fuel used for transport purposes, distributed to an emitter for the emitter's establishments referred to in the first paragraph of section 2 or section 2.1 of the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances (chapter Q-2, r. 46.1) that is required to cover greenhouse gas emissions pursuant to that Regulation, measured in accordance with QC.30.4, in thousands of cubic metres at standard conditions in the case of fuels;

 Q_i^{Other} = Other total annual quantity of fuel *i* subtracted, measured in accordance with QC-30.4 in thousands of cubic metres at standard conditions;

i = natural gas or biomethane;

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Equation 30-3

$$Q_i = Q_i^P + Q_i^I$$

Where:

 Q_i = Total net annual quantity of fuel *i* distributed for consumption in Québec, that is,

— in thousands of cubic metres at standard conditions, in the case of fuels the quantity of which is expressed as a volume of gas;

- in kilolitres, in the case of fuels the quantity of which is expressed as a volume of liquid;

— in bone dry metric tons, in the case of fuels the quantity of which is expressed as a mass;

 Q_i^P = Total net annual quantity of fuel *i* refined, manufactured, mixed, prepared or distilled in Québec by the emitter and distributed for consumption in Québec, in accordance with equation 30-4, that is,

— in thousands of cubic metres at standard conditions, in the case of fuels the quantity of which is expressed as a volume of gas;

- in kilolitres, in the case of fuels the quantity of which is expressed as a volume of liquid;

— in bone dry metric tons, in the case of fuels the quantity of which is expressed as a mass;

 Q_i^I = Total net annual quantity of fuel *i* from outside Québec distributed for consumption in Québec, in accordance with equation 30-5, that is,

— in thousands of cubic metres at standard conditions, in the case of fuels the quantity of which is expressed as a volume of gas;

- in kilolitres, in the case of fuels the quantity of which is expressed as a volume of liquid;

- in bone dry metric tons, in the case of fuels the quantity of which is expressed as a mass.

Equation 30-4

$$Q_i^P = Q_i^{PT} - Q_i^{POQ} - Q_i^{PA} - Q_i^{PW} - Q_i^{PGV} - Q_i^{POthet}$$

Where:

 Q_i^P = Total net annual quantity of fuel *i* refined, manufactured, mixed, prepared or distilled in Québec by the emitter and distributed for consumption in Québec, that is,

— in thousands of cubic metres at standard conditions, in the case of fuels the quantity of which is expressed as a volume of gas;

- in kilolitres, in the case of fuels the quantity of which is expressed as a volume of liquid;

— in bone dry metric tons, in the case of fuels the quantity of which is expressed as a mass;

 Q_i^{PT} = Total annual quantity of fuel *i* refined, manufactured, mixed, prepared or distilled in Québec by the emitter and distributed, measured in accordance with QC.30.4, that is,

— in thousands of cubic metres at standard conditions, in the case of fuels the quantity of which is expressed as a volume of gas;

- in kilolitres, in the case of fuels the quantity of which is expressed as a volume of liquid;

— in bone dry metric tons, in the case of fuels the quantity of which is expressed as a mass;

 Q_i^{POQ} = Total annual quantity of fuel *i* refined, manufactured, mixed, prepared or distilled in Québec by the emitter and distributed for consumption outside Québec, measured in accordance with QC.30.4, that is,

— in thousands of cubic metres at standard conditions, in the case of fuels the quantity of which is expressed as a volume of gas;

- in kilolitres, in the case of fuels the quantity of which is expressed as a volume of liquid;

— in bone dry metric tons, in the case of fuels the quantity of which is expressed as a mass;

 Q_i^{PA} = Total annual quantity of fuel *i* refined, manufactured, mixed, prepared or distilled in Québec by the emitter and distributed in Québec for use in air navigation, measured in accordance with QC.30.4, that is,

— in thousands of cubic metres at standard conditions, in the case of fuels the quantity of which is expressed as a volume of gas;

— in kilolitres, in the case of fuels the quantity of which is expressed as a volume of liquid;

— in bone dry metric tons, in the case of fuels the quantity of which is expressed as a mass;

 Q_i^{PW} = Total annual quantity of fuel *i* refined, manufactured, mixed, prepared or distilled in Québec by the emitter and distributed in Québec for use in water navigation, measured in accordance with QC.30.4, that is,

— in thousands of cubic metres at standard conditions, in the case of fuels the quantity of which is expressed as a volume of gas;

- in kilolitres, in the case of fuels the quantity of which is expressed as a volume of liquid;

- in bone dry metric tons, in the case of fuels the quantity of which is expressed as a mass;

 Q_i^{PGV} = Total annual quantity of fuel *i* refined, manufactured, mixed, prepared or distilled in Québec by the emitter and distributed for consumption in Québec, other than fuel used for transport purposes, by an emitter referred to in the first paragraph of section 2 or section 2.1 of the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances (chapter Q-2, r. 46.1) that is required to cover greenhouse gas emissions under that Regulation, measured in accordance with QC.30.4, that is,

— in thousands of cubic metres at standard conditions, in the case of fuels the quantity of which is expressed as a volume of gas;

— in kilolitres, in the case of fuels the quantity of which is expressed as a volume of liquid;

- in bone dry metric tons, in the case of fuels the quantity of which is expressed as a mass;

 Q_i^{POther} = Other total annual quantity of fuel *i* refined, manufactured, mixed, prepared or distilled in Québec by the emitter and distributed for consumption in Québec subtracted, measured in accordance with QC.30.4, that is,

— in thousands of cubic metres at standard conditions, in the case of fuels the quantity of which is expressed as a volume of gas;

— in kilolitres, in the case of fuels the quantity of which is expressed as a volume of liquid;

— in bone dry metric tons, in the case of fuels the quantity of which is expressed as a mass.

Equation 30-5

$$Q_i^I = Q_i^{IT} - Q_i^{IOQ} - Q_i^{IA} - Q_i^{IN} - Q_i^{IGV} - Q_i^{IOther}$$

Where:

 Q_i^I = Total net annual quantity of fuel *i* from outside Québec and distributed for consumption in Québec, that is,

— in thousands of cubic metres at standard conditions, in the case of fuels the quantity of which is expressed as a volume of gas;

- in kilolitres, in the case of fuels the quantity of which is expressed as a volume of liquid;

- in bone dry metric tons, in the case of fuels the quantity of which is expressed as a mass;

 Q_i^{IT} = Total annual quantity of fuel *i* from outside Québec and distributed, measured in accordance with QC.30.4, that is,

— in thousands of cubic metres at standard conditions, in the case of fuels the quantity of which is expressed as a volume of gas;

- in kilolitres, in the case of fuels the quantity of which is expressed as a volume of liquid;

- in bone dry metric tons, in the case of fuels the quantity of which is expressed as a mass;

 Q_i^{IOQ} = Total annual quantity of fuel *i* from outside Québec and distributed for consumption outside Québec, calculated using equation 30-4 and measured in accordance with QC.30.4, that is,

— in thousands of cubic metres at standard conditions, in the case of fuels the quantity of which is expressed as a volume of gas;

- in kilolitres, in the case of fuels the quantity of which is expressed as a volume of liquid;

- in bone dry metric tons, in the case of fuels the quantity of which is expressed as a mass;

 Q_i^{IA} = Total annual quantity of fuel *i* from outside Québec and distributed in Québec for use in air navigation, measured in accordance with QC.30.4, that is,

— in thousands of cubic metres at standard conditions, in the case of fuels the quantity of which is expressed as a volume of gas;

- in kilolitres, in the case of fuels the quantity of which is expressed as a volume of liquid;

- in bone dry metric tons, in the case of fuels the quantity of which is expressed as a mass;

 Q_i^{IN} = Total annual quantity of fuel *i* from outside Québec and distributed in Québec for use in water navigation, measured in accordance with QC.30.4, that is,

— in thousands of cubic metres at standard conditions, in the case of fuels the quantity of which is expressed as a volume of gas;

- in kilolitres, in the case of fuels the quantity of which is expressed as a volume of liquid;
- in bone dry metric tons, in the case of fuels the quantity of which is expressed as a mass;

 Q_i^{IGV} = Total annual quantity of fuel *i* from outside Québec and distributed for consumption in Québec, other than fuel used for transport purposes, by an emitter referred to in the first paragraph of section 2 or section 2.1 of the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances (chapter Q-2, r. 46.1) that is required to cover greenhouse gas emissions under the same Regulation, measured in accordance with QC.30.4, that is,

— in thousands of cubic metres at standard conditions, in the case of fuels the quantity of which is expressed as a volume of gas;

— in kilolitres, in the case of fuels the quantity of which is expressed as a volume of liquid;

— in bone dry metric tons, in the case of fuels the quantity of which is expressed as a mass;

 Q_i^{IOther} = Other total annual quantity of fuel *i* from outside Québec and distributed for consumption in Québec subtracted, measured in accordance with QC.30.4, that is,

— in thousands of cubic metres at standard conditions, in the case of fuels the quantity of which is expressed as a volume of gas;

- in kilolitres, in the case of fuels the quantity of which is expressed as a volume of liquid;

— in bone dry metric tons, in the case of fuels the quantity of which is expressed as a mass.";

(*d*) by adding the following paragraph at the end of QC.30.4:

"Where an emitter is unable to determine the origin of the fuel distributed due to storage method, the origin of the fuel distributed is established in chronological order of the storage of the fuel and on the basis of their quantity.";

(e) in the second paragraph of QC.30.5, by striking out "distributed" after "quantity of fuel";

(f) in QC.30.6, by replacing Table 30-1. by the following:

"Table 30-1. Fuel emission factors, in CO2 equivalent

(QC.30.3)

Liquid fuels	Emission factor (metric tons CO ₂
Automotive gasolines	2.361
Diesels	3.007
Kerosene	2.544
Light oils (0, 1 and 2)	2.735
Heavy oils (4, 5 and 6)	3.146
Propane	1.544
Butane	1.764
Liquefied natural gas	1.178
Liquefied petroleum coke	3.837
Ethanol	0
Biodiesel	0

Gaseous fuels	Emission factor (metric tons CO ₂ equivalent per thousand cubic metres)
Natural gas	1.889
Compressed natural gas	1.907
Biomethane	0.011
Distillation gas (refinery)	1.757
Solid fuels	Emission factor (metric tons CO ₂
	equivalent per metric ton)
Coal coke	2.487
Petroleum coke	3.451
Coal	2.397

7. This Regulation comes into force on 1 January 2020.

104123

Draft By-law

An Act respecting the Société d'habitation du Québec (chapter S-8)

Conditions for the leasing of dwellings in low-rental housing —Amendment

Notice is hereby given, in accordance with sections 10 and 11 of the Regulations Act (chapter R-18.1), that the By-law to amend the By-law respecting the conditions for the leasing of dwellings in low-rental housing, made by the Société d'habitation du Québec and appearing below, may be submitted to the Government for approval on the expiry of 45 days following this publication.

The draft By-law provides for a partial exemption, for the purposes of calculating the income of a household, for child support income received for the maintenance of a child, the removal of the term "head of the household" and the updating of certain references.

The draft By-law will allow households benefitting from the proposed changes to find housing at a lower cost.

Further information on the draft By-law may be obtained by contacting Gabriel Fortin, Executive Assistant to the President and Chief Executive Officer, Société d'habitation du Québec, 1054, rue Louis-Alexandre-Taschereau, aile Jacques-Parizeau, 3^e étage, Québec (Québec) G1R 5E7; telephone: 418 643-4035, extension 2024; fax: 418 646-5560; email: gabriel.fortin@shq. gouv.qc.ca. Any person wishing to comment on the draft By-law is requested to submit written comments within the 45-day period to Gabriel Fortin, at the address mentioned above.

ANDRÉE LAFOREST, Minister of Municipal Affairs and Housing

By-law to amend the By-law respecting the conditions for the leasing of dwellings in low-rental housing

An Act respecting the Société d'habitation du Québec (chapter S-8, s. 86, 1st par., subpar. *g*, and 2nd par.)

1. The By-law respecting the conditions for the leasing of dwellings in low-rental housing (chapter S-8, r. 3) is amended in section 1

(1) by striking out "the head of the household, that is" in the definition of "occupant 1";

(2) by replacing "the head of the household" in the definition of "independent person" by "occupant 1".

2. Section 2 is amended

(1) by replacing subparagraph 1 of the first paragraph by the following:

"(1) the amount received as solidarity credit paid under the Taxation Act (chapter I-3);";