

chapter Q-2, r. 4.1

Clean Air Regulation

Environment Quality Act
(chapter Q-2, ss. 53, 95.1, 124.0.1 and 124.1).

Act respecting certain measures enabling the enforcement of environmental and dam safety legislation
(chapter M-11.6, ss. 30 and 45).

O.C. 501-2011; I.N. 2019-12-01; S.Q. 2022, c. 8, s. 1.

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TITLE I

GENERAL

CHAPTER I

OBJECT

1. The object of this Regulation is to establish particle and gas emission standards, emission opacity standards, air quality standards and monitoring measures to prevent, eliminate, or reduce the emission of contaminants into the atmosphere.

O.C. 501-2011, s. 1.

CHAPTER II

SCOPE

2. This Regulation applies to every source of atmospheric contamination, subject to the following cases:

(1) in the case of bituminous concrete plants, only the fuel sulphur content standards set out in section 57, the combustion gas discharge velocity standards set out in section 61, the standards that apply to the use of a fuel referred to in Division V of Chapter VI of Title II and the air quality standards referred to in section 197 apply;

(2) in the case of quarries and sandpits, only the emission opacity standards set out in section 16, the fuel sulphur content standards set out in section 57, the combustion gas discharge velocity standards set out in section 61, the standards that apply to the use of a fuel referred to in Division V of Chapter VI of Title II and the air quality standards referred to in section 197 apply;

(3) in the case of production equipment subject to the provisions of Chapter III of the Regulation respecting pulp and paper mills (chapter Q-2, r. 27), only the emission opacity standards set out in section 16, the fugitive particle emission standards set out in Division III of Chapter II of Title II, the fuel sulphur content standards set out in section 57, subparagraphs 1 and 2 of the first paragraph and subparagraph 1 of the second paragraph of section 58, the combustion gas discharge velocity standards set out in section 61, the standards that apply to the use of a fuel referred to in Division V of Chapter VI of Title II and the air quality standards referred to in section 197 apply;

(4) in the case of flour mills and other grain processing facilities whose production is not commercialized or whose drying capacity does not exceed 15 tons per hour, only the emission opacity standards set out in section 16, the fugitive particle emission standards set out in Division III of Chapter II of Title II, the fuel sulphur content standards set out in section 57 and the air quality standards referred to in section 197 apply;

(5) in the case of fuel burning systems used for domestic heating, only the fuel sulphur content standards set out in section 57 apply.

Subject to the first paragraph, the emission standards referred to in section 9 apply to every source of contamination other than the facilities referred to in sections 132 and 138 for which no specific particle emission standards are determined under this Regulation or any other regulation made under the Environment Quality Act (chapter Q-2).

In the event that the provisions of this Regulation are inconsistent with those of any other Regulation made under the Environment Quality Act, the provisions that ensure greater protection of the environment are to prevail.

The provisions of this Regulation also apply in a reserved area or an agricultural zone established under the Act respecting the preservation of agricultural land and agricultural activities (chapter P-41.1).

O.C. 501-2011, s. 2.

CHAPTER III

INTERPRETATION

3. For the purposes of this Regulation, unless the context indicates otherwise,

(1) the words and expressions below are to be interpreted as follows:

“dwelling” means any construction intended for human habitation that is connected to individual or collective systems for the supply of drinking water and the treatment of wastewater; (*habitation*)

“emission limit” and “emission limit value” mean the mass, expressed in terms of certain parameters, the concentration, rate or level of an emission that may not be exceeded during one or more specified periods or, in the cases provided for in certain provisions of this Regulation, that may be exceeded only on the conditions prescribed by those provisions; (*valeur limite d’émission*)

“existing” means established or put into operation or the construction of which commenced before 30 June 2011, except any part of the contamination source modified or expanded as of that date; (*existant*)

“heavy fuel oil” means fuel oil meeting the specifications for types 4, 5 or 6 set out in CAN/CGSB-3.2-2007 Heating Fuel Oil published in July 2007 by the Canadian General Standards Board; (*mazout lourd*)

“light fuel oil” means fuel oil meeting the specifications for types 0, 1 or 2 set out in CAN/CGSB-3.2-2007 Heating Fuel Oil published in July 2007 by the Canadian General Standards Board; (*mazout léger*)

“new” means established or put into operation or the construction of which commenced on or after 30 June 2011, including any part of an existing source of contamination that is altered or expanded as of that date; (*nouveau ou nouvel*)

“particle” means any substance, except uncombined water, which exists in a finely divided liquid or solid state in suspension in a gaseous environment; (*particule*)

“public institution” means any of the following institutions, facilities or establishments:

(1) “educational institution” : any institution providing preschool, elementary or secondary education and governed by the Education Act (chapter I-13.3) or by the Education Act for Cree, Inuit and Naskapi Native Persons (chapter I-14), a private educational institution governed by the Act respecting private education (chapter E-9.1), an institution whose instructional program is the subject of an international agreement within the meaning of the Act respecting the Ministère des Relations internationales (chapter M-25.1.1), a general and vocational college, a university, a research institute, a superior school or an educational institution of which more than one-half of the operating expenditures are paid out of the appropriations voted by the National Assembly, and for the purposes of this Regulation, includes childcare centres and day care centres governed by the Educational Childcare Act (chapter S-4.1.1);

(2) “correctional facility” : any facility used for the detention of persons and governed by the Act respecting the Québec correctional system (chapter S-40.1);

(3) “health and social services institution” : any health and social services institution governed by the Act respecting health services and social services (chapter S-4.2) or by the Act respecting health services and social services for Cree Native persons (chapter S-5) and, for the purposes of this Regulation, any other place where lodging services are provided for senior citizens or for any users entrusted by a public institution governed by any of the aforementioned Acts;

(4) “tourist establishment” : an establishment which offers to the public restaurant services or sleeping accommodations, including the rental of camping spaces and, for the purposes of this Regulation, tourist information offices, museums, ski stations, holiday camps, outdoor recreation areas, public beaches, rest areas, golf courses, marinas and sites with guided tourist visits; (*établissement public*)

- (2) the term “PCBs” means polychlorinated biphenyls;
- (3) the term “PAHs” means any type of polycyclic aromatic hydrocarbons listed in Schedule A;
- (4) the term “average” means arithmetic average;
- (5) the term “ppb” means parts per billion in volume;
- (6) the term “ppm” means parts per million in volume; and
- (7) the reference conditions or “R” are a temperature of 25 °C and a pressure of 101.3 kPa.

O.C. 501-2011, s. 3; O.C. 987-2023, s. 1.

CHAPTER IV

INFORMATION, DATA AND EQUIPMENT

4. Every operator of a source of contamination to which a standard set out in this Regulation applies must provide the Minister of Sustainable Development, Environment and Parks, at the Minister’s request and within the time indicated, with all information necessary to identify the nature of contaminants being emitted or likely to be emitted into the atmosphere, to evaluate their quantity or concentration, to locate the emission sites or to be familiar with the features of the facilities, equipment or processes involved.

O.C. 501-2011, s. 4.

5. Any data entered into a register or other document, recorded by a continuous emission measurement and recording system, collected, measured, calculated, used or provided in accordance with this Regulation must be retained by the operator for a minimum of 5 years and must be sent to the Minister at the Minister’s request, within the time indicated by the Minister.

O.C. 501-2011, s. 5; O.C. 987-2023, s. 2.

6. Any device, system or other equipment required under this Regulation must be maintained in good working order and operate optimally during production hours.

O.C. 501-2011, s. 6.

TITLE II

EMISSION STANDARDS

CHAPTER I

SCOPE AND DEFINITIONS

7. Unless indicated otherwise, the emission standards prescribed by this Title do not apply during the start-up or shutdown operations of a device or process.

The standards prescribed by this Title also do not apply to emissions from motor vehicles, aircraft, ships or locomotives.

O.C. 501-2011, s. 7; O.C. 1228-2013, s. 1.

8. In this Title, unless the context indicates otherwise,

“biomedical waste” means biomedical waste referred to in section 1 of the Regulation respecting biomedical waste (chapter Q-2, r. 12); (*déchets biomédicaux*)

“feed rate” means the total weight of the substances introduced into an industrial process during a full operating cycle, except liquid and gaseous fuels and air; (*taux d'alimentation*)

“hazardous material” means hazardous material within the meaning of section 1 of the Environment Quality Act (chapter Q-2); (*matière dangereuse*)

“process” means any method, reaction or operation through which the substance treated undergoes a chemical or physical change; in a physical change, the process includes all successive operations on the same substance bringing about the same type of physical change; (*procédé*)

“rated heat capacity” means the maximum heat input rate of fuel burning equipment or an industrial furnace as specified by the manufacturer, or if an authorization issued by the Minister of Sustainable Development, Environment and Parks for the equipment or furnace provides for a different heat input rate, the heat input rate indicated in the authorization; (*capacité calorifique nominale*)

“rated power” means the maximum useful power of equipment as specified by the manufacturer or, if an authorization issued by the Minister of Sustainable Development, Environment and Parks for the equipment provides for a different power, the power indicated in the authorization; (*puissance nominale*)

“residual hazardous material” means residual hazardous material within the meaning of section 5 of the Regulation respecting hazardous materials (chapter Q-2, r. 32); (*matière dangereuse résiduelle*)

“toxic material” means toxic material within the meaning of paragraphs 2 and 3 of the definition of toxic material in section 3 of the Regulation respecting hazardous materials; (*matière toxique*)

“vapor pressure” means the equilibrium partial pressure exerted by a volatile organic liquid as specified in the method entitled Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isotenoscope published by the American Society of Testing and Materials (ASTM-D-2879-97 (2007)). (*tension de vapeur*)

O.C. 501-2011, s. 8; O.C. 1228-2013, s. 2; I.N. 2019-12-01.

CHAPTER II

LIMIT VALUES AND OTHER STANDARDS APPLICABLE TO PARTICLE EMISSIONS

DIVISION I

LIMIT VALUES APPLICABLE TO PARTICLE EMISSIONS FROM INDUSTRIAL PROCESSES

9. Subject to the second paragraph of section 2, section 10, the provisions of Chapters VI to VIII and the provisions of Divisions I to XII of Chapter IX of this Title, a process that emits particles into the atmosphere must not emit particles in excess of the limits prescribed by Schedule B in the case of sources installed or put into operation on or before 14 November 1979 and in Schedule C in the case of sources installed or put into operation after that date.

O.C. 501-2011, s. 9; O.C. 1228-2013, s. 3.

DIVISION II

LIMIT VALUES AND OTHER STANDARDS APPLICABLE TO PARTICLE EMISSIONS FROM CERTAIN FACILITIES OR ACTIVITIES OR CERTAIN INDUSTRIAL PROCESSES

10. Subject to the provisions of Chapter VI of this Title, the following industrial facilities, activities and processes must not emit or have the effect of emitting particles into the atmosphere in a concentration greater than 30 mg/Rm³ of dry gas for each emission point:

- (1) flour mills or other grain processing facilities;
- (2) distilleries;

- (3) breweries;
- (4) powdered food plants;
- (5) fertilizer production or mixing plants;
- (6) concrete plants;
- (7) ceramic, refractory composite, clay or porcelain products plants;
- (8) polyvinyl chloride processing plants;
- (9) storage in a confined environment;
- (10) welding or metal works in a plant;
- (11) indoor sandblasting;
- (12) preparation, concentration, agglomeration or drying of ore or ore concentrate, except asbestos ore and aluminum hydroxide;
- (13) drilling other than the drilling of a water supply well;
- (14) crushing or sieving of concrete waste, cement, bricks, bituminous concrete or architectural stones carried out outside a quarry or sand pit;
- (15) crushing, drying or sieving of surface mineral substances or aggregate from the operation of a quarry or sand pit governed by the Regulation respecting sand pits and quarries (chapter Q-2, r. 7.1) but carried out outside that quarry or sand pit, except crushing, drying or sieving carried out in a cement plant.

The emission limit prescribed by the first paragraph also applies to any particle collection system designed to prevent fugitive particle emissions during the transfer, fall or handling of the materials referred to in section 12, except sawdust and wood chips for which the particle emission limit value is 50 mg/Rm³ of dry gas.

O.C. 501-2011, s. 10; O.C. 1228-2013, s. 4; O.C. 239-2019, s. 1.

11. A grain processing facility, installed or put into operation after 14 November 1979, whose rated drying capacity exceeds 15 t per hour and whose grain moisture rate reduction is at least 15% must be situated more than 300 m from a residential zone established by the competent municipal authorities or from a dwelling situated in the direction of the prevailing wind, and more than 150 m from any other dwelling, except a dwelling owned by or leased to the owner or the operator of the grain processing facility.

For the purposes of this section, “prevailing wind” means the wind from August to November inclusively that prevails on average more than 20% of the time in a direction if a wind rose that has 8 compass directions is used, or more than 10% of the time in a direction if a wind rose that has 16 compass directions is used, as measured by the meteorological station nearest to the facility.

O.C. 501-2011, s. 11.

DIVISION III

FUGITIVE PARTICLE EMISSION STANDARDS

12. Particle emissions from the transfer, fall or handling of materials including aggregates, ashes, grains, fertilizers, sawdust, wood chips, mine tailings, ore, ore concentrate, ore slag, coal, coke or iron concentrate pellets must not be visible more than 2 m from the emission point.

O.C. 501-2011, s. 12.

12.1. Section 12 does not apply to the harvesting of horticultural peat where a producer has submitted a particle emission management plan to the Minister and complies with the following requirements:

(1) the producer uses equipment designed or certified to measure wind speed and direction on the site where the harvesting is carried out or has access to data from such equipment installed on the site in conditions comparable to the harvesting site and, where applicable, a device designed and certified to measure peat moisture content;

(2) while harvesting peat, the speed and direction of the wind are measured at least

(a) every 2 hours where wind speed is less than 25 km/h; and

(b) every 30 minutes where wind speed is equal to or greater than 25 km/h but less than 50 km/h;

(3) where wind speed equal to or greater than 45 km/h is measured, all vacuum harvesting operations are suspended until wind speed is less than 35 km/h and harrowing operations are suspended where peat moisture content is less than 50%;

(4) where wind speed equal to or greater than 50 km/h is measured, loading and transportation operations are also suspended until wind speed is less than 35 km/h.

The producer must maintain in a record

(1) the dates and times of the beginning and end of the horticultural peat harvesting activities on the site;

(2) wind speeds and directions measured during harvesting and the date and time of each measurement; and

(3) the dates and times of the suspension of activities due to wind speed reaching or exceeding the speeds referred to in subparagraphs 3 and 4 of the first paragraph;

(4) peat moisture content where harrowing operations take place despite wind speed equal to or greater than 45 km/h.

Where dwellings or public institutions are present less than 1 km from the site where horticultural peat is harvested, the producer must, each year, first inform the persons concerned of the period of the harvesting and the procedure established to collect and process complaints in case of nuisance. The procedure must provide for the keeping of a complaints register including in particular the information concerning the complainant, the reasons of the complaint, the date of the event covered by the complaint if available and the corrective measures put in place.

O.C. 987-2023, s. 3.

13. Particle emissions from abrasive blast cleaning or scraping must be contained within an enclosed space, except in the case of a bridge or a metallic wharf being cleaned or scraped.

The same applies to cleaning or scraping with a wet blast system where particle emissions resulting from those operations are visible more than 2 m from the emission point.

O.C. 501-2011, s. 13.

14. Despite the provisions of the Regulation respecting hazardous materials (chapter Q-2, r. 32), particles recovered with a dry dust collector must be handled, transported, stored and disposed of so no particle emission is visible more than 2 m from the emission point.

O.C. 501-2011, s. 14.

CHAPTER III

EMISSION OPACITY

15. The opacity standards prescribed by this Chapter do not apply to smoke from open burning authorized under Title III and to fugitive particle emissions to which Division III of Chapter II of this Title applies.

O.C. 501-2011, s. 15; O.C. 868-2020, s. 1.

16. The opacity of grey or black emissions into the atmosphere from a source of contamination must not exceed 20% for each emission point.

During the operation of a source of contamination, emission opacity may exceed 20%, without exceeding 40%, for one or more periods totalling 4 minutes per hour.

In addition, on starting a stationary internal combustion engine, emission opacity may exceed 20% for a maximum period of 4 minutes.

On igniting a combustion furnace or blowing tubes, emission opacity may exceed 20%, without exceeding 60%, for a maximum period of 4 minutes.

For the purposes of this section, emission opacity is measured using the Micro-Ringelmann chart in Schedule D, in accordance with the instructions in that Schedule.

O.C. 501-2011, s. 16.

CHAPTER IV

EMISSION LIMIT VALUES FOR VOLATILE ORGANIC COMPOUNDS AND OTHER STANDARDS APPLICABLE TO CERTAIN INDUSTRIAL OR COMMERCIAL FACILITIES OR ACTIVITIES

DIVISION I

INTERPRETATION AND SCOPE

17. In this Chapter, unless the context indicates otherwise,

“HVLP” means a high volume, low pressure spray gun using maximum atomizing air pressure of 69 kPa measured at the centre of the air cap and its horns; (*HVBP*)

“light motor vehicle” means any motor vehicle with a 4-stroke engine whose gross weight as indicated by the manufacturer is 3,000 kg or less, other than an off-highway vehicle within the meaning of the Act respecting off-highway vehicles (chapter V-1.3); (*véhicule automobile léger*)

“organic solvent” means a liquid organic compound at reference conditions, used as a thinner, solvent, viscosity reducer or cleaning agent; (*solvant organique*)

“volatile organic compound” or “VOC” means any organic compound that has the property of changing into vapour and the potential to react photochemically in the atmosphere. (*composé organique volatil ou COV*)

For the purposes of this Chapter, dyes, primers, varnishes, lacquers, inks, elastomers, wood or masonry treatment products and any preparation of the same nature intended for maintenance, protection or decoration purposes are considered to be paints.

O.C. 501-2011, s. 17.

18. This Chapter applies to volatile organic compounds emitted into the atmosphere or likely to be emitted during storage or during the use or storage of organic solvents.

Despite the foregoing, the provisions of this Chapter do not apply to the following compounds:

- (1) acetone;
- (2) methane;
- (3) ethane;
- (4) methyl acetate;
- (5) tert-Butyl acetate;
- (6) methyl formate;
- (7) 1,1,1-trichloroethane (methyl chloroform);
- (8) dichloromethane (methylene chloride);
- (9) parachlorobenzotrifluoride (PCBTF);
- (10) cyclic, branched or linear permethylsiloxanes;
- (11) cyclic, branched or linear perfluoroalcanes;
- (12) cyclic, branched or linear perfluoroethers having no unsaturation;
- (13) perfluorinated cyclic, branched or linear tertiary amines having no unsaturation;
- (14) sulfurized perfluorocarbons having no unsaturation and whose sulfur atoms are linked to carbon and fluorine atoms exclusively;
- (15) trichlorofluoromethane (CFC-11);
- (16) dichlorodifluoromethane (CFC-12);
- (17) 1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113);
- (18) 1,2-dichloro-1,1,2,2-tetrafluoroethane (CFC-114);
- (19) chloropentafluoroethane (CFC-115);
- (20) chlorodifluoromethane (HCFC-22);
- (21) chlorofluoromethane (HCFC-31);
- (22) 1,1,1-trifluoro-2,2-dichloroethane (HCFC-123);
- (23) 1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a);
- (24) 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124);
- (25) 1,1-dichloro-1-fluoroethane (HCFC-141b);
- (26) 1-chloro-1,1-difluoroethane (HCFC-142b);
- (27) 1-chloro-1-fluoroethane (HCFC-151a);
- (28) 3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC- 225ca);

- (29) 1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC- 225cb);
- (30) trifluoromethane (HFC-23);
- (31) difluoromethane (HFC-32);
- (32) pentafluoroethane (HFC-125);
- (33) 1,1,2,2-tetrafluoroethane (HFC-134);
- (34) 1,1,1,2-tetrafluoroethane (HFC-134a);
- (35) 1,1,1-trifluoroethane (HFC-143a);
- (36) 1,1-difluoroethane (HFC-152a);
- (37) ethyl fluoride (HFC-161);
- (38) 1,1,2,2,3-pentafluoropropane (HFC-245ca);
- (39) 1,1,2,3,3-pentafluoropropane (HFC-245ea);
- (40) 1,1,1,2,3-pentafluoropropane (HFC-245eb);
- (41) 1,1,1,3,3-pentafluoropropane (HFC-245fa);
- (42) 1,1,1,3,3,3-hexafluoropropane (HFC-236fa);
- (43) 1,1,1,2,3,3-hexafluoropropane (HFC-236ea);
- (44) 1,1,1,3,3-pentafluorobutane (HFC-365mfc);
- (45) 1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC 43-10mee);
- (46) 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxybutane (C₄F₉OCH₃);
- (47) 2-(difluoromethoxymethyl)-1,1,1,2,3,3,3,-heptafluoropropane ((CF₃)₂CF₂OCH₃);
- (48) 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane (C₄F₉OC₂H₅);
- (49) 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane ((CF₃)₂CF₂OC₂H₅).

O.C. 501-2011, s. 18; O.C. 1228-2013, s. 5.

DIVISION II

GENERAL STANDARDS

§ 1. — *Emission standards and general operating conditions*

19. Organic solvents or substances that contain organic solvents must not be used in a manner that emits or allows the emission of volatile organic compounds into the atmosphere in excess of the limit of 100 kg per day.

Despite the first paragraph, volatile organic compound emissions may exceed 100 kg per day if the source of emission has a system that reduces on a daily basis at least 90% of the source's volatile organic compound emissions.

O.C. 501-2011, s. 19.

20. The prohibition under section 19 does not apply to the manufacturing of insecticides, pesticides or herbicides or to the use of halocarbons.

The activities referred to in the provisions of subdivisions 1 and 3 to 8 of Division III of this Chapter are also excluded from the application of section 19.

In addition, the activities referred to in the provisions of subdivision 2 of Division III of this Chapter are excluded from the application of the second paragraph of section 19.

O.C. 501-2011, s. 20.

21. The operator of a source of emission referred to in section 19 must maintain a record indicating for each day of operation and for each type of organic solvent used or each type of substance that contains organic solvents, the volumes used in litres, their volatile organic compound content and all other data necessary to calculate volatile organic compound emissions.

O.C. 501-2011, s. 21.

§ 2. — *Emission monitoring measures*

22. The operator of a source of emission referred to in section 19 must, at least once every 3 years, calculate the rate of volatile organic compound emissions into the atmosphere using a mass balance performed on the basis of the combined volatile organic compound content of all the products used.

For the application of the second paragraph of section 19, the operator must, at the same frequency, perform source emissions testing and analyze the volatile organic compounds emitted into the atmosphere, calculate the percentage of reduction, and for that purpose, measure each of the parameters established in that section.

In addition, the operator must carry out a first calculation of the emission rate or, where applicable, take the first sample and carry out the first analysis within 1 year as of 30 June 2014 in the case of an existing operation or, in the case of a new operation, within 1 year as of the date on which the operation commences.

O.C. 501-2011, s. 22; O.C. 657-2013, s. 1.

DIVISION III

STANDARDS SPECIFIC TO CERTAIN SOURCES OF CONTAMINATION

§ 1. — *Paint or adhesive manufacturing*

23. The operator of an establishment where paints or adhesives are manufactured must ensure that the vats used to mix the ingredients are provided with lids that comply with the following specifications:

(1) the lids must be attached to the rim of the vat or the rim of the lids must extend at least 1.3 cm beyond the outer rim of the vat;

(2) the lids must maintain contact with the rim of the vat over at least 90% of the circumference; and

(3) when equipped with an opening to allow for the insertion of a mixer shaft, the shaft clearance must not exceed 5 cm.

In addition, the operator must ensure that the vats are kept covered, except for the time required to fill them, add ingredients or take samples.

O.C. 501-2011, s. 23.

24. The operator of an establishment referred to in section 23 must also, where the production equipment has mills, ensure that the mills have fully enclosed screens to prevent volatile organic compound emissions.

O.C. 501-2011, s. 24.

25. The operator of an establishment referred to in section 23 must maintain a record, indicating for each month of operation, the quantity of each type of paint or adhesive manufactured, the percentage in weight of each volatile organic compound used in the manufacturing and the quantity of solvents required to clean the paint manufacturing equipment.

O.C. 501-2011, s. 25.

§ 2. — *Printing activities*

26. The volatile organic compounds emitted into the atmosphere by printing activities may, for the combined activities of an establishment, exceed the limit prescribed by the first paragraph of section 19, provided that the emission of the substances by the operator is reduced by a percentage at least equal to the percentage set out in the following table, for each type of printing process, through the use of ink or other substances having a lower volatile organic compound content or the installation of a volatile organic compound emission reduction system:

Process	Percentage of VOC emission reduction
Flexography	90
Rotogravure	90
Offset lithography with heatset ink	90
Offset lithography without heatset ink	70
Letterpress printing	70

O.C. 501-2011, s. 26; O.C. 1060-2015, s. 1.

§ 3. — *Application of paint*

27. The emission of volatile organic compounds into the atmosphere from the combined paint application activities of an establishment in which paints are applied, for industrial or commercial purposes, including the use of solvents to dilute the paint or clean the equipment, must not exceed 15 kg per day.

That prohibition does not apply to the application of translucent paints in sign manufacturing processes or to the application of paint outside a paint shop or paint room. It also does not apply to the application of paint performed in accordance with any of sections 30 to 32, 34, 35, 37 and 38.

O.C. 501-2011, s. 27; O.C. 1060-2015, s. 2.

28. An establishment in which paints are applied, for industrial or commercial purposes, must have

(1) a gas exhaust stack that extends at least 5 m above the roof ridge of the building where the paint is applied; and

(2) a particle collection system with a minimum efficiency of 90% where the application is made by gun or by spraying.

In addition, the updraft vertical exhaust velocity of the gases must be at least 15 m per second at the stack outlet.

An establishment in which only paints containing less than 20% by weight of organic solvents are applied is not subject to the requirements provided for in subparagraph 1 of the first paragraph and in the second paragraph of this section.

O.C. 501-2011, s. 28; O.C. 1228-2013, s. 6.

29. The operator of an establishment in which paint application activities are carried out must maintain a record, indicating for each day of operation and for each type of paint used, the volumes used, their volatile organic compound content, the volumes of solvents added to dilute the paint or clean the equipment, and all data necessary to calculate volatile organic compound emissions.

O.C. 501-2011, s. 29.

§ 4. — *Application of paint on wood surfaces*

30. The emission of volatile organic compounds into the atmosphere from the combined paint application activities of a flooring or prefinished panel manufacturing establishment may exceed the limit prescribed by

section 27, provided that the volatile organic compound content of the paints applied does not exceed the limit set out in the following table for each type of paint:

Type of paint	Maximum VOC content (g/l of product applied)
Washcoat	730
Primer	600
Translucent stain	760
Non-grain raising stain	780
Ink	500
Filler	480
Sealer	670
Transparent finishing coat	670
All other types of paint	670

For the purposes of this section, the volatile organic compound content is established according to the monthly weighted average composition of the volumes used for each type of paint. If a solvent, hardener or catalyst is mixed with the paint, the volatile organic compound content of the product must be included in the calculation of the average content of the paint used to determine its volatile organic compound content.

O.C. 501-2011, s. 30.

31. The emission of volatile organic compounds into the atmosphere from the combined paint application activities of a door or window manufacturing establishment may exceed the limit prescribed by section 27,

provided that the volatile organic compound content of the paints applied does not exceed the limit set out in the following table for each type of paint:

Type of paint	Maximum VOC content (g/l of product applied)
Pigmented primer	600
Pigmented finishing coat	480
Transparent finishing coat	670
All other types of paint	670

For the purposes of this section, the volatile organic compound content is established according to the monthly weighted average composition of the volumes used for each type of paint. If a solvent, hardener or catalyst is mixed with the paint, the volatile organic compound content of the product must be included in the calculation of the average content of the paint used to determine its volatile organic compound content.

O.C. 501-2011, s. 31.

32. The emission of volatile organic compounds into the atmosphere from the combined paint application activities of a furniture, cupboard, casket or other wood products manufacturing establishment, except an establishment referred to in section 30 or 31, may exceed the limit prescribed by section 27, provided that the

volatile organic compound content of the paints applied does not exceed the limit set out in the following table for each type of paint:

Type of paint	Maximum VOC content (g/l of product applied)
Washcoat	730
Translucent stain	760
Non-grain raising stain	780
Filler	480
Sealer	670
Pigmented coating	600
Transparent finishing coat	670
Laquered finishing coat	780
All other types of paint	780

For the purposes of this section, the volatile organic compound content is established according to the monthly weighted average composition of the volumes used for each type of paint. If a solvent, hardener or catalyst is mixed with the paint, the volatile organic compound content of the product must be included in the calculation of the average content of the paint used to determine its volatile organic compound content.

O.C. 501-2011, s. 32.

33. The operator of a paint shop or paint room must not use or permit the use therein of a paint gun having a transfer efficiency lower than that of an HVLP paint gun to apply paint on wood surfaces if the emission of volatile organic compounds into the atmosphere from the combined paint application activities exceeds 15 kg per day.

That prohibition does not apply to touch-up paint work.

This section applies to existing paint shops and paint rooms as of 30 June 2012.

O.C. 501-2011, s. 33.

§ 5. — *Application of paint on surfaces other than wood*

34. The emission of volatile organic compounds into the atmosphere from the combined paint application activities of an establishment in a class listed in the following table may exceed the limit prescribed by section 27, provided that the volatile organic compound content of the paints applied does not exceed the limit set out in the table for each class of establishment and each type of paint application:

Class of establishment	Type of paint application	Maximum VOC content (g/l of product applied)
Manufacturing establishment of tins, cans or other types of closed metallic containers	Base coat and varnish for metal sheet	340
	Coating of the interior and top of the container	510
	Coating of the weld	660
	Seal coating	440
Textile industry	Fabric coating process	350
	Vinyl coating	450
Other establishments except those referred to in subdivisions 6 and 7 of Division III of this Chapter	All applications	580

Emissions of volatile organic compounds into the atmosphere from an industrial or a commercial establishment in a class covered by the last box in the above table may exceed the limit prescribed by section 27 even if the volatile organic compound content of the paints applied exceeds 580 g per litre of applied product, provided that the emissions are not higher than would be the case if the paint were applied using an HVLP paint gun.

For the purposes of this section, the volatile organic compound content is established according to the monthly weighted average composition of the volumes used for each type of paint application. If a solvent, hardener or catalyst is mixed with the paint, the volatile organic compound content of the product must be included in the calculation of the average content of the paint used to determine its volatile organic compound content.

O.C. 501-2011, s. 34; O.C. 1228-2013, s. 7.

§ 6. — *Application of paint in the automobile industry*

35. The emission of volatile organic compounds into the atmosphere from the combined paint application activities of a light motor vehicle assembly plant may exceed the limit prescribed by section 27, provided that the volatile organic compound content of the paints applied does not exceed the limit set out in the following table for each type of paint application:

Type of paint application	VOC emission limit values (g/l of solids applied)
Electroplating bath	160
Primer coat spraying	1,400
Coat spraying including colour and transparent part	1,890

For the purposes of this section, the volatile organic compound content is established according to the monthly weighted average composition of the volumes used for each type of paint. If a solvent, hardener or catalyst is mixed with the paint, the volatile organic compound content of the product must be included in the calculation of the average content of the paint used to determine its volatile organic compound content.

O.C. 501-2011, s. 35.

36. The operator of a plant referred to in the first paragraph of section 35 must maintain a record indicating for each month of operation the average quantities of volatile organic compounds emitted per litre of paint solids applied, the percentage of solids in the paint, the quantities of solvents added, the actual efficiency coefficients of the equipment used and any other parameter necessary to calculate the emissions. The calculation must be performed using the method established in section 60.393 of Part 60 of Title 40 of the Code of Federal Regulations (40 CFR 60.393) and published by the U.S. Environmental Protection Agency (USEPA).

O.C. 501-2011, s. 36.

37. The emission of volatile organic compounds into the atmosphere from the combined paint application activities of a bus body paint shop or paint room may exceed the limit prescribed by section 27, provided that the average volatile organic compound content of the paints applied does not exceed 580 g of volatile organic compounds per litre of product applied.

For the purposes of this section, the volatile organic compound content is established according to the annual weighted average composition of the volumes of paint used for each type of paint. If a solvent, hardener or catalyst is mixed with the paint, the volatile organic compound content of the product must be included in the calculation of the average content of paint applied to determine its volatile organic compound content.

O.C. 501-2011, s. 37.

38. The emission of volatile organic compounds into the atmosphere from the combined paint application activities of a body repair and paint shop may exceed the limit prescribed by section 27, provided that the

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volatile organic compound content of the paints applied does not exceed the limit set out in the following table for each type of paint:

Type of paint	Maximum VOC content (g/l of product applied)
Primer surfacer	250
Primer sealer	340
Pre-treatment wash primer	660
Adhesion promoter	840
Colour coating	420
Uniform finish coating	540
Truck-bed liner coating	310
Temporary protection coating	60
Underbody coating	430
Single-stage coating	420
Multi-colour coating	680
Clear coating	250
Other coatings	250
Surface cleaners	50

For the purposes of this section, the volatile organic compound content is established according to the monthly weighted average composition of the volumes of paint used for each type of paint. If a solvent, hardener or catalyst is mixed with the paint, the volatile organic compound content of the product must be included in the calculation of the average content of the paint used to determine its volatile organic compound content.

O.C. 501-2011, s. 38.

39. The operator of a body repair and paint shop must not use or permit the use in the shop of a paint gun having a transfer efficiency lower than that of an HVLP paint gun.

This section applies to existing body repair and paint shops as of 30 June 2012.

O.C. 501-2011, s. 39.

§ 7. — *Application of paint on roads, roadways, parking areas and certain other surfaces*

40. The volatile organic compound content of paint applied on parking areas, sidewalks, bicycle trails, curbs, approach noses, roads and roadways must not exceed

- (1) 150 g per litre of product applied between 1 May and 15 October; and
- (2) 450 g per litre of product applied between 16 October and 30 April.

For the purposes of this section, the volatile organic compound content is established according to the monthly weighted average composition of the volumes of paint used for each type of paint. If a solvent, hardener or catalyst is mixed with the paint, the volatile organic compound content of the product must be included in the calculation of the average content of the paint applied to determine its volatile organic compound content.

This section takes effect on 9 September 2012.

O.C. 501-2011, s. 40.

§ 8. — *Dry cleaning activities*

41. A dry cleaning establishment that uses tetrachloroethylene or other cleaning agent containing chlorine or substances containing chlorine must not emit into the atmosphere more than 20 kg of volatile organic compounds per 1,000 kg of textiles cleaned.

O.C. 501-2011, s. 41.

42. A dry cleaning establishment that uses petroleum solvents or substances containing such solvents must not emit into the atmosphere more than 65 kg of volatile organic compounds per 1,000 kg of textiles cleaned.

O.C. 501-2011, s. 42.

43. The operator of a dry cleaning establishment must maintain a record indicating for each month of operation the quantities of volatile organic compounds bought, the quantities of volatile organic compounds on hand at the end of that period, the weight of the textiles cleaned and the quantities in kilograms of volatile organic compounds used during that period per 1,000 kg of textiles cleaned.

O.C. 501-2011, s. 43.

§ 9. — *Above-ground storage of volatile organic compounds*

44. Every above-ground tank of a capacity equal to or greater than 4 m³ that is used to store volatile organic compounds that have a vapor pressure under storage conditions equal to or greater than 10 kPa must have a submerged fill pipe.

This section applies to existing above-ground tanks as of the date of the first repair that requires degassing or not later than 31 December 2011, whichever is earlier.

O.C. 501-2011, s. 44.

45. Every above-ground tank of a capacity equal to or greater than 75 m³ with a diameter of 4 m or more that is used to store volatile organic compounds that have a vapor pressure under storage conditions between 10 and 76 kPa must have a floating roof of one of the following types:

- (1) double seal;
- (2) liquid-mounted primary seal;
- (3) mechanical shoe seal; or
- (4) another type that has a sealing efficiency of at least 95%.

If the vapor pressure of the stored products is greater than 76 kPa under storage conditions, the tank must have an emission recovery system.

This section applies to existing above-ground tanks as of the date of the first repair that requires degassing or not later than 31 December 2013, whichever is earlier.

O.C. 501-2011, s. 45; O.C. 657-2013, s. 2.

§ 10. — *Volatile organic compound leak control plan*

46. The operator of a petroleum refinery, petrochemical or organic chemical plant or petroleum depot or terminal whose production or distribution volume is greater than 250 million litres per year and whose equipment contains or is intended to contain substances consisting of 10% or more in volume of volatile organic compounds that have a vapor pressure equal to or greater than 1 kPa at a temperature of 20 °C, must implement an annual plan able to detect and repair any volatile organic compound leak causing a concentration in the atmosphere in excess of 10,000 ppm, or any benzene or butadiene leak causing a concentration in the atmosphere in excess of 1,000 ppm.

The implementation of the plan referred to in the first paragraph must be completed not later than 30 June 2016.

O.C. 501-2011, s. 46.

47. The plan referred to in section 46 must cover all of the following equipment parts:

- (1) gate valves and other valves of a diameter equal to or greater than 1.875 cm;
- (2) pump, compressor and agitator seals;
- (3) joints or connections of a diameter equal to or greater than 1.875 cm; and
- (4) open pipes.

Equipment maintained under negative pressure or completely covered with thermal insulation is excluded from the plan.

For the purposes of this section, an open pipe means a gate valve or a valve, except a pressure relief valve, with one side of the seat in contact with one of the substances referred to in section 46 and the other side exposed to the atmosphere.

O.C. 501-2011, s. 47.

48. Leak detection must be carried out

- (1) once every 3 months between 1 April and 31 December for pump, compressor and agitator seals; and
- (2) once a year for all other parts.

O.C. 501-2011, s. 48.

49. If a volatile organic compound leak is detected with respect to an equipment part, the operator must have the required repair carried out within 15 days in the case of fluid or gas consisting of 10% or more in volume of benzene or butadiene or within 45 days in any other case. However, if the repair requires the interruption of an on-going process, the repair must be carried out not later than the next shutdown of the process involved.

O.C. 501-2011, s. 49.

50. Despite section 47, if the number of leaks detected for the entire operation during 2 consecutive annual detection periods is less than 2% of the number of equipment parts in each category inspected, the plan may be limited to 10% of the equipment parts of each type, as long as the number of leaks detected does not exceed 1% of the number of equipment parts sampled.

O.C. 501-2011, s. 50.

51. The operator referred to in section 46 must forward to the Minister of Sustainable Development, Environment and Parks, not later than 1 June of each year,

- (1) a report indicating, for each category of equipment part, the results of the leak detection program for the previous calendar year and any repair work performed; and
- (2) an estimate of the total quantities of volatile organic compounds emitted into the atmosphere for all of the equipment parts listed in section 47, for the entire operation in the previous calendar year.

For the purposes of subparagraph 2 of the first paragraph, the estimate of the quantities of volatile organic compounds emitted must be calculated using the formulas in Table I of Schedule E for each category of operation and the most recent measure of volatile organic compound concentration used for each equipment part.

The formulas in Table II of Schedule E apply when no leaks are detected for a category of equipment part.

O.C. 501-2011, s. 51.

CHAPTER V

EMISSION LIMIT VALUES AND OTHER STANDARDS APPLICABLE TO STATIONARY INTERNAL COMBUSTION ENGINES

DIVISION I

EMISSION STANDARDS

52. A stationary internal combustion engine, other than an engine used in an emergency to operate a generator, pump, compressor or other similar unit, must not emit into the atmosphere

(1) nitrogen oxides in excess of the limits set out in the following table:

Rated Power (MW)	Nitrogen oxide emission limits (g/Mj of fuel input)	
	Existing engine	New engine
<1	2.2	2.2
≥1	4.5	2.5

(2) more than 1.8 g of carbon monoxide per megajoule of fuel input for an engine with a rated power equal to or greater than 1 MW, or not more than 0.65 g of carbon monoxide per megajoule of fuel input for an engine with a rated power less than 1 MW; or

(3) more than 2.2 g of total hydrocarbons per megajoule of fuel input for an engine with a rated power equal to or greater than 1 MW using gas or a fossil fuel mixture, or not more than 0.28 g of total hydrocarbons per megajoule of fuel input for an engine with a rated power equal to or greater than 1 MW using diesel or light fuel oil or for an engine with a rated power less than 1 MW.

O.C. 501-2011, s. 52; O.C. 1228-2013, s. 8.

DIVISION II

EMISSION MONITORING MEASURES

53. The operator of a stationary internal combustion engine with a rated power equal to or greater than 10 MW must, at least once every 3 years, perform source emissions testing of the gases emitted into the atmosphere, calculate the rate of the contaminants referred to in section 52, and for that purpose, measure each of the parameters necessary for the calculation.

O.C. 501-2011, s. 53.

54. Fuel that has a sulphur content exceeding the following limits cannot be used in a stationary internal combustion engine:

- (1) 1.5% (mass/mass) by weight for heavy fuel oil; or
- (2) 0.5% (mass/mass) by weight for light fuel oil.

Despite the first paragraph, the operator of an existing stationary internal combustion engine may, until 30 June 2012, use heavy fuel oil that has a sulphur content exceeding 2% by weight.

O.C. 501-2011, s. 54.

CHAPTER VI

EMISSION LIMIT VALUES AND OTHER STANDARDS APPLICABLE TO COMBUSTION PLANTS

DIVISION I

INTERPRETATION

55. In this Chapter, unless the context indicates otherwise,

“fuel burning equipment” means any indirect heat transfer equipment that uses fuel for heating purposes, for an industrial process or for electricity production; (*appareil de combustion*)

“industrial furnace” means any direct heat transfer equipment that uses fuel for an industrial process; (*four industriel*)

“pulp and paper mill residual materials” means mill residual materials within the meaning of section 1 of the Regulation respecting pulp and paper mills (chapter Q-2, r. 27), except bark and wood waste; (*matières résiduelles de fabrication de pâtes et papiers*)

“wood waste” means wood waste from wood cutting activities or wood product transformation and includes tree branches, sawdust, chips, shavings, particles and bark, except pulp and paper mill residual materials, free of any foreign material or substance other than soil or sand. (*résidus de bois*)

O.C. 501-2011, s. 55.

56. If the combustion chamber of fuel burning equipment is modified after 29 June 2011, the fuel burning equipment is considered to be new equipment within the meaning of section 3.

O.C. 501-2011, s. 56.

DIVISION II

GENERAL

57. The use of fossil fuel in fuel burning equipment or in an industrial furnace is prohibited if the fossil fuel has a sulphur content exceeding

- (1) 1.5% (mass/mass) by weight for heavy fuel oil;
- (2) 0.5% (mass/mass) by weight for light fuel oil;
- (3) 1.5% (mass/mass) by weight for coal;
- (4) 1.5% (mass/mass) by weight for coke; or
- (5) 1.5% (mass/mass) by weight for pitch.

Despite the first paragraph, the operator of existing fuel burning equipment or industrial furnace may, until 30 June 2012, use heavy fuel oil or coal that has a sulphur content not exceeding 2% (mass/mass) by weight.

In addition, if the facilities of the operator of fuel burning equipment or an industrial furnace are situated in a territory where natural gas is accessible, the operator must use heavy fuel oil that has a sulphur content not exceeding 1% (mass/mass) by weight as of 30 June 2013.

For the purposes of the third paragraph, natural gas is considered to be accessible where it is technically possible to have access to it as long as the costs associated with natural gas do not threaten the operator's competitiveness.

Subparagraphs 4 and 5 of the first paragraph take effect from 30 June 2012.

O.C. 501-2011, s. 57.

58. The sulphur limits prescribed by section 57 for heavy fuel oil, coal, coke and pitch do not apply if

- (1) part of the sulphur that would otherwise be emitted in the form of sulphur dioxide in the combustion gases is collected and blended with a raw material or product coming into contact with the gases;
- (2) part of the sulphur that would otherwise be emitted in the form of sulphur dioxide in the combustion gases is collected and treated in a scrubber; or
- (3) in a petroleum refinery, another low sulphur fossil fuel is used simultaneously.

Despite the first paragraph, the quantity of sulphur dioxide emitted into the atmosphere during fossil fuel combustion must not exceed the quantity emitted when burning fuel that has a calorific value of 42.6 MJ/kg and a sulphur content

- (1) meeting the requirements of section 57 that apply in the case of subparagraphs 1 and 2 of the first paragraph of this section;
- (2) of 1% (mass/mass) by weight in the case of subparagraph 3 of the first paragraph of this section.

O.C. 501-2011, s. 58.

59. The operator of a fuel burning equipment or an industrial furnace to which one of the cases described in section 58 applies must maintain a record of the origin, quantity, sulphur content and heat content of the heavy fuel oil, coal, coke, or pitch used.

In the case described in subparagraph 3 of the first paragraph of section 58, the operator must also maintain a record indicating for each day of operation the nature, quantity, sulphur content and heat content of each fossil fuel used.

O.C. 501-2011, s. 59.

60. As of 30 June 2012, when replacing a burner in fuel burning equipment with a rated heat capacity or rated power, as the case may be, equal to or greater than 3 MW, the installation of a new burner that has a nitrogen oxide emission rate greater than that of a low nitrogen oxide emission is prohibited.

O.C. 501-2011, s. 60; O.C. 657-2013, s. 3.

61. The updraft vertical exhaust velocity of combustion gas discharge into the atmosphere from equipment installed or put into operation after 14 November 1979, that has a rated power less than 3 MW, using wood or wood waste, wood or wood waste containing or saturated with formaldehyde-based glue or granules produced from lignocellulosic crops as fuel, alone or in combination with a fossil fuel, and whose combustion gases are

discharged through a stack installed or built after that date, must be at least 10 m per second at the stack outlet, when the equipment is operating at its rated heat capacity.

The updraft vertical exhaust velocity of combustion gas discharge into the atmosphere from the following equipment must be at least 15 m per second at the stack outlet when the equipment is operating at its rated heat capacity or, where applicable, at its rated power:

(1) fuel burning equipment, installed or put into operation after 14 November 1979, that uses heavy fuel oil and whose combustion gases are discharged through a stack installed or built on or after that date; and

(2) fuel burning equipment, installed or put into operation after 14 November 1979, that has a rated heat capacity equal to or greater than 3 MW, using a fuel referred to in Division IV or V of this Chapter, alone or in combination with a fossil fuel, and whose combustion gases are discharged through a stack installed or built after that date;

(3) *(subparagraph revoked)*.

This section does not apply to fuel burning equipment using exclusively light fuel oil or fuel in a gaseous state at the feed point.

O.C. 501-2011, s. 61; O.C. 1228-2013, s. 9.

62. For the purposes of sections 60 and 61, rated heat capacity is in reference to fuel burning equipment whose fuel is in a liquid or gaseous state at the feed point. If the fuels used are not in a liquid or gaseous state at the feed point, rated power applies.

O.C. 501-2011, s. 62.

DIVISION III

FUEL BURNING EQUIPMENT OR STATIONARY COMBUSTION TURBINES USING LIQUID OR GASEOUS FOSSIL FUELS OTHER THAN USED OIL

O.C. 501-2011, Div. III; O.C. 1228-2013, s. 10.

§ 1. — Interpretation

63. For the purposes of this Division, fuel burning equipment coupled to one or more stationary combustion turbines are considered stationary combustion turbines.

O.C. 501-2011, s. 63.

§ 2. — *Fuel burning equipment*

64. Fuel burning equipment using exclusively fossil fuel other than used oil must not emit particles into the atmosphere in excess of the limits set out in the following table:

Rated heat capacity (MW)	Fuel used	Particle emission limits (g/GJ of fuel input)	
		Equipment installed or put into operation on or before 14 November 1979	Equipment installed or put into operation after 14 November 1979
≥ 3 and ≤ 15	Light or heavy fuel oil	85	60
> 15	Light or heavy fuel oil	60	45

For fuel burning equipment used in an electricity generating station and that produces steam at a rated heat capacity that enables electric power production equal to or greater than 125 MW, the particle emission limit is 45 g/GJ of fuel input.

O.C. 501-2011, s. 64.

65. New fuel burning equipment using exclusively fossil fuel other than used oil must not emit nitrogen oxides into the atmosphere in excess of the limits set out in the following table:

Rated heat capacity (MW)	Fuel used	Nitrogen oxide emission limits (g/GJ of fuel input)
≥ 3 and ≤ 30	gas	26
	Light fuel oil	40
	Heavy fuel oil (nitrogen content ≤ 0.35%)	90
	Heavy fuel oil (nitrogen content > 0.35%)	110
> 30	gas	40
	Light fuel oil	50
	Heavy fuel oil (nitrogen content ≤ 0.35%)	90
	Heavy fuel oil (nitrogen content > 0.35%)	125

In the case of fuel burning equipment referred to in the first paragraph that uses an auxiliary fossil fuel for less than 500 hours per year, the limit value that applies to nitrogen oxide emissions is 110 g/GJ for equipment with a rated heat capacity equal to or greater than 3 MW but less than or equal to 30 MW, and 125 g/GJ for equipment with a rated heat capacity greater than 30 MW.

In the case of existing fuel burning equipment installed or put into operation after 14 November 1979, the applicable limits are the limits set out in the following table:

Rated heat capacity (MW)	Fuel used	Nitrogen oxide emission limits (g/GJ of fuel input)
≥ 15 and ≤ 70	gas	80
	Light or heavy fuel oil	175
> 70	gas	110
	Light or heavy fuel oil	135

In the case of fuel burning equipment referred to in the third paragraph that uses an auxiliary fossil fuel for less than 500 hours per year, the limit value that applies to nitrogen oxide emissions is 175 g/GJ for equipment with a rated heat capacity equal to or greater than 15 MW but less than or equal to 70 MW, and 135 g/GJ for equipment with a rated heat capacity greater than 70 MW.

O.C. 501-2011, s. 65; O.C. 1228-2013, s. 11.

66. In the case of fuel burning equipment in an electricity generating station that was established or put into operation on or before 14 November 1979, that is situated in the area described in Schedule J and that uses electric generators having an electricity generating capacity greater than 125 MW, the applicable limit for nitrogen oxide emissions from all the equipment combined is, as of 30 June 2012, 2.1 kt per year.

O.C. 501-2011, s. 66.

67. Where fossil fuel is used for at least 50% of total heat input in the fuel burning equipment in an electricity generating station that has a rated electricity generating capacity greater than 25 MW, that is situated in the area described in Schedule J and that supplies electricity to a public distribution network, the applicable limits for nitrogen oxide emissions are, as of 30 June 2012, the limits prescribed by the first paragraph of section 65 for a rated heat capacity greater than 30 MW.

O.C. 501-2011, s. 67.

§ 3. — *Stationary combustion turbines*

68. A stationary combustion turbine used to produce electricity must not emit nitrogen oxides into the atmosphere in excess of the limits set out in the following table for each category of turbine:

Category of turbine (electricity generating capacity - MW)	Nitrogen oxide emission limits (ppm)
< 50	30
< 50 supplied by liquid fuel and situated outside the area described in Schedule J	60
≥ 50	15
≥ 50 situated in the area described in Schedule J	4

For the purposes of this section, if a facility has several turbines, the prescribed limits are determined according to the total production capacity of all the facility’s turbines.

This section does not apply to a stationary combustion turbine or a set of turbines if the nitrogen oxide emission is less than 25 t per year.

O.C. 501-2011, s. 68.

69. A stationary combustion turbine referred to in section 68 must not emit carbon monoxide into the atmosphere in excess of 16 ppm.

This section applies to existing stationary combustion turbines with an electricity generating capacity less than 50 MW as of 1 January 2013.

O.C. 501-2011, s. 69.

70. If the stationary combustion turbine has a catalytic reduction system for nitrogen oxide control, the ammonia content of the combustion gases must not exceed 5 ppm.

O.C. 501-2011, s. 70.

71. For the purposes of sections 68 to 70, the concentration of the contaminants emitted is determined using average concentration measured in the emissions over a period of 3 hours, expressed on a dry basis corrected to 15% oxygen according to the following formula:

$$E = E_a \times \frac{5.9}{20.9 - A}$$

where

“E” is the corrected concentration;

“E_a” is the concentration on a dry basis, uncorrected; and

“A” is the percentage of oxygen on a dry basis in the combustion gases at the sampling site.

O.C. 501-2011, s. 71.

§ 4. — *Monitoring equipment*

72. Fuel burning equipment referred to in any of sections 64 to 67 with a rated heat capacity equal to or greater than 15 MW must have a sampling system that continuously measures and records the particle concentration or opacity of the gases emitted into the atmosphere as well as the oxygen, carbon monoxide and nitrogen oxide concentration.

However, if such equipment is supplied exclusively with gaseous fuel or is supplied with liquid fossil fuel less than 500 hours per year, the opacity and particle concentration in the gases emitted need not be measured and recorded by the system.

The nitrogen oxide concentration, the opacity and the particle concentration need not be measured and recorded by the system where the fuel burning equipment is in operation less than 500 hours per year.

For the purposes of this section, for the measurement and recording of the particle concentration or opacity of the gases emitted into the atmosphere, all fuel burning equipment is considered to be a single unit of equipment emitting gases through a single stack.

This section applies to existing fuel burning equipment as of 30 June 2013.

O.C. 501-2011, s. 72; O.C. 1228-2013, s. 12.

73. Every stationary combustion turbine, except a turbine referred to in the third paragraph of section 68, must have a system that continuously measures and records nitrogen oxides, carbon monoxide and oxygen in the combustion gases. In the case referred to in section 70, the system must also measure and record continuously the ammonia content in the combustion gases.

The provisions of this section relating to carbon monoxide apply to existing stationary combustion turbines with a rated electricity generating capacity less than 50 MW as of 1 January 2013.

O.C. 501-2011, s. 73.

§ 5. — *Emission monitoring measures*

74. The operator of fuel burning equipment referred to in any of sections 64 to 67, with a rated heat capacity equal to or greater than 3 MW, and the operator of a stationary combustion turbine referred to in any of sections 68 to 70 must, at least once every 3 years, perform source emissions testing of the gases emitted into the atmosphere by the equipment or turbine, calculate the rate or concentration of the contaminants

referred to in those sections, and for that purpose, measure each of the parameters necessary for the calculation.

In addition, the operator must carry out the first sampling and calculation within 1 year as of 30 June 2011 in the case of an existing equipment or turbine or, in the case of new equipment or turbine, within 1 year as of the date on which the equipment or turbine is put into operation.

O.C. 501-2011, s. 74.

DIVISION IV

FUEL BURNING EQUIPMENT OR INDUSTRIAL FURNACES USING WOOD, WOOD WASTE OR PULP AND PAPER MILL RESIDUAL MATERIALS AS FUEL

§ 1. — *Emission standards and other standards*

75. Fuel burning equipment using wood, wood waste or pulp and paper mill residual materials as fuel, alone or in combination with a fossil fuel other than used oil, must not emit particles into the atmosphere in excess of the limits set out in the following table:

Rated power (MW)	Fuel used	Particle emission limits (mg/m ³ R of dry gas)	
		Existing equipment	New equipment
< 3	Wood or wood waste, used alone or in combination with a fossil fuel	600	150
≥ 3 and < 10	Wood or wood waste, used alone or in combination with a fossil fuel	340	150
≥ 10	Wood or wood waste, used alone or in combination with a fossil fuel	100	70
≥ 3	Pulp and paper mill residual materials, used alone or in combination with a fossil fuel	100	70

Only fuel burning equipment with a rated power equal to or greater than 3 MW may use fuel that consists of wood or wood waste containing or saturated with formaldehyde-based glue. In that case and subject to the

fourth paragraph, the applicable particle emission limit is 100 mg/Rm³ of dry gas for existing equipment and 70 mg/Rm³ of dry gas for new equipment.

Despite the second paragraph, in the case of a furniture manufacturing establishment, fuel burning equipment with a rated power less than 3 MW may use fuel that consists of the materials referred to in that paragraph where those materials are generated in connection with the activities of that establishment.

In addition, fuel referred to in the second and third paragraphs used in fuel burning equipment of a furniture manufacturing establishment may not contain more than 0.05% by weight of total halogens at the feed point, which must not emit particles into the atmosphere in excess of the following limits:

(1) in the case of existing fuel burning equipment, 340 mg/Rm³ of dry gas as of 30 June 2011 and, as of 30 June 2014, 180 mg/Rm³ of dry gas in the case of equipment with a rated power less than 3 MW and 100 mg/Rm³ of dry gas in the case of equipment with a rated power equal to or greater than 3 MW;

(2) in the case of new fuel burning equipment, 150 mg/Rm³ of dry gas in the case of equipment with a rated power less than 3 MW and 70 mg/Rm³ of dry gas in the case of equipment with a rated power equal to or greater than 3 MW.

For the use as fuel of wood or wood waste containing or saturated with formaldehyde-based glue, fuel burning equipment must not emit formaldehyde into the atmosphere in a concentration in excess of 37 µg/m³, over a period of 15 consecutive minutes, using an air dispersion model in accordance with Schedule H.

O.C. 501-2011, s. 75; O.C. 1228-2013, s. 13.

76. New fuel burning equipment with a rated power greater than 15 MW and using one of the fuels referred to in section 65 for at least 50% of total heat input must not emit nitrogen oxides into the atmosphere in excess of the limits prescribed by the first paragraph of that section for a rated heat capacity greater than 30 MW.

O.C. 501-2011, s. 76.

77. If the wood or wood waste used as fuel has been treated with a product containing chromium, copper or arsenic, the fuel burning equipment must have a rated power equal to or greater than 3 MW and must not emit into the atmosphere

(1) particles in excess of 100 mg/Rm³ of dry gas in the case of existing fuel burning equipment, or 70 mg/Rm³ of dry gas in the case of new equipment; or

(2) chromium, copper or arsenic in such manner that the contaminant concentrations in the atmosphere exceed the concentrations listed in Schedule G, using an air dispersion model in accordance with Schedule H.

O.C. 501-2011, s. 77.

78. If the wood or wood waste used as fuel has been treated with a product containing creosote or pentachlorophenol, the fuel burning equipment must have a rated power equal to or greater than 3 MW and must not emit into the atmosphere

(1) carbon monoxide in a concentration that exceeds the limit of 114 mg/Rm³ of dry gas calculated on the running average of the emissions taken over a period of 60 minutes.

That limit value may however be exceeded if the features of the fuel burning equipment used do not allow compliance with that limit, provided the total hydrocarbon concentration, calculated according to the running average of the emissions taken over a period of 60 minutes, remains equal to or less than 20 ppm, expressed as propane on a dry basis, in the combustion gases. The limit value of carbon monoxide then applicable is established on the basis of the results obtained during burning tests and calculated according to the average of

the highest running averages of the emissions of carbon monoxide taken over a period of 60 minutes, obtained for each burning test;

- (2) particles in a concentration that exceeds the limit prescribed by paragraph 1 of section 77.

In addition, if the wood or wood waste used as fuel has been treated with a product containing pentachlorophenol, the fuel burning equipment must not emit polychlorinated dibenzofurans or polychlorinated dibenzo [b,e] [1,4] dioxins into the atmosphere in excess of the limit of 0.08 ng/Rm³ of dry gas; the contaminant concentration in the combustion gases is obtained by adding the concentrations of each of the congeners listed in Schedule I and multiplying the sum obtained by the corresponding toxicity equivalency factor listed in that Schedule.

O.C. 501-2011, s. 78.

79. For the purposes of sections 75 and 76, paragraph 1 of section 77 and the first paragraph of section 78, the concentration of the contaminants emitted is expressed on a dry basis corrected to 7% oxygen according to the following formula:

$$E = E_a \times \frac{13.9}{20.9 - A}$$

where

“E” is the corrected concentration;

“E_a” is the concentration on a dry basis, uncorrected; and

“A” is the percentage of oxygen on a dry basis in the combustion gases at the sampling site.

For the purposes of the second paragraph of section 78, the concentration of the contaminants emitted is expressed on a dry basis corrected to 11% oxygen according to the following formula:

$$E = E_a \times \frac{9.9}{20.9 - A}$$

where

“E” is the corrected concentration;

“E_a” is the concentration on a dry basis, uncorrected; and

“A” is the percentage of oxygen on a dry basis in the combustion gases at the sampling site.

O.C. 501-2011, s. 79.

80. If wood or wood waste used as fuel contains one of the substances referred to in sections 75, 77 and 78, the industrial furnace must have a rated heat capacity equal to or greater than 3 MW and the applicable particle emission limits are those prescribed by Chapter IX of Title II of this Regulation for the type of furnace used, or, in other cases, the limits prescribed by the provisions of Chapter II of Title II.

In addition, the fifth paragraph of section 75, paragraph 2 of section 77 and the second paragraph of section 78 apply to industrial furnaces. Subparagraph 1 of the first paragraph of section 78 also applies to industrial furnaces other than clinker kilns and lime kilns.

O.C. 501-2011, s. 80.

81. The use as fuel of wood or wood waste containing one of the contaminants referred to in section 78 is permitted only in fuel burning equipment or an industrial furnace with a rated power or rated heat capacity equal to or greater than 3 MW that has a destruction and removal efficiency equal to or greater than 99.99% for each of the following substances:

(1) pentachlorophenol; and

(2) each of the organic compounds present as a result of creosote treatment and which would be a hazardous material if the compound were the sole component of the fuel.

For the purposes of this section, destruction and removal efficiency is calculated using the following formula:

$$E_d = \frac{(Q_i - Q_s)}{Q_i} \times 100$$

where

“ E_d ” is the destruction and removal efficiency of the organic compound concerned;

“ Q_i ” is the feed rate expressed in kg/h of the most thermally stable organic compound concerned by the prescribed destruction and removal efficiency; and

“ Q_s ” is the rate of emission of the organic compound concerned by “ Q_i ” that is present in the gases emitted, expressed in kg/h.

O.C. 501-2011, s. 81.

82. Where the combustion gases from equipment referred to in section 75 are used to dry wood, wood waste or pulp and paper mill residual materials to be used as fuel in the equipment, the particle emissions from the dryer are deemed to be part of the emissions from the attendant fuel burning equipment and are governed by the provisions of this Division, despite section 154.

O.C. 501-2011, s. 82.

§ 2. — *Monitoring equipment*

83. Fuel burning equipment referred to in section 75 that uses wood or wood waste containing or saturated with formaldehyde-based glue as fuel and fuel burning equipment that uses other fuel with a rated power

equal to or greater than 10 MW must have a system that continuously measures and records the oxygen and carbon monoxide concentration of the gases emitted into the atmosphere.

In addition, in the case of fuel burning equipment referred to in section 75 whose rated power is equal to or greater than 10 MW, the system must also continuously measure and record the opacity or particle concentration of the gases emitted into the atmosphere.

The first and second paragraphs also apply to fuel burning equipment and industrial furnaces whose rated heat capacity or rated power, as the case may be, is equal to or greater than 3 MW and that are supplied with wood or wood waste that has been treated with a product containing a substance referred to in sections 77 and 78.

For the purposes of this section, for the continuous measurement and recording of the particle concentration or opacity of the gases emitted into the atmosphere, all fuel burning equipment or industrial furnaces are considered to be a single unit of equipment or furnace emitting gases through a single stack.

This section applies to existing fuel burning equipment and industrial furnaces as of 30 June 2013, subject to the provisions relating to fuel burning equipment using wood or wood waste containing or saturated with formaldehyde-based glue as fuel that apply as of 30 June 2014. Where a scrubber and a stack must be installed so that the equipment or furnaces comply with the emission standards prescribed by the first paragraphs of section 75 or 80, this section applies as of 30 June 2016.

O.C. 501-2011, s. 83.

84. A wet scrubber connected to fuel burning equipment with a rated power equal to or greater than 3 MW must have a system that continuously measures and records the gas pressure loss through the scrubber using a differential pressure gauge accurate to within 0.5 kPa.

In addition, the wet scrubber must have a system that continuously measures and records the scrubbing liquid pressure at the delivery pipe inlet using a pressure gauge accurate to within 10% of the rated pressure in that pipe.

O.C. 501-2011, s. 84.

85. A device capable of changing the flow resistance of the scrubbing liquids cannot be installed or used in a wet scrubber between the pressure gauge and the delivery pipe outlet.

O.C. 501-2011, s. 85.

§ 3. — *Emission monitoring measures*

86. The operator of fuel burning equipment referred to in the first, second, third and fourth paragraphs of section 75, section 76, paragraph 1 of section 77 and section 78 must perform source emissions testing of the gases emitted into the atmosphere by the equipment, calculate the rate of the contaminants referred to in the provisions applying to the equipment, and for that purpose, measure each of the parameters necessary for the calculation

(1) at least once every 5 years in the case of new equipment with a rated power less than 3 MW other than the equipment referred to in subparagraph 2;

(2) at least once every 3 years in the case of fuel burning equipment of a furniture manufacturing establishment with a rated power less than 3 MW and that uses wood or wood waste containing or saturated with formaldehyde-based glue as fuel;

(3) at least once every 3 years in the case of equipment with a rated power equal to or greater than 3 MW and less than 10 MW;

(4) at least once a year in the case of equipment with a rated power equal to or greater than 10 MW; and

(5) at least once every 2 years in the case of sampling and analysis of nitrogen oxides from fuel burning equipment with a rated power equal to or greater than 15 MW.

In addition, the operator must carry out the first sampling and calculation within 1 year as of 30 June 2011 in the case of existing equipment or, in the case of new equipment, within 1 year as of the date on which the equipment is put into operation.

The provisions of this section apply, with the necessary modifications, to the operator of an industrial furnace referred to in section 80.

O.C. 501-2011, s. 86.

87. In addition to the emissions testing referred to in section 86, the operator of fuel burning equipment using fuel that consists of wood or wood waste treated with a product containing creosote or pentachlorophenol must, at the frequency prescribed by the first paragraph of that section according to the rated power of that equipment, perform source emissions testing of the gases emitted into the atmosphere by the equipment, calculate the destruction and removal efficiency of the equipment for those substances in accordance with section 81 and for that purpose, measure each of the parameters necessary for the calculation.

If the wood or wood waste used as fuel contains or is saturated with formaldehyde-based glue or has been treated with a product containing chromium, copper or arsenic, the operator must, at the same frequency, perform source emissions testing of the gases emitted into the atmosphere and calculate the concentration in the atmosphere of the contaminants referred to in the applicable provisions of the fifth paragraph of section 75 or paragraph 2 of section 77 using an air dispersion model in accordance with Schedule H.

In addition, the operator must carry out the first sampling and calculation within 1 year as of 30 June 2011 or as of the date on which the treated wood or wood waste is first used as fuel if that date is subsequent to the former date.

The provisions of this section apply, with the necessary modifications, to the operator of an industrial furnace supplied with such fuels.

O.C. 501-2011, s. 87.

DIVISION V

FUEL BURNING EQUIPMENT OR INDUSTRIAL FURNACES USING OTHER FUELS

§ 1. — Fuel burning equipment

88. Fuel burning equipment using fuel other than fuel referred to in Divisions III and IV of this Chapter must not emit particles into the atmosphere in excess of the following limits:

(1) the limits prescribed by section 64, (according to the rated heat capacity of the equipment, in the case of fuel that is exclusively in a liquid or gaseous state at the feed point; or

(2) 100 mg/Rm³ of dry gas for existing equipment and 70 mg/Rm³ of dry gas for new equipment in all other cases, the measured concentration being corrected to 7% of oxygen according to the formula in the first paragraph of section 79.

This section does not apply to the use of fuel consisting of used oil in accordance with the second paragraph of section 26 of the Regulation respecting hazardous materials (chapter Q-2, r. 32).

O.C. 501-2011, s. 88.

89. Fuel burning equipment using fuel other than fuel referred to in Divisions III and IV of this Chapter must not emit nitrogen oxides into the atmosphere in excess of

(1) the limits prescribed by the first paragraph of section 65, for fuel oil that has a nitrogen content exceeding 0.35% in the case of new equipment or in the third paragraph of that section for light fuel oil in the case of existing equipment installed or put into operation after 14 November 1979, according to the rated heat capacity of the equipment, if the fuel is exclusively in a liquid or gaseous state at the feed point; or

(2) the limit of 125 g of nitrogen oxide per gigajoule supplied by the fuels in the case of new equipment with a rated power greater than 15 MW and where the liquid and gaseous fuel input is at least 50% of the total heat input.

O.C. 501-2011, s. 89; O.C. 1228-2013, s. 14.

90. The use in fuel burning equipment of fuel other than fuel referred to in Divisions III and IV of this Chapter is also subject to the following emission limits and other standards:

(1) the fuel burning equipment must have a rated heat capacity or rated power, as the case may be, equal to or greater than 3 MW, subject to the use of biogas or granules produced from lignocellulosic crops and, in the case of used oil, to the provisions of section 26 of the Regulation respecting hazardous materials (chapter Q-2, r. 32);

(2) an emission limit of 114 mg/Rm³ of dry gas for carbon monoxide, calculated as the running average of the emissions over a period of 60 consecutive minutes.

That limit value may however be exceeded if the features of the fuel burning equipment used do not allow compliance with that limit provided the total hydrocarbon concentration, calculated according to the running average of the emissions during a period of 60 minutes remains equal to or less than 20 ppm, expressed as propane on a dry basis, in combustion gases. The limit value of the carbon monoxide then applicable is established on the basis of the results obtained during burning tests and calculated according to the average of the highest running averages of the carbon monoxide emissions during a period of 60 minutes, obtained for each burning test;

(3) a limit of 0.15% by weight of total halogens at the feed point;

(4) an emission limit of 0.08 ng/Rm³ of dry gas for polychlorinated dibenzofuran and polychlorinated dibenzo [b,e][1,4] dioxin congeners if chlorinated organic compounds are present in the fuel used. The contaminant concentration in the combustion gases is obtained by adding the concentrations of each of the congeners listed in Schedule I and multiplying the sum obtained by the corresponding toxicity equivalency factor listed in that Schedule; and

(5) a destruction and removal efficiency equal to or greater than 99.99% for each of the following substances:

(a) any organic compound in fuel consisting of a residual hazardous material that would be a hazardous material if it were the sole component of the fuel; and

(b) any halogenated organic compound present in a gaseous effluent used as fuel and originating from a process.

The contaminant concentration measured pursuant to this section is expressed on a dry basis corrected to 7% oxygen according to the formula referred to in the first paragraph of section 79.

Despite the foregoing, the contaminant concentration measured pursuant to subparagraph 4 of the first paragraph is expressed on a dry basis corrected to 11% oxygen according to the formula referred to in the second paragraph of section 79.

For the purposes of this section, destruction and removal efficiency is calculated using the following formula:

$$E_d = \frac{(Q_i - Q_s) \times 100}{Q_i}$$

where

“E_d” is the destruction and removal efficiency of the organic compound concerned;

“Q_i” is the feed rate expressed in kg/h of the most thermally stable organic compound concerned by the prescribed destruction and removal efficiency; and

“Q_s” is the rate of emission into the atmosphere of the organic compound referred to “Q_i” that is present in the gases emitted, expressed in kg/h.

Subparagraphs 2, 4 and 5 of the first paragraph do not apply to biogas or granules produced from lignocellulosic crops or used oil used in accordance with the second paragraph of section 26 of the Regulation respecting hazardous materials.

In addition, subparagraph 5 of the first paragraph does not apply to fuel consisting exclusively of used oil that has a contaminant content meeting the standards in Schedule 6 to the Regulation respecting hazardous materials.

O.C. 501-2011, s. 90.

91. The use of residual hazardous materials that have a PCB content exceeding 50 mg/kg as fuel in fuel burning equipment is prohibited, as is the use of halogenated organic compounds in a concentration such that they constitute toxic materials.

If the fuel used is not fuel referred to in Divisions III and IV and contains a contaminant listed in Schedule G, the fuel burning equipment in which it is used, except equipment referred to in the second paragraph of section 26 of the Regulation respecting hazardous materials (chapter Q-2, r. 32), must not emit the contaminant into the atmosphere in such manner that its concentration in the atmosphere exceeds the limit value prescribed by that Schedule using an air dispersion model in accordance with Schedule H.

The first paragraph does not apply in the case of fuel consisting exclusively of used oil that has a contaminant content meeting the standards in Schedule 6 to the Regulation respecting hazardous materials.

O.C. 501-2011, s. 91; O.C. 1228-2013, s. 15.

§ 2. — *Industrial furnaces*

92. An industrial furnace using fuel other than fuel referred to in Divisions III and IV of this Chapter must not emit particles into the atmosphere in excess of the emission limits prescribed by Chapter IX of Title II for that type of industrial furnace or, in other cases, in excess of the limits prescribed by Chapter II of Title II.

The use in an industrial furnace of fuel other than that referred to in Divisions III and IV of this Chapter is subject to the following emission limits and other standards:

(1) the furnace must have a rated heat capacity equal to or greater than 3 MW, subject in the case of used oil to section 26 of the Regulation respecting hazardous materials (chapter Q-2, r. 32); and

(2) an emission limit of 114 mg/Rm³ of dry gas for carbon monoxide calculated as the running average of the emissions over a period of 60 minutes.

That limit value may however be exceeded if the features of the industrial furnace used do not allow compliance with that limit, provided the total hydrocarbon concentration, calculated according to the running average of the emissions during a period of 60 minutes, remains equal to or less than 20 ppm, expressed as propane on a dry basis, in combustion gases. The limit value of the carbon monoxide then applicable is established on the basis of the results obtained during burning tests and calculated according to the average of the highest running averages of the carbon monoxide emissions during a period of 60 minutes, obtained for each burning test;

(3) a destruction and removal efficiency equal to or greater than 99.9999% for each of the following substances contained in the fuel if the fuel consists of a residual hazardous material or is fuel if its total halogen content at the feed point is greater than 0.15% by weight:

(a) any halogenated organic compound in a concentration such that the fuel containing it at the feed point is a toxic material;

(b) any halogenated organic compound if the total halogen content in the fuel containing it at the feed point is greater than 0.15% by weight; and

(c) any PCB if the total PCB concentration in the fuel containing it at the feed point is greater than 50 mg/kg;

(4) a destruction and removal efficiency equal to or greater than 99.99% for each of the following substances:

(a) any organic compound, other than those referred to in subparagraph 3 of the second paragraph, in fuel consisting of a residual hazardous material or in fuel if its total halogen content at the feed point is greater than 0.15% by weight and would be a hazardous material if it were the sole component of the fuel; and

(b) any halogenated organic compound present in a gaseous effluent used as fuel and originating from a process;

(5) if the fuel used contains a contaminant listed in Schedule G, the furnace must not emit such a contaminant into the atmosphere in such manner that its concentration in the atmosphere exceeds the concentration prescribed by that Schedule according to an air dispersion model in accordance with Schedule H; and

(6) an emission limit of 0.08 ng/Rm³ of dry gas for polychlorinated dibenzofuran and polychlorinated dibenzo [b,e] [1,4] dioxin congeners if chlorinated compounds are present in the fuel used. The calculation of the contaminant concentration must take into account the toxicity equivalency factors listed in Schedule I.

Subparagraphs 2 to 6 of the second paragraph do not apply to the use of used oil as fuel in accordance with the second paragraph of section 26 of the Regulation respecting hazardous materials.

In addition, subparagraph 2 of the second paragraph does not apply to

(1) clinker kilns;

(2) lime kilns;

(3) furnaces of bituminous concrete plants using used oils whose contaminant content complies with the standards provided for in Schedule 6 to the Regulation respecting hazardous materials;

(4) furnaces with a destruction and removal efficiency prescribed by this Regulation that is equal to or greater than 99.9999%; or

(5) furnaces using carbon monoxide or hydrogen as fuel, alone or in combination with non combustible compounds.

For the purposes of subparagraphs 3 and 4 of the second paragraph, the destruction and removal efficiency is calculated using the formula in the fourth paragraph of section 90.

Subparagraphs 3 and 4 of the second paragraph do not apply to fuel consisting exclusively of used oil that has a contaminant content meeting the standards in Schedule 6 to the Regulation respecting hazardous materials.

O.C. 501-2011, s. 92; O.C. 1228-2013, s. 16.

93. For the purposes of section 92, the contaminant concentration measured is expressed on a dry basis corrected to 7% oxygen according to the formula in the first paragraph of section 79.

Despite the foregoing, the contaminant concentration measured pursuant to subparagraph 6 of the second paragraph of section 92 is expressed on a dry basis corrected to 11% oxygen according to the formula in the second paragraph of section 79.

O.C. 501-2011, s. 93.

94. The use in an industrial furnace of fuel referred to in subparagraph 3 of the second paragraph of section 92 is also subject to the following emission limits and other standards:

(1) an emission limit for hydrogen chloride of 50 mg/Rm³, expressed on a dry basis corrected to 11% oxygen according to the formula in the second paragraph of section 79;

(2) the fuels for which section 92 prescribes a destruction and removal efficiency equal to or greater than 99.9999% must not be introduced into the furnace before the combustion chamber and accessory equipment have reached and maintained normal operating temperature for a minimum period of 60 consecutive minutes;

(3) the combustion chamber and accessory equipment must be maintained at normal operating temperature for a minimum period of 30 consecutive minutes after the last fuel for which section 92 prescribes a destruction and removal efficiency equal to or greater than 99.9999% have been introduced into the furnace, or for a minimum period of 10 consecutive minutes after the introduction of that fuel if it is in a liquid state; and

(4) the furnace, except a clinker kiln or lime kiln, must have an emergency device that stops the supply of fuel if the carbon monoxide concentration in the combustion gases exceeds the limit of 57 mg/Rm³ on a dry basis corrected to 11% oxygen for 1 minute.

O.C. 501-2011, s. 94.

§ 3. — *Monitoring equipment*

95. The fuel burning equipment referred to in sections 88 and 89 and every industrial furnace referred to in section 92 with a rated heat capacity or rated power, as the case may be, equal to or greater than 3 MW, must have a system that continuously measures and records the oxygen and carbon monoxide concentration in the gases emitted into the atmosphere.

In addition, if the fuel burning equipment or industrial furnace has a rated heat capacity or a rated power, as the case may be, greater than 15 MW, the system required under the first paragraph must also continuously measure and record the particle concentration or opacity of the gases emitted into the atmosphere, except for fuel burning equipment or an industrial furnace supplied exclusively with gaseous fuel.

Fuel burning equipment referred to in the second paragraph must have a system that continuously measures and records the concentration of nitrogen oxides emitted into the atmosphere if fuels in a liquid or gaseous state constitute at least 50% of the total heat input.

For the purposes of the second paragraph, all fuel burning equipment or a series of industrial furnaces is considered to be a single unit of equipment or a single furnace if the combustion gases are emitted through a single stack.

An industrial furnace using combustible materials for which section 92 prescribes a destruction and removal efficiency equal to or greater than 99.9999% must have a system that continuously measures and records the feed rate of the fuels and the hydrogen chloride concentration in the gases emitted into the atmosphere. Sections 84 and 85 apply, with the necessary modifications, to the industrial furnaces to which this section applies.

This section applies to existing fuel burning equipment and industrial furnaces as of 30 June 2012.

O.C. 501-2011, s. 95; O.C. 1228-2013, s. 17.

§ 4. — *Emission monitoring measures*

96. The operator of fuel burning equipment referred to in sections 88 and 89 or subparagraph 2 or 4 of the first paragraph of section 90 or of an industrial furnace referred to in the first paragraph or subparagraph 2 or 6 of the second paragraph of section 92 or paragraph 1 of section 94 must perform source emissions testing of the gases emitted into the atmosphere by the equipment or furnace, calculate the rate or concentration of the contaminants listed in the applicable provisions, and for that purpose, measure each of the parameters necessary for the calculation

(1) at least once every 3 years in the case of the use of biogas or granules produced from lignocellulosic crops and in the case where the fuel used consists of used oil meeting the standards in Schedule 6 to the Regulation respecting hazardous materials (chapter Q-2, r. 32); and

(2) at least once a year for equipment or a furnace supplied with fuel other than fuel referred to in subparagraph 1.

The operator must carry out the first sampling and calculation within 1 year as of 30 June 2011 in the case of existing equipment or a furnace, or within 1 year as of the date on which the equipment or furnace is put into operation.

This section does not apply to an operator who uses biogas in fuel burning equipment with a rated heat capacity or rated power less than 3 MW.

O.C. 501-2011, s. 96.

97. The operator of fuel burning equipment referred to in the second paragraph of section 91 or an industrial furnace referred to in subparagraph 5 of the second paragraph of section 92 must, for the contaminants listed in Schedule G, perform source emissions testing of the gases emitted into the atmosphere by the equipment or furnace and calculate their concentration in the atmosphere using an air dispersion model in accordance with Schedule H

(1) at least once every 3 years if the fuel used consists of used oil meeting the standards in Schedule 6 to the Regulation respecting hazardous materials (chapter Q-2, r. 32); and

(2) at least once a year for equipment or a furnace supplied with fuel other than fuel referred to in subparagraph 1.

In addition, the operator must carry out the first sampling and calculation within 1 year as of 30 June 2011 in the case of existing equipment or a furnace or, in the case of new equipment or a new furnace, within 1 year as of the date on which the equipment or furnace is put into operation.

O.C. 501-2011, s. 97.

98. The operator of fuel burning equipment or an industrial furnace in respect of which subparagraph 5 of the first paragraph of section 90 or subparagraph 3 or 4 of the second paragraph of section 92 prescribes a destruction and removal efficiency percentage for certain contaminants must calculate the destruction and removal efficiency at least once a year in accordance with the fourth paragraph of section 90, and for that purpose, take samples of the contaminants and measure each of the parameters necessary for the calculation.

If the composition of a fuel consisting of a residual hazardous material or a fuel other than that referred to in Divisions III and IV of this Chapter if the total halogen content at the feed point is greater than 0.15% by weight is modified after the calculation of the destruction and removal efficiency referred to in the first paragraph by the introduction of an organic compound that is more thermally stable than the compound for which the destruction and removal efficiency has been calculated, the operator must immediately carry out a new sampling and calculation of the destruction and removal efficiency for that compound.

In addition, the operator must carry out the first sampling and calculation within 1 year as of 30 June 2011 in the case of existing equipment or a furnace or, in the case of new equipment or a new furnace, within 1 year as of the date on which the equipment or furnace is put into operation.

O.C. 501-2011, s. 98.

99. The operator of fuel burning equipment or an industrial furnace using fuel that contains residual hazardous materials or that is fuel other than that referred to in Divisions III and IV of this Chapter if the total halogen content at the feed point is greater than 0.15% by weight must maintain a record, for each fuel batch, of

- (1) the number or identification code assigned by the operator to the fuel batch and the quantity in kilograms;
- (2) the date of use;
- (3) the PCB and total halogen content, expressed in mg/kg of fuel, at the equipment or furnace feed point;
- (4) the concentration of each organic compound present in the fuel, expressed in mg/kg of fuel, at the equipment or furnace feed point; and
- (5) the concentration of each contaminant listed in Schedule G present in the fuel, expressed in mg/kg of fuel, at the equipment or furnace feed point.

Fuel consisting exclusively of used oil meeting the standards in Schedule 6 to the Regulation respecting hazardous materials (chapter Q-2, r. 32) is excluded from the application of this section.

O.C. 501-2011, s. 99.

100. Despite this Division, where fuel burning equipment or an industrial furnace uses household garbage as fuel, the rules applicable to the equipment or furnace are those concerning incineration plants provided for in Chapter VII.

O.C. 501-2011, s. 100.

CHAPTER VII

EMISSION LIMIT VALUES AND OTHER STANDARDS APPLICABLE TO INCINERATION PLANTS

DIVISION I

INTERPRETATION AND SCOPE

101. In this Chapter, unless the context indicates otherwise,

“conical burner” means any burner used in the thermal destruction of wood waste, known as a “teepee”, “wigwam” or “silo burner”; (*brûleur conique*)

“design feed rate” means the maximum rate expressed in kilograms per hour at which material may be fed into an incinerator as specified by the manufacturer or, if an authorization issued by the Minister of Sustainable Development, Environment and Parks for the incinerator provides for a different rate, the rate indicated in the authorization; (*capacité nominale d'alimentation*)

“incinerator” means all the equipment or devices designed or used for the thermal treatment of residual materials in order to eliminate all or part of the residual materials with or without heat recovery, including incineration, pyrolysis, gasification and plasma treatment. (*incinérateur*)

O.C. 501-2011, s. 101; O.C. 1060-2015, s. 3; I.N. 2019-12-01; O.C. 987-2023, s. 4.

102. This Chapter does not apply to crematoriums or animal incinerators.

O.C. 501-2011, s. 102; O.C. 868-2020, s. 2.

DIVISION II

GENERAL EMISSION STANDARDS AND OTHER STANDARDS APPLICABLE TO INCINERATORS

§ 1. — *General*

103. An incinerator must not emit combustion gases into the atmosphere that contain carbon monoxide in a concentration in excess of the limits set out in the following table for the period:

Type of incinerated materials	Carbon monoxide emission limits	
	(mg/Rm ³ of dry gas)	Period for which the running average is calculated (minutes)
Residual hazardous materials	100	20
Biomedical waste and other residual materials	57	240

This section does not apply to incinerators used for the destruction of residual hazardous materials for which a destruction and removal efficiency equal to or greater than 99.9999% is prescribed.

O.C. 501-2011, s. 103.

104. An incinerator must not emit combustion gases into the atmosphere that contain

(1) more than 20 mg/Rm³ of particles; that limit is raised to 50 mg/Rm³ in the case of a facility with a design feed rate of less than 1 ton per hour that does not burn residual hazardous materials or biomedical waste;

(2) more than 50 mg/Rm³ of hydrogen chloride; that limit is raised to 100 mg/Rm³ in the case of a facility with a design feed rate of less than 1 ton per hour that does not burn residual hazardous materials or biomedical waste;

(3) more than 150 mg/Rm³ of dioxide sulphur if the facility burns residual hazardous materials; or

(4) more than 0.08 ng/Rm³ of polychlorinated dibenzofuran or polychlorinated dibenzo [b,e] [1,4] dioxin congeners; the concentration of those contaminants in the combustion gases is obtained by adding the concentrations of each of the congeners listed in Schedule I and multiplying the sum obtained by the corresponding toxicity equivalency factor listed in that Schedule.

Subparagraphs 1 to 3 of the first paragraph and sections 103, 105, 108 to 110 and 115 do not apply to an incinerator used to scrub a gas effluent generated by an industrial process. The standards related to the industrial process apply to such an incinerator.

In addition, subparagraph 4 of the first paragraph does not apply to an incinerator referred to in the second paragraph if the effluent does not contain chlorinated compounds.

Subparagraph 4 of the first paragraph applies to existing incinerators as of 30 June 2012.

O.C. 501-2011, s. 104.

105. An incinerator must not emit mercury into the atmosphere in excess of the following limits:

(1) 40 µg/Rm³ in the case of biomedical waste incinerated in a facility with a design feed rate of less than 1 ton per hour;

(2) 50 µg/Rm³ in the case of residual hazardous materials; or

(3) 20 µg/Rm³ in cases other than those referred to in paragraphs 1 and 2.

This section applies to existing incinerators as of 30 June 2012.

O.C. 501-2011, s. 105.

106. For the purposes of sections 103 to 105, the contaminant concentration measured is expressed on a dry basis corrected to 11% oxygen according to the formula in the second paragraph of section 79.

O.C. 501-2011, s. 106.

107. Every incinerator must have a destruction and removal efficiency during incineration equal to or greater than 99.9999% for the following substances present in each residual hazardous material:

(1) any halogenated organic compound if the concentration at the feed point is such that the residual hazardous material containing the compound constitutes a toxic material;

(2) any halogenated organic compound where the total halogen content in the residual hazardous material containing the compound at the feed point is equal to or greater than 0.2% by weight in the case of an existing incinerator, or greater than 0.15% by weight in the case of a new incinerator; and

(3) any PCB where the total PCB concentration of the residual hazardous material in the fuel containing the PCB at the feed point is greater than 50 mg/kg.

The destruction and removal efficiency must be equal to or greater than 99.99% for the organic compounds present in the residual hazardous materials other than the organic compounds referred to in the first paragraph that would constitute hazardous materials if they were the sole component of a material or for any halogenated organic compound present in a gaseous effluent originating from a process.

For the purposes of this section, the destruction and removal efficiency is calculated using the formula in the fourth paragraph of section 90.

This section does not apply to used oil meeting the standards in Schedule 6 to the Regulation respecting hazardous materials (chapter Q-2, r. 32).

O.C. 501-2011, s. 107.

§ 2. — *Installation and operation*

108. An incinerator with a design feed rate of less than 1 ton per hour and a biomedical waste incinerator must have a primary combustion chamber and at least one secondary combustion chamber.

Gases from the combustion of residual materials in the primary combustion chamber must be brought to a temperature greater than 1,000 °C for at least 1 second when they reach the final secondary combustion chamber.

O.C. 501-2011, s. 108.

109. An incinerator with a design feed rate of less than 1 ton per hour and a residual hazardous materials incinerator or a biomedical waste incinerator and must have auxiliary gas or liquid fossil fuel burners other than used oil.

O.C. 501-2011, s. 109.

109.1. An incinerator whose rate is less than 1 ton per hour and which burns liquid or gaseous residual hazardous materials by plasma treatment is not subject to sections 108 and 109.

O.C. 1060-2015, s. 4.

110. Materials to be incinerated must not be introduced in the primary chamber of a biomedical waste incinerator or an incinerator with a design feed rate of less than 1 ton per hour during the preheating of the final secondary combustion chamber or be ignited until the temperature of the final secondary combustion chamber has been maintained at a temperature of at least 1,000 °C for a minimum of 15 consecutive minutes.

O.C. 501-2011, s. 110.

111. Residual hazardous materials must not be fed into an incinerator during start-up until the temperature of the incinerator and accessory equipment has been maintained at normal operating temperature for a minimum of 60 consecutive minutes.

O.C. 501-2011, s. 111.

112. If residual hazardous materials are incinerated, combustion chambers must be maintained at normal operating temperature for a minimum of 30 consecutive minutes after the last solid residual hazardous

materials introduced have been incinerated, or for a minimum of 10 consecutive minutes in the case of liquid or gaseous materials.

O.C. 501-2011, s. 112.

113. A residual hazardous materials or biomedical waste incinerator with a design feed rate equal to or greater than 1 ton per hour must have an emergency device that stops the supply of the materials or waste if the concentration of carbon monoxide exceeds the limits prescribed by section 103.

A residual hazardous materials incinerator for which a destruction and removal efficiency equal to or greater than 99.9999% is required must have an emergency device that stops the supply of the materials if the concentration of carbon monoxide in the combustion gases, on a dry basis corrected to 11% oxygen, exceeds 57 mg/Rm³ for 1 minute.

O.C. 501-2011, s. 113.

114. Sections 103 and 104, subparagraph 3 of the first paragraph and the second paragraph of section 105 and sections 106, 107, 111 to 113 and 115 to 120 apply, with the necessary modifications, to the thermal treatment of contaminated soils.

O.C. 501-2011, s. 114.

§ 3. — *Monitoring equipment*

115. An incinerator must have a system that continuously measures and records the concentration of carbon monoxide and oxygen in the combustion gases emitted into the atmosphere. The incinerator must also have a system that continuously measures and records the gas temperature at the combustion chamber outlet or, in the case of an incinerator that has more than one combustion chamber, at the outlet of the final chamber.

In addition, an incinerator with a design feed rate equal to or greater than 1 ton per hour must have a system that continuously measures and records the opacity of the combustion gases or the concentration of the particles emitted into the atmosphere.

An incinerator with a design feed rate equal to or greater than 2 tons per hour that burns halogenated materials must have a system that continuously measures and records the concentration of hydrogen chloride in the combustion gases emitted into the atmosphere.

O.C. 501-2011, s. 115.

116. A wet scrubber connected to an incinerator must have a system that continuously measures and records the gas pressure loss through the scrubber and a differential pressure gauge accurate to within 0.5 kPa.

In addition, it must have a system that continuously measures and records the scrubbing liquid pressure at the delivery pipe inlet and have a pressure gauge accurate to within 10% of the rated pressure in that pipe.

O.C. 501-2011, s. 116; O.C. 1228-2013, s. 18.

117. The installation or use of a device likely to modify flow resistance of scrubbing liquids is prohibited in a wet scrubber, between the pressure gauge and the delivery pipe outlet.

O.C. 501-2011, s. 117.

118. A residual hazardous materials incinerator with a design feed rate equal to or greater than 1 ton per hour must have a system that continuously measures and records the feed rate of the materials.

O.C. 501-2011, s. 118.

§ 4. — *Emission monitoring measures*

119. The operator of an incinerator with a design feed rate equal to or greater than 1 ton per hour must, at least once a year, perform source emissions testing of the combustion gases emitted into the atmosphere, calculate the emission rate or concentration of the contaminants referred to in the applicable provisions of sections 103 to 105, and for that purpose, measure each of the parameters necessary for the calculation.

In the case of an incinerator with a design feed rate of less than 1 ton per hour, the testing prescribed by the first paragraph must be performed at least once every 3 years.

O.C. 501-2011, s. 119.

120. The operator of an incinerator for which section 107 prescribes a destruction and removal efficiency for certain contaminants must, at least once a year, calculate the destruction and removal efficiency for each contaminant referred to in that section and, for that purpose, take samples of the contaminants and measure each of the parameters necessary for the calculation.

If the composition of the residual hazardous materials is modified after the calculation of the destruction and removal efficiency referred to in the first paragraph by the introduction of a contaminant that is more thermally stable than the contaminant for which the destruction and removal efficiency has been calculated, the operator must immediately carry out a new sampling and calculation of the destruction and removal efficiency for that contaminant.

O.C. 501-2011, s. 120.

121. The operator of a residual hazardous materials incinerator must maintain a record, for each batch of residual hazardous materials, of

(1) the number or identification code assigned by the operator to the batch of residual hazardous materials and the quantity in kilograms;

(2) the incineration date;

(3) the total PCB concentration and total halogen content at the feed point, expressed in mg/kg of residual hazardous materials; and

(4) the content of each organic compound present in the residual hazardous materials at the feed point, expressed in mg/kg of residual hazardous materials.

This section does not apply to residual hazardous materials consisting exclusively of used oil meeting the standards in Schedule 6 to the Regulation respecting hazardous materials (chapter Q-2, r. 32).

O.C. 501-2011, s. 121.

DIVISION III

EMISSION STANDARDS AND OTHER STANDARDS APPLICABLE TO CONICAL BURNERS

122. The building or erection of a conical burner is prohibited.

As of 30 June 2012, the operation of a conical burner that is unable to maintain burner particle emissions below 100 mg/Rm³ on a dry basis corrected to 7% oxygen at all times is prohibited.

O.C. 501-2011, s. 122.

123. The operation of a conical burner to burn residual materials other than wood waste from sawing operations is prohibited.

Wood waste used to feed a burner must be free of any foreign material or substance other than soil or sand.

O.C. 501-2011, s. 123.

CHAPTER VIII

EMISSION LIMIT VALUES AND OTHER STANDARDS APPLICABLE TO CREMATORIUMS AND ANIMAL INCINERATORS

DIVISION I

INTERPRETATION

124. In this Chapter, unless the context indicates otherwise,

“animal incinerator” means any facility used to burn animal carcasses and animal parts exclusively; (*incinérateur d’animaux*)

“crematorium” means any facility used to reduce dead human bodies or human remains, including stillborn babies, to ashes by cremation. (*crématorium*)

O.C. 501-2011, s. 124.

DIVISION II

EMISSION STANDARDS AND OTHER STANDARDS

125. A crematorium or animal incinerator must not emit particles into the atmosphere in excess of 70 mg/Rm³. The concentration is calculated over the entire cremation or incineration cycle or over a period of not more than 2 hours from the time the burner is ignited. It is expressed on a dry basis corrected to 11% oxygen according to the formula in the second paragraph of section 79.

Sections 108 to 110 apply, with the necessary modifications, to the layout and operation of a crematorium and an animal incinerator.

O.C. 501-2011, s. 125.

126. Only dead human bodies and human remains, including stillborn babies, may be cremated in a crematorium.

Only animal carcasses and animal parts excluded from the application of the Regulation respecting biomedical waste (chapter Q-2, r. 12) may be incinerated in an animal incinerator.

O.C. 501-2011, s. 126.

127. The operation of a crematorium or animal incinerator having only one combustion chamber is prohibited.

O.C. 501-2011, s. 127.

DIVISION III

MONITORING EQUIPMENT

128. The final combustion chamber in a crematorium or animal incinerator must have at its outlet a system that continuously measures and records gas temperature.

O.C. 501-2011, s. 128.

DIVISION IV

EMISSION MONITORING MEASURES

129. The operator of a crematorium or animal incinerator must, at least once every 5 years, perform source emissions testing of the gases emitted into the atmosphere, calculate the particle concentration, and for that purpose, measure each of the parameters necessary for the calculation.

In addition, the operator must carry out the first sampling and calculation within 1 year as of 30 June 2011 in the case of an existing incinerator or, in the case of a new crematorium or incinerator, within 1 year as of the date on which the crematorium or incinerator is put into operation.

O.C. 501-2011, s. 129; O.C. 1228-2013, s. 19.

CHAPTER IX

EMISSION LIMIT VALUES AND OTHER STANDARDS APPLICABLE TO CERTAIN INDUSTRIAL SOURCES OF CONTAMINATION

DIVISION I

SCOPE

130. The contaminant emission limits prescribed by Divisions II, IV, VII, X, XI and XII apply to the sum of all the emissions that are incidental to the operation of a furnace or a series of furnaces used in a process, including the emissions from raw material preheating, loading, refining and casting.

O.C. 501-2011, s. 130; O.C. 1228-2013, s. 20.

DIVISION II

ALUMINUM SMELTERS

§ 1. — *Interpretation*

131. In this Division, unless the context indicates otherwise,

“potline” means a group of pots in an aluminum smelter electrically connected in series; (*série de cuves*)

“total fluorides” means the sum of fluorides emitted as gases and fluorides emitted as particles. (*fluorures totaux*)

O.C. 501-2011, s. 131.

§ 2. — *Emission standards applicable to aluminum smelter potlines*

132. A new potline must not emit total fluorides into the atmosphere in excess of an annual limit of 0.95 kg per ton of aluminum produced, or in excess of a monthly limit of 1.25 kg per ton of aluminum produced.

The limits prescribed by the first paragraph also apply to existing centre-worked prebaked anode type potline.

O.C. 501-2011, s. 132.

133. An existing vertical stud Söderberg anode type potline must not emit total fluorides, particles and PAHs into the atmosphere in excess of the limits prescribed as of the dates indicated and set out in the following table:

Emission limit values (kg/t of aluminum produced)				
	Total fluorides	Particles	PAHs	Date of application
Annual	1.8	8	0.25	30 June 2011
	1.5			1 January 2015
Monthly	2.25	9	N/A	30 June 2011
	2		N/A	1 January 2015

O.C. 501-2011, s. 133.

134. An existing horizontal stud Söderberg anode type potline must not emit total fluorides, particles and PAHs into the atmosphere in excess of the limits prescribed as of the dates indicated and set out in the following table:

Emission limit values (kg/t of aluminum produced)				
	Total fluorides	Particles	PAHs	Date of application
Annual	3.5	16	1.05	30 June 2011
	1.35	7	0.2	1 January 2015
Monthly	4	18	N/A	30 June 2011
	1.5	8	N/A	1 January 2015

O.C. 501-2011, s. 134.

135. An existing side-worked prebaked anode type potline must not emit total fluorides and particles into the atmosphere in excess of the limits prescribed as of the dates indicated and set out in the following table:

Emission limit values (kg/t of aluminum produced)			
	Total fluorides	Particles	Date of application
Annual	4.95	15.4	1 January 2015
	1.35	7	1 January 2026
Monthly	5.5	16.5	1 January 2015
	1.5	8	1 January 2026

O.C. 501-2011, s. 135; O.C. 1228-2013, s. 21; O.C. 1060-2015, s. 5; O.C. 1131-2020, s. 1.

136. For the purposes of sections 132 to 135,

(1) the monthly emission limit for total fluorides or particles from a potline is calculated as the sum of the emissions measured at the potline roof vents monthly and the emissions measured at each potline scrubber;

(2) the annual emission limit for total fluorides or particles from a potline is calculated as the annual average of the emissions measured monthly at the potline roof vents and the emissions measured at each potline scrubber; and

(3) the annual emission limit for PAHs from a potline is calculated as the sum of the average of the emissions measured over 1 week every 3 months at the potline roof vents and the emissions measured at each potline scrubber.

O.C. 501-2011, s. 136; O.C. 1228-2013, s. 22.

§ 3. — *Fluoride standards in forage and other standards*

137. In addition to the limits prescribed by sections 132 to 135, an aluminum smelter must not emit total fluorides into the environment in such manner that the fluoride concentration in forage for feeding animals measured in samples taken off the property of the contamination source exceeds the following limits:

- (1) an annual average of 40 ppm;
- (2) a monthly average of 60 ppm that may not be exceeded for more than 2 consecutive months; and
- (3) a monthly average of 80 ppm that may not be exceeded more than once a year.

O.C. 501-2011, s. 137; O.C. 1228-2013, s. 23.

138. An anode baking furnace used in an aluminum smelter must not emit total fluorides into the atmosphere in excess of the limit of 0.1 kg per ton of anodes produced or PAHs in excess of the limit of 0.05 kg per ton of anodes produced.

O.C. 501-2011, s. 138.

§ 4. — *Monitoring equipment*

139. The operator of an aluminum smelter must install, on each potline gas scrubber, a continuous gas measuring and recording system that enables the operation of the scrubber to be verified at any time.

The system,

- (1) in the case of a wet scrubber,
 - (a) must continuously measure and record gas pressure loss through the scrubber using a differential pressure gauge accurate to within 0.5 kPa;
 - (b) must continuously measure and record the flow and scrubbing liquid pressure, measured at the delivery pipe inlet using a pressure gauge accurate to within 10% of rated pressure in that delivery pipe; and
 - (c) must continuously measure and record scrubbing liquid pH using a device accurate to within 20%; and
- (2) in the case of a dry scrubber, must have a continuous leak and malfunction detection and recording device.

In addition, every scrubber of emissions from an anode baking furnace must have a continuous leak and malfunction detection and recording device.

Subparagraph 2 of the second paragraph applies to dry scrubbers of an existing aluminum smelter as of 30 June 2012.

O.C. 501-2011, s. 139.

140. For emissions measured at the roof vents, the operator of an aluminum smelter must install a continuous total fluoride and particle sampling system for each potline.

This section applies to potlines of an existing aluminum smelter as of 30 June 2013.

O.C. 501-2011, s. 140.

§ 5. — *Emission monitoring measures*

141. The operator of an aluminum smelter must measure the contaminants referred to in sections 132 to 134 that are emitted into the atmosphere for all potlines.

In the case of potline scrubbers, the operator must measure the contaminants

- (1) at least once every 2 years when the aluminum smelter has at least 5 scrubbers; and
- (2) at least once every 3 years when the aluminum smelter has 5 scrubbers or more.

If potlines are connected to less than 5 scrubbers each, the operator must measure the emissions of at least 1 potline per year.

In the case of potline roof vents, the operator must measure the contaminants monthly.

This section applies to existing aluminum smelters as of 30 June 2013.

O.C. 501-2011, s. 141; O.C. 1228-2013, s. 24; O.C. 1131-2020, s. 2.

141.1. The operator of an aluminum smelter must measure annually the contaminants referred to in section 135 that are emitted into the atmosphere for potlines that are equipped with a scrubber and sampling station.

In the case of potline roof vents, the operator must measure the contaminants monthly.

O.C. 1131-2020, s. 3.

142. The operator of an aluminum smelter must maintain a record of the quantities of coke and pitch used in the process and their sulphur content.

No later than 1 June following the end of each calendar year, the operator must send the following to the Minister of Sustainable Development, Environment and Parks:

(1) a detailed sulphur balance report for each month of the year ended, in which the emissions into the atmosphere are reported in the form of sulphur dioxide; the report must indicate the quantities of sulphur contained in the input for aluminum production processes and manufacturing and baking of anodes, including the quantities of sulphur contained in the fuel; and

(2) a report indicating, for each month of the year ended, the quantities of coke and pitch used, from each supplier, and their respective sulphur content.

O.C. 501-2011, s. 142.

143. The operator of an anode baking furnace referred to in section 138 must, at least once a year, perform source emissions testing of total fluorides and PAHs, calculate the rate, and for that purpose, measure each of the parameters necessary for the calculation.

O.C. 501-2011, s. 143.

DIVISION III

CEMENT PLANTS

§ 1. — *Emission standards*

144. A cement plant kiln or clinker cooler must not emit particles into the atmosphere in excess of the limits respectively of 150 g and 125 g per ton of clinker produced.

Despite the first paragraph, a kiln and a clinker cooler in an existing cement plant may, until 30 June 2012, emit particles into the atmosphere beyond the limit values of 240 g and 150 g per ton of clinker produced.

O.C. 501-2011, s. 144.

145. A source of sporadic emission from a cement plant other than a kiln or a clinker cooler must not emit particles into the atmosphere in a concentration greater than 30 mg/Rm³ of dry gas.

O.C. 501-2011, s. 145.

§ 2. — *Monitoring equipment*

146. A cement plant must have a system that continuously measures and records the opacity of the gases emitted into the atmosphere by the kiln and the clinker cooler, or their particle concentration.

This section does not apply if the clinker cooler has a fabric filter gas scrubber, provided that the scrubber has a continuous leak or malfunction detection device.

O.C. 501-2011, s. 146.

§ 3. — *Emission monitoring measures*

147. The operator of a cement plant must, at least once a year, for each kiln and clinker cooler, perform emissions testing of the gases emitted into the atmosphere, calculate the emission particle rate, and for that purpose, measure each of the parameters necessary for the calculation.

The operator must carry out the first sampling and calculation within 1 year as of 30 June 2011 in the case of existing kiln and clinker coolers of a cement plant or within 1 year as of the date on which it is put into operation.

O.C. 501-2011, s. 147.

DIVISION IV

STEEL MILLS

§ 1. — *Particle emission standards applicable to cast iron or steel production processes*

148. A cast iron or steel production process must not emit particles into the atmosphere in excess of the emission limits listed respectively for new plants and existing plants in Schedules C and F.

In addition, if a cupola is used, it must not emit into the atmosphere carbon monoxide in a concentration greater than 1,000 ppm.

O.C. 501-2011, s. 148; O.C. 1228-2013, s. 25.

149. Despite section 148, a cast iron or steel production process with a feed rate equal to or less than 5 t per hour must not emit more than 5.9 kg of particles per hour into the atmosphere.

O.C. 501-2011, s. 149.

§ 2. — *Emission standards applicable to certain activities*

150. The activities of cutting, shake-out, grit blasting, grinding or sanding castings, preparation of the casting sand and core making in a cast iron or steel foundry must take place in the presence of a local ventilation system and must not emit or have the effect of emitting particles into the atmosphere in a concentration greater than 30 mg/Rm³ of dry gas for each emission point.

O.C. 501-2011, s. 150; I.N. 2023-08-01.

§ 3. — *Monitoring equipment*

151. Every dry scrubber for a cast iron or steel production furnace must have a continuous leak and malfunction detection device.

This section applies to scrubbers of existing steel mill as of 30 June 2013.

O.C. 501-2011, s. 151.

§ 4. — *Emission monitoring measures*

152. The operator of a steel mill with a production capacity equal to or greater than 5,000 ton per year must, at least once a year, take samples of the gases at the stack or at the emission point into the atmosphere from the scrubbers connected to the furnace and, every 3 years, take samples of the gases from the building housing the furnaces, calculate the rate or concentration, as the case may be, of the contaminants to which this Division applies, and for that purpose, measure each of the parameters necessary for the calculation and determination of the applicable limit.

The operator must also take the first sample and calculation of the gases from the building housing the furnaces within 2 years as of 30 June 2011 in the case of an existing plant or, in the case of a new plant, within 1 year as of the date on which it is put into operation.

The operator of a steel mill with a production capacity equal to or greater than 5,000 ton per year carrying out the activities referred to in section 150 must, at least once every 5 years, take samples of the gases at the emission point into the atmosphere of the local ventilation system, calculate the particle emission rate, and for that purpose, measure each of the parameters necessary for the calculation.

O.C. 501-2011, s. 152.

DIVISION V

WOOD INDUSTRY

§ 1. — *Particle and formaldehyde emission standards applicable to wood processing facilities*

153. Subject to section 154, a primary or secondary wood or wood product processing facility manufacturing particle boards, chips, wafers, fibreboard or other wood products using, in particular, the processes of sawing, chipping, planing, trimming, levelling, edging, sanding, screening or pressing must not emit particles into the atmosphere in excess of 2.5 kg per hour for all processes combined, unless the particle concentration is less than 50 mg/Rm³ of dry gas at each emission point.

In addition, a facility manufacturing particle board, chips, wafers or fibreboard containing or saturated with formaldehyde-based glue must not emit formaldehyde into the atmosphere in a concentration in excess of $37 \mu\text{g}/\text{m}^3$, over a period of 15 consecutive minutes, in all of its installations including the dryer, using an air dispersion model in accordance with Schedule H.

This section applies to existing facilities as of 30 June 2016.

O.C. 501-2011, s. 153; O.C. 1228-2013, s. 26.

§ 2. — *Particle emission standards applicable to dryers*

154. Subject to section 82, a bark, chip, wafer, particle or wood fibre dryer must not emit particles into the atmosphere in excess of the emission limits listed respectively for new and existing stationary sources in Schedules C and F.

Despite the foregoing, as of 30 June 2016, an existing stationary source referred to in the first paragraph must not emit particles into the atmosphere in excess of the emission limits listed in Schedule C.

For the purposes of this section, all the dryers in the same establishment are considered to be a single dryer.

O.C. 501-2011, s. 154.

§ 3. — *Emission standards and other standards applicable to charcoal kilns*

D. 501-2011, Sd. 3; O.C. 1228-2013, s. 27.

155. A charcoal kiln must not emit particles into the atmosphere in excess of the limit of $225 \text{ mg}/\text{Rm}^3$ of dry gas.

The emissions from a kiln referred to in the first paragraph must be routed to one or more stacks and emitted into the atmosphere.

O.C. 501-2011, s. 155; O.C. 1228-2013, s. 28.

§ 4. — *Emission monitoring measures*

156. The operator of a facility must perform source emissions testing, calculate the rate of the contaminants referred to in this Division, and for that purpose, measure each of the parameters necessary for the calculation and determination of the applicable limit

(1) in the case of a facility referred to in the first paragraph of section 153 using a quantity of wood or wood products equal to or greater than $250,000 \text{ m}^3$ for at least one year over a 5-year period, at least once during that period;

(2) in the case of a facility referred to in the second paragraph of section 153 and section 154, at least once every 3 years; or

(3) in the case of a facility referred to in section 155, at least once every 5 years.

If the facility manufactures particle board, chips, wafers or fibreboard that contain or are saturated with formaldehyde-based glue, the operator must at the same frequency perform source emissions testing of the gases emitted into the atmosphere and calculate the concentration of formaldehyde in the atmosphere using an air dispersion model in accordance with Schedule H.

O.C. 501-2011, s. 156; O.C. 1228-2013, s. 29.

DIVISION VI

ASBESTOS INDUSTRY

§ 1. — *Interpretation*

157. In this Division, unless the context indicates otherwise, “asbestos tailings” means fibres and particles collected by the dust collection equipment in a mine or an asbestos extraction or processing plant, particles of serpentine rocks from the fibre circuit, the waste from the rock circuit and the waste from ore preparation in the establishment.

O.C. 501-2011, s. 157.

§ 2. — *Emission standards and other standards*

158. In a mine or an asbestos extraction plant, drilling, crushing, drying, dry rock storage, ore processing or asbestos processing must not cause asbestos fibres to be emitted into the atmosphere in excess of the limit of 2 fibres per cm³ of dry gas at reference conditions.

For the purposes of this section, only fibres at least 5 µm long with a length/width ratio of at least 3:1 are calculated.

O.C. 501-2011, s. 158.

159. Every outside conveyor used to transport asbestos ore, asbestos concentrates or asbestos tailings and all transfer points must be completely enclosed and connected to a dust collector whose asbestos fibre emissions comply with the limit prescribed by section 158.

If the loading or unloading of ore or asbestos concentrates into or from trucks, railroad cars or ships causes particle emissions visible more than 2 m from the emission point, the person in charge of the source of contamination must take the necessary measures so that the loading or unloading points are in an enclosed space that has ducts which draw the particles into a dust collector in such manner that the asbestos fibre emissions comply with the limit prescribed by section 158.

This section does not apply to stacker-conveyors discharging asbestos tailings onto waste piles.

O.C. 501-2011, s. 159.

160. The discharging of asbestos tailings onto waste piles by stacker-conveyors, the transportation, loading and unloading of asbestos tailings into or from trucks or railroad cars and the levelling of tailings piles must be carried out in such manner that no emission into the atmosphere is visible more than 2 m from the emission point.

O.C. 501-2011, s. 160.

161. In every asbestos mine or asbestos extraction plant, asbestos tailings must be wetted before being discharged onto waste piles. The fine particles collected by the dust collectors in the facilities must be mixed with water in a mixer before being disposed of.

O.C. 501-2011, s. 161.

§ 3. — *Emission monitoring measures*

162. The operator of a mine or an asbestos extraction or processing plant must, at least once a year, perform source emissions testing for each process referred to in section 158, calculate the asbestos fibre concentration, and for that purpose, measure each of the parameters necessary for the calculation.

The operator must also, at least once every 3 years, perform source emissions testing for each dust collector referred to in section 159 and have the samples analyzed to measure the asbestos fibre concentration for each of the parameters established in that section.

O.C. 501-2011, s. 162.

DIVISION VII

LEAD INDUSTRY

§ 1. — *Interpretation*

163. In this Division, unless the context indicates otherwise, “secondary lead smelter” means any plant or industrial equipment that processes a substance containing lead, other than an ore concentrate, to produce refined lead, lead oxide or a lead alloy.

Any other equipment used to remelt lead for recycling purposes is considered to be a smelter.

O.C. 501-2011, s. 163.

§ 2. — *Emission standards and other standards*

164. A secondary lead smelter or plant that processes, uses or remelts lead or lead compounds must not emit particles into the atmosphere in excess of the following limits:

- (1) 46 mg/Rm³ of dry gas in the case of smelting furnaces; and
- (2) 23 mg/Rm³ of dry gas in the case of holding furnaces or kettle furnaces, lead oxide production, lead material handling or refuse units, or lead crushing, slagging, tapping, furnace cleaning or casting units.

In addition, a secondary lead smelter or plant that processes or uses lead or lead compounds must not emit lead into the atmosphere in excess of

- (1) 30 mg/Rm³ of dry gas in the case of the emission sources referred to in subparagraph 1 of the first paragraph; and
- (2) 15 mg/Rm³ of dry gas in the case of the emission sources referred to in subparagraph 2 of the first paragraph.

O.C. 501-2011, s. 164.

165. Lead oxide and lead compounds salvaged from batteries must be stored outside a building.

No salvaging of lead from batteries may take place outside a building.

O.C. 501-2011, s. 165.

166. The handling or transfer of lead substances must not cause emissions into the atmosphere that are visible more than 2 m from the emission source.

O.C. 501-2011, s. 166.

§ 3. — *Emission monitoring measures*

167. The operator of a secondary lead smelter or plant that processes, uses or remelts lead or lead compounds must, at least once a year, perform source emissions testing of the gases emitted into the atmosphere by each emission source referred to in section 164, calculate the concentration of the

contaminants referred to in that section, and for that purpose, measure each of the parameters necessary for the calculation.

O.C. 501-2011, s. 167.

DIVISION VIII

PETROLEUM REFINERIES AND PETROCHEMICAL PLANTS

§ 1. — Emission standards and other standards

168. A catalyst regeneration process used in catalytic cracking in a petroleum refinery must not emit into the atmosphere

- (1) particles in a concentration greater than 100 mg/Rm³ of dry gas; and
- (2) carbon monoxide in a concentration greater than 500 ppm of dry gas at reference conditions.

O.C. 501-2011, s. 168.

169. If the flare of a petroleum refinery or a petrochemical plant has a steam injection system, the steam/gas ratio must be regulated automatically.

O.C. 501-2011, s. 169.

§ 2. — Monitoring equipment

170. Every petroleum refinery must have a system that continuously measures and records the opacity of the gases emitted into the atmosphere by the catalyst regeneration process referred to in section 168, or the gas particle concentration, and the gas carbon monoxide concentration.

This section applies to existing petroleum refineries as of 30 June 2013.

O.C. 501-2011, s. 170.

§ 3. — Emission monitoring measures

171. The operator of a petroleum refinery must, at least once a year, perform source emissions testing of the gases emitted into the atmosphere by the catalyst regeneration process used in catalytic cracking, calculate the particle and carbon monoxide concentration, and for that purpose, measure each of the parameters necessary for the calculation.

O.C. 501-2011, s. 171.

DIVISION IX

TREATMENT OF METALLIC SURFACES

§ 1. — Interpretation

172. In this Division, unless the context indicates otherwise, “treatment of metallic surfaces” means the preparation of metallic surfaces by pickling, other than abrasive blast cleaning, or etching, and the treatment of the surfaces by chemical or electrochemical methods.

O.C. 501-2011, s. 172.

§ 2. — *Emission standards*

173. A metallic surface treatment process must not emit contaminants into the atmosphere in excess of the limits prescribed as of the dates indicated and set out for each type of contaminant in the following table:

Contaminant	Inorganic acid or hexavalent chromium emission limits (mg/Rm ³ of dry gas)	Date of application
Inorganic acid other than chromic acid	10	30 June 2011
Hexavalent chromium	0.9	30 June 2011
	0.03	4 January 2012

O.C. 501-2011, s. 173.

§ 3. — *Emission monitoring measures*

174. The operator of a metallic surface treatment process that uses a chromic acid process must, at least once every 5 years, perform source emissions testing of the gases emitted into the atmosphere by the process, calculate the concentration of the contaminants referred to in section 173, and for that purpose, measure each of the parameters necessary for the calculation.

The operator must also carry out the first sampling and calculation within 1 year as of the date of application set out in section 173 in the case of the value of 0.9 mg/Rm³ of dry gas and no later than 4 January 2013 in the case of the value of 0.03 mg/Rm³ of dry gas.

O.C. 501-2011, s. 174; O.C. 1228-2013, s. 30.

175. Section 174 does not apply to an operator of a metallic surface treatment process that reduces surface tension of a solution containing hexavalent chromium so that the tension does not exceed

- (1) 35 dynes per centimetre when the tension is measured with a tensiometer;
- (2) 45 dynes per centimetre when the tension is measured with a stalagmometer.

The operator must measure that tension once a day for each vat used, and take 2 successive measurements at least 16 hours apart.

O.C. 501-2011, s. 175.

DIVISION X

IRON ORE CONCENTRATE PLANTS

§ 1. — *Emission standards*

176. An iron ore sintering furnace of a plant in one of the categories referred to in the following table must not, as of the dates prescribed for that category, emit particles into the atmosphere in excess of the limits prescribed by the table, for that category:

Category of plant	Particle emission limits (kg/t of sinters produced, including the recirculating load, where applicable)	Date of application
Existing plant established or put into operation or the construction of which commenced on or before 14 November 1979	0.12	30 June 2011
Existing plant established or put into operation or the construction of which commenced after 14 November 1979	0.10	30 June 2011
Existing plant	0.075	30 June 2014
New plant	0.05	30 June 2011

O.C. 501-2011, s. 176.

§ 2. — *Monitoring equipment*

177. Every scrubber of emissions from a furnace used to harden iron ore concentrate must have a system that continuously measures and records

- (1) voltage and amperage operation;
- (2) gas velocity and temperature; and
- (3) the opacity or the particle concentration in the gases emitted into the atmosphere.

This section applies to scrubbers of existing iron ore concentrate plants as of 30 June 2013.

O.C. 501-2011, s. 177.

§ 3. — *Emission monitoring measures*

178. The operator of an iron ore pelletizing/concentrate/sinter plant must, at least once a year, perform source emissions testing of the gases emitted into the atmosphere by a furnace referred to in section 176, calculate the particle emission rate, and for that purpose, measure each of the parameters necessary for the calculation.

O.C. 501-2011, s. 178.

DIVISION XI

FERRO-ALLOY PLANTS

§ 1. — *Interpretation*

179. For the purposes of this Division, silicon is considered to be a ferro-alloy.

O.C. 501-2011, s. 179.

§ 2. — *Emission standards*

180. A ferro-alloy production plant using one or more existing furnaces must not emit particles into the atmosphere in excess of the following limits:

- (1) 10 kg/t of finished product in the case of metallurgical grade silicon;
- (2) limit values prescribed by Schedule C in the case of silicon purer than metallurgical grade;
- (3) 7.5 kg/t of finished product in the case of other categories of ferro-alloys.

A process using one or more new furnaces must not emit particles into the atmosphere in excess of the limits listed in Schedule C.

O.C. 501-2011, s. 180; O.C. 1228-2013, s. 31.

181. An emission source in a ferro-alloy plant other than a process must not emit particles into the atmosphere in a concentration greater than 30 mg/Rm³ of dry gas.

O.C. 501-2011, s. 181.

§ 3. — *Monitoring equipment*

182. Every scrubber of emissions from a furnace used to produce a ferro-alloy must have a system that continuously measures and records the opacity of the gases emitted into the atmosphere or the particle concentration and that is capable of detecting any leak and malfunction of the scrubber.

This section applies to scrubbers of existing ferro-alloy plants as of 30 June 2013.

O.C. 501-2011, s. 182.

§ 4. — *Emission monitoring measures*

183. The operator of a ferro-alloy production process referred to in section 180 must, at least once every 3 years, perform source emissions testing of the gases emitted into the atmosphere by the process, calculate the particle emission rate, and for that purpose, measure each of the parameters necessary for the calculation.

In addition, the operator must carry out the first sampling and calculation within 1 year as of 30 June 2011 in the case of an existing ferro-alloy plant or, in the case of a new plant, within 1 year as of the date on which it is put into operation.

O.C. 501-2011, s. 183; O.C. 1228-2013, s. 32.

DIVISION XII

COPPER OR ZINC PRODUCING PLANTS

§ 1. — *Emission standards and other standards*

O.C. 501-2011, Sd. 1; O.C. 1228-2013, s. 33.

184. A primary copper production plant in a category listed in the following table must not, as of the date prescribed for that category, emit a percentage of sulphur into the atmosphere, in the form of sulphur dioxide, greater than the maximum percentage of input sulphur set out in the table for that category:

Category of plant	Maximum % of input sulphur emitted	Date of application
Existing plant	25	30 June 2011
	10	30 June 2012
New plant	5	30 June 2011

For the purposes of the first paragraph, input sulphur is the sulphur contained in the total feed, including the sulphur contained in the fuel. The percentage is calculated on an annual basis using the monthly production data average.

In addition, a primary copper production plant must not emit sulphur dioxide into the atmosphere in such manner that the average concentration of the contaminant measured in the atmosphere at each sampling station exceeds the limits set out in the following table:

Limits for sulphur dioxide in the atmosphere		
Concentration		Sampling time
ppm	$\mu\text{g}/\text{m}^3$	
0.21	550	Average over 1 hour
0.11	288	Average over 24 hours
0.02	52	Annual average on a 1-hour sampling basis

Despite the third paragraph, a primary copper production plant built or put into operation before 30 June 2011 may exceed the limit of 0.21 ppm or $550 \mu\text{g}/\text{m}^3$ prescribed by the table above, without exceeding the limit of 0.34 ppm or $890 \mu\text{g}/\text{m}^3$.

The primary copper production plant referred to in the fourth paragraph may exceed the limit of 0.34 ppm or $890 \mu\text{g}/\text{m}^3$ prescribed by that paragraph by a maximum of 0.2% of the samples taken over a 1-year period per sampling station, provided that the concentration of sulphur dioxide never exceeds 0.5 ppm or $1,310 \mu\text{g}/\text{m}^3$.

O.C. 501-2011, s. 184.

185. A primary copper production plant in a category listed in the following table must not, as of the date prescribed for that category, emit particles into the atmosphere in excess of the limits set out in the table for that category:

Category of plant	Particle emission limits (kg/t)	Date of application
Existing plant	1.2	30 June 2011
	0.6	30 June 2012
New plant	0.3	30 June 2011

For the purposes of this section, particle emissions are calculated by the sum of the emissions from the reactor, matte and slag casting, converters and copper anode furnaces. Emissions are calculated on an annual basis in kilograms of particles per ton of material introduced into the process.

O.C. 501-2011, s. 185.

186. A primary copper production plant must not emit mercury into the atmosphere in excess of the limit of 2 g/t of anodes produced in the case of an existing plant, or in excess of the limit of 0.2 g/t of anodes produced in the case of a new plant.

For the purposes of this section, mercury emissions are calculated by the sum of the emissions from the reactor, converters and anode furnaces. Emissions are calculated on an annual basis in grams of mercury per ton of copper anodes produced.

O.C. 501-2011, s. 186.

187. A sulphuric acid plant used to reduce emissions into the atmosphere of sulphur dioxide from a primary copper production plant must fix the sulphur in the gases to be treated at not less than 96% efficiency, and must not emit more than 0.075 kg of sulphuric acid into the atmosphere, including sulphur trioxide, per ton of sulphuric acid calculated at 100%.

O.C. 501-2011, s. 187; O.C. 1228-2013, s. 34.

188. If a sulphuric acid plant referred to in section 187 is not in operation, no gases may be emitted into the atmosphere from a reactor or a converter other than the thermal refining type for a period exceeding 90 consecutive minutes.

O.C. 501-2011, s. 188.

189. A zinc production plant must not emit into the atmosphere in the form of sulphur dioxide more than 4% of the total sulphur introduced monthly into the process or more than 0.2 g of mercury per ton of zinc produced.

A zinc production plant must not emit sulphur dioxide into the atmosphere in such manner that the average concentration of the contaminant measured in the atmosphere at each sampling station exceeds the limits set out in the third and fourth paragraphs of section 184.

O.C. 501-2011, s. 189.

190. A sulphuric acid plant used to reduce sulphur dioxide emissions from a zinc production plant must not emit into the atmosphere

(1) more than 25 kg of sulphur dioxide per ton of sulphuric acid calculated at 100% on a monthly basis in the case of a plant established, put into operation or the construction of which commenced on or before 14 November 1979, or not more than 5 kg of sulphur dioxide per ton of sulphuric acid calculated at 100% in the case of a plant established, put into operation or built after that date.

If the operator of a zinc production plant uses more than one sulphuric acid plant to reduce sulphur dioxide emissions from the zinc production plant and all the sulphuric acid plants were established, put into operation or the construction of which commenced on or before 14 November 1979, the total sulphur dioxide emitted for all the sulphuric acid plants combined must not exceed 20 kg per ton of sulphuric acid, calculated at 100%, on the basis of the weighted average of the total production of the plants; and

(2) more than 0.5 kg of sulphuric acid, including sulphur trioxide, per ton of sulphuric acid calculated at 100%, in the case of a plant established, put into operation or the construction of which commenced on or before 14 November 1979, or more than 0.075 kg of sulphuric acid per ton of sulphuric acid calculated at 100% in the case of a plant established, put into operation or the construction of which commenced after that date.

O.C. 501-2011, s. 190; O.C. 1228-2013, s. 35.

§ 2. — *Monitoring equipment*

191. A primary copper production plant must have systems that continuously measure and record

- (1) the opacity or the concentration of the gas particles emitted into the atmosphere;
- (2) the sulphur dioxide concentration and the flow of the gases emitted into the atmosphere; and
- (3) sulphur dioxide in the atmosphere at not fewer than 5 sampling stations.

For the purposes of subparagraph 1 of the first paragraph, the emissions considered are those from sources not treated by a sulphuric acid plant referred to in the second paragraph of section 185.

A zinc production plant is subject to the continuous measuring requirements in subparagraph 2 of the first paragraph and the requirements in subparagraph 3 of the first paragraph for at least 2 sampling stations.

The sampling stations required for the purposes of subparagraph 3 of the first paragraph and the third paragraph must be situated in such manner as to be representative of the site where the concentration of contaminants emitted into the atmosphere is the highest.

This section applies to existing primary copper production plants and zinc production plants as of 30 June 2012, except subparagraph 1 of the first paragraph that applies to those plants as of 30 June 2013.

O.C. 501-2011, s. 191.

§ 3. — *Emission monitoring measures*

192. At least once a year, the operator of a primary copper production plant referred to in sections 185 and 186 must perform source emissions testing of the gases emitted into the atmosphere, calculate the particle and mercury emission rate, and for that purpose, measure each of the parameters necessary for the calculation.

The operator of a sulphuric acid plant referred to in section 187 or 190 and the operator of a zinc production plant referred to in the first paragraph of section 189 have respectively the same obligation with respect to the contaminants and parameters referred to in those provisions.

In addition, the operator of a plant referred to in this section must send to the Minister of Sustainable Development, Environment and Parks, no later than 1 June of each year,

(1) a detailed sulphur balance report for each month of the year ended indicating the quantities of sulphur contained in the treated dry concentrate, in the heavy fuel oil used or, as the case may be, in the flux or coal used and in any other material introduced in the process and the quantity of 100% sulphuric acid produced during the year; and

(2) a report indicating, for each month of the year ended, the total quantity of concentrate from each supplier and any other material introduced in the process and the weight percentage of the arsenic, bismuth, antimony, lead, cadmium and mercury content of the treated concentrate or other material.

O.C. 501-2011, s. 192; O.C. 1228-2013, s. 36.

193. Where the operator of a primary copper production plant or a zinc production plant becomes aware that the limits referred to respectively in the third or fourth paragraph of section 184 or the second paragraph of section 189 are exceeded in the atmosphere, the operator must immediately notify the Minister of Sustainable Development, Environment and Parks and take the necessary measures to remedy the situation.

O.C. 501-2011, s. 193.

TITLE III

OPEN AIR BURNING

194. Open air burning of residual materials, even for partial recovery, is prohibited, except in the case of branches, trees, dead leaves, explosive products or empty explosive containers.

The presence in the environment of smoke from burning prohibited in the first paragraph is also prohibited within the meaning of the second paragraph of section 20 of the Environment Quality Act (chapter Q-2).

O.C. 501-2011, s. 194; O.C. 657-2013, s. 4.

195. Section 194 does not apply to burning activities subject to the provisions of Chapter I of Title VI of the Sustainable Forest Development Act (chapter A-18.1). It also does not apply to the landfills referred to in Division 4 of Chapter II and section 115 of the Regulation respecting the landfilling and incineration of residual materials (chapter Q-2, r. 19), to flares used to burn residual gases produced by landfills, to industrial flares or to burning activities carried out in connection with the training of firefighters.

The person in charge of the training of firefighters must ensure that the emissions produced are not likely to affect the life, health, safety, welfare or comfort of human beings, or to cause damage to or otherwise impair the quality of the soil, vegetation, wildlife or property. The operator of a landfill has the same obligation.

O.C. 501-2011, s. 195.

TITLE IV

AIR QUALITY STANDARDS

196. The air quality standards prescribed for the territory of Québec are listed in Schedule K.

O.C. 501-2011, s. 196.

197. As of 30 June 2011, the construction or alteration of a source of contamination or an increase in the production of a good or service is prohibited if it will likely result in an increase in the concentration of a contaminant listed in Schedule K in the atmosphere in excess of the limit for that contaminant in column 1 of that Schedule or in excess of the concentration of a contaminant for which the limit is already exceeded.

For the purposes of this section, the air dispersion models in Schedule H are to be used as provided in that Schedule.

This section does not operate to restrict the application of section 196 for any other purpose.

O.C. 501-2011, s. 197; O.C. 987-2023, s. 5.

TITLE V

MEASUREMENT AND ANALYSIS METHODS, PROCEDURES AND FOLLOW-UP

198. The sampling of emissions into the atmosphere required for the purposes of this Regulation must be carried out using the reference methods prescribed by Book 4 of the Guide d'échantillonnage à des fins d'analyses environnementales published by the Centre d'expertise en analyse environnementale du Québec of the Ministère du Développement durable, de l'Environnement et des Parcs.

For the purposes of Divisions IV and V of Chapter VI of Title II or Division II of Chapter VII of Title II other than the provisions on the sampling of emissions from stationary sources, the sampling must be carried out in conformity with the applicable best practices.

For the purposes of section 137, fluoride sampling in forage must be carried out using the methods prescribed by Book 6 of the Guide referred to in the first paragraph.

For the purposes of the third and fourth paragraphs of section 184 or the second paragraph of section 189, sulphur dioxide sampling and analysis must be carried out using the methods prescribed by the latest version of the List of Designated Reference and Equivalent Methods published by the United States Environmental Protection Agency.

With regard to the application of the provisions of Title IV, the sampling and analysis of a contaminant referred to in section 196 must be carried out using a generally accepted method.

O.C. 501-2011, s. 198; O.C. 1228-2013, s. 37.

199. For the purposes of this Regulation, an emission limit or other emission standard established for a source of contamination is complied with if

- (1) the arithmetic average of 3 results of measures taken during the same sampling run carried out is less than or equal to the limit or standard;
- (2) at least 2 of the results are less than the limit or standard; and
- (3) none of the 3 results exceeds the limit or standard by not more than 20%.

This section does not apply to emission limits and other emission standards for which a provision of this Regulation prescribes a contaminant sampling taken by a continuous measuring and recording system, or to the limits prescribed by section 137 for fluorides. It also does not apply to the limits prescribed by Title IV.

O.C. 501-2011, s. 199.

200. Sampling that is part of emission monitoring measures prescribed by a provision of this Regulation other than a provision of Title IV must be the subject of a sampling report prepared in accordance with the procedures prescribed by Book 4 of the Guide referred to in the first paragraph of section 198. If the analysis indicates that an emission limit or other emission standard determined by a provision of this Regulation has been exceeded, that fact and the measures taken to remedy the situation must appear in the report. The report must be sent, on paper or electronically, to the Minister of Sustainable Development, Environment and Parks within 120 days after the end of the sampling run.

Written certification by the report signatory stating that the samplings were carried out in conformity with the applicable best practices or with the requirements of this Regulation, including those of the Guide referred to in the first paragraph of section 198, as the case may be, must also be sent to the Minister of Sustainable Development, Environment and Parks with the report referred to in the first paragraph.

O.C. 501-2011, s. 200.

201. The analyses required for the purposes of this Regulation must be carried out by a laboratory accredited by the Minister of Sustainable Development, Environment and Parks under section 118.6 of the Act.

If there is no accredited laboratory for the analysis of a substance referred to in this Regulation, the samples taken pursuant to this Regulation must, for analysis purposes and despite the first paragraph, be sent to a laboratory that meets standard ISO/IEC 17025, General requirements for the competence of testing and calibration laboratories, disseminated jointly by the International Organization for Standardization and the International Electrotechnical Commission.

O.C. 501-2011, s. 201; O.C. 1228-2013, s. 38.

202. For the purposes of sections 75, 77, 91, 92, 97, 153 and 197, the concentration of contaminants must be calculated for all the sources of contamination for a point off the limits of the property occupied by those sources and off a sector zoned for industrial purposes, as established by the competent municipal authorities. If the limits of the property occupied by the sources of contamination or the territory thus zoned includes a dwelling or a public institution, the concentration of contaminants must also be calculated for a point within the limits of each of the locations.

A contaminant concentration in the atmosphere includes its initial concentration, the latter being calculated on the basis of the results of sampling carried out or validated for all or part of the 3 preceding years and taken on the sites of all the sources of contamination or in a comparable environment, and that corresponds to the following, according to the period applicable for the limit value concerned:

- (1) for a period less than or equal to 1 hour, the 99th percentile of the data measured during that period;
- (2) for a period greater than 1 hour but less than or equal to 24 hours, the 98th percentile of the data measured during that period;
- (3) for a period greater than 24 hours but less than or equal to 1 year, the average of the hourly or daily data.

If sampling results are not available for the 3 preceding years, the initial concentration is the concentration referred to for that contaminant appearing in column 2 of Schedule G or K, as the case may be.

O.C. 501-2011, s. 202; O.C. 987-2023, s. 6.

TITLE V.1

MONETARY ADMINISTRATIVE PENALTIES

O.C. 657-2013, s. 5.

202.1. A monetary administrative penalty of \$250 in the case of a natural person or \$1,000 in other cases may be imposed on any person who fails to retain any data referred to in section 5 for the minimum period provided for in that section or to send the data to the Minister at the Minister's request, within the time indicated by the Minister.

O.C. 657-2013, s. 5; O.C. 987-2023, s. 7.

202.2. A monetary administrative penalty of \$350 in the case of a natural person or \$1,500 in other cases may be imposed on any person who fails

(1) to provide, at the Minister's request and within the time indicated by the Minister, all information referred to in section 4;

(1.1) to submit to the Minister a particle emission management plan in accordance with the portion before subparagraph 1 of the first paragraph of section 12.1;

(1.2) to enter in a register the information prescribed by the second paragraph of section 12.1;

(2) to maintain in a record the data and information prescribed by section 21, 25, 29, 36, 43, 59, 99 or 121 or the first paragraph of section 142, in the cases and on the conditions provided for therein;

(3) to forward to the Minister each year the report or estimate provided for in the first paragraph of section 51, not later than on the date set in that section;

(4) to send to the Minister each year a document referred to in the second paragraph of section 142 or the third paragraph of section 192, not later than on the date set in that section;

(5) to file with or to send to the Minister the sampling report or the written certification provided for in section 200 in accordance with that section.

O.C. 657-2013, s. 5; O.C. 987-2023, s. 8.

202.3. A monetary administrative penalty of \$500 in the case of a natural person or \$2,500 in other cases may be imposed on any person who fails

(0.1) to inform the persons concerned of a horticultural peat harvesting period and the procedure put in place to collect and process complaints in case of nuisance, in accordance with the third paragraph of section 12.1;

(1) to contain within an enclosed space the particle emissions referred to in section 13 in accordance with that section;

(2) to carry out a calculation or to perform testing, an analysis or a measurement provided for in section 22 in the cases and according to the frequency and conditions provided for in that section;

(3) to ensure compliance with the conditions relating to the vats or mills established by section 23 or 24 in the cases provided for therein;

(4) to equip an establishment referred to in section 28 with a collection system of particles or a gas exhaust stack that complies with the requirements of that section;

(5) to comply with the conditions provided for in section 44 or 45 relating to an above-ground tank;

(6) to perform testing or to carry out a calculation or measurement prescribed by section 53, 74, 86, 87, 129, 147, 152, 156, 171 or 174, the second paragraph of section 175 or section 178 or 183 in accordance with those sections;

(7) to comply with the standards prescribed by section 61 as to the updraft vertical exhaust velocity of combustion gas discharge into the atmosphere from equipment referred to in that section;

(8) to equip fuel burning equipment, a turbine, an industrial furnace, a scrubber, a crematorium, an animal incinerator, a cement plant, a petroleum refinery or a furnace referred to in section 72, 73, 83, 84, 128, 146, 170, 177 or 182 with a measuring and recording system that complies with the requirements of those sections, in the cases and on the conditions provided for therein;

(9) to use a kiln referred to in the first paragraph of section 155 the emissions of which are routed and emitted to one or more stacks in accordance with the second paragraph of that section;

(10) to have any analysis required for the purposes of this Regulation carried out by a laboratory accredited by the Minister in accordance with the first paragraph of section 201 or, if there is no such laboratory, by a laboratory that meets the standard provided for in the second paragraph of that section.

The penalty provided for in the first paragraph may also be imposed on any person who

(1) uses or permits the use, in contravention of section 33 or 39, of a paint gun having a transfer efficiency lower than that of an HVLP paint gun in the cases and on the conditions provided for therein;

(2) installs a burner that has a nitrogen oxide emission rate that does not comply with the requirements of section 60 in the cases and on the conditions provided for therein.

O.C. 657-2013, s. 5; O.C. 987-2023, s. 9.

202.4. A monetary administrative penalty of \$750 in the case of a natural person or \$3,500 in other cases may be imposed on any person who fails

(1) to maintain in good working order or to ensure that any device, system or other equipment referred to in section 6 operates optimally during production hours;

(1.1) to use equipment designed or certified to measure wind speed and direction on the site where the horticultural peat harvesting is carried out or have access to data from such equipment installed on the site in conditions comparable to the harvesting site and, where applicable, to use a device designed and certified to measure peat moisture content, in accordance with subparagraph 1 of the first paragraph of section 12.1;

(1.2) to measure wind speed and direction in accordance with subparagraph 2 of the first paragraph of section 12.1;

(2) to implement an annual plan able to detect and repair any leak referred to in section 46 in the cases and on the conditions provided for in that section;

(3) to comply with the conditions provided for in any of sections 47 to 50 in respect of the parts that must be covered by the annual plan referred to in section 46, leak detection or, where applicable, leak repair;

(4) to comply with the rated power required for fuel burning equipment referred to in section 77 or 78 in the cases and on the conditions provided for therein;

(5) to comply with the rated heat capacity required for an industrial furnace referred to in section 80 in the case provided for in that section;

(5.1) to comply with the rated heat capacity required for fuel burning equipment or an industrial furnace referred to in section 81, in the cases and on the conditions provided for therein;

(6) to comply with the standards relating to fuel burning equipment provided for in subparagraph 1 or 3 of the first paragraph of section 90;

(7) to comply with the standards relating to an industrial furnace provided for in subparagraph 1 of the second paragraph of section 92 or in any of paragraphs 2 to 4 of section 94;

(8) to equip fuel burning equipment, an industrial furnace, an incinerator, a scrubber, an aluminum smelter or a copper production plant referred to in section 95, 115, 116, 118, 139 or 191 with a measuring and recording system that complies with the requirements of those sections in the cases and on the conditions provided for therein;

(9) to perform testing or to carry out a calculation or measurement prescribed by any of sections 96 to 98, section 119, 120, 141, 143, 162 or 167 or by the first or second paragraph of section 192 in accordance with those sections;

(10) to comply with the conditions prescribed by section 108, 109, 112 or 113 as to an incinerator or a combustion chamber referred to therein;

(11) to install a continuous total fluoride and particle sampling system for each potline referred to in section 140 in accordance with that section;

(11.1) to measure the contaminants emitted into the atmosphere by potlines, in the cases and at the frequencies provided for in section 141.1;

(12) to comply with the ventilation conditions prescribed by section 150 as to the activities referred to in that section;

(13) to equip a dry scrubber for a cast iron or steel production furnace referred to in section 151 with a device that complies with the requirements of that section;

(14) to comply with the conditions relating to the handling of asbestos provided for in section 159 or 161;

(15) to comply with the conditions of storage or salvaging of lead prescribed by section 165;

(16) to automatically regulate the steam/gas ratio in accordance with section 169.

The penalty provided for in the first paragraph may also be imposed on any person who uses

(1) fuel that has a sulphur content exceeding the limits provided for in section 54 in a stationary internal combustion engine;

(2) fossil fuel in fuel burning equipment or in an industrial furnace if the fossil fuel has a sulphur content exceeding the limits provided for in any of subparagraphs 1 to 5 of the first paragraph of section 57 or the second or third paragraph of that section in the cases provided for in that section;

(3) materials referred to in the second paragraph of section 75 as fuel in fuel burning equipment that does not have the rated power provided for in that section or materials that have not been generated in connection with the activities of the establishment concerned, contrary to the third paragraph of that section;

(4) fuel referred to in the second or third paragraph of section 75 that contains more than 0.05% by weight of total halogens at the feed point used in fuel burning equipment of a furniture manufacturing establishment in contravention of the fourth paragraph of that section.

O.C. 657-2013, s. 5; O.C. 987-2023, s. 10.

202.5. A monetary administrative penalty of \$1,000 in the case of a natural person or \$5,000 in other cases may be imposed on any person who fails to notify the Minister if the limits referred to in section 193 are exceeded in accordance with that section.

O.C. 657-2013, s. 5.

202.6. A monetary administrative penalty of \$1,500 in the case of a natural person or \$7,500 in other cases may be imposed on any person who

(1) fails to comply with the location conditions provided for in section 11 as to a grain processing facility referred to in that section;

(1.1) fails to suspend an operation referred to in subparagraph 3 or 4 of the first paragraph of section 12.1, in the cases provided for therein;

(2) installs or uses, in a wet scrubber, a device capable of changing the flow resistance of the scrubbing liquids in contravention of section 85 or 117;

(3) uses, as fuel in fuel burning equipment, residual hazardous materials or organic compounds referred to in the first paragraph of section 91, in contravention of section 91;

(4) introduces materials to be incinerated in the primary chamber of an incinerator referred to in section 110 or ignites such materials without complying with the conditions provided for in that section;

(5) feeds residual hazardous materials into an incinerator without complying with the conditions provided for in section 111;

(6) builds or erects a conical burner in contravention of the first paragraph of section 122;

(7) operates a conical burner without complying with the conditions provided for in the second paragraph of section 122;

(8) uses a conical burner to burn other residual materials than those referred to in the first paragraph of section 123 or uses wood waste that does not comply with the conditions prescribed by the second paragraph of that section;

(9) cremates or incinerates, in a crematorium or an animal incinerator, materials other than those provided for in section 126;

(10) operates a crematorium or an animal incinerator having only one combustion chamber in contravention of section 127;

(11) burns in open air residual materials other than those provided for in section 194 in contravention of section 194;

(12) constructs or alters a source of contamination or increases the production of a good or service without complying with the conditions prescribed by section 197.

O.C. 657-2013, s. 5; O.C. 987-2023, s. 11.

202.7. A monetary administrative penalty of \$2,000 in the case of a natural person or \$10,000 in other cases may be imposed on any person who

(1) fails to comply with the prescribed limits or concentrations that apply to emissions

(a) of particles, in accordance with section 9, 10 or 64, the first, second or fourth paragraph of section 75, paragraph 1 of section 77, subparagraph 2 of the first paragraph of section 78, section 80, the first paragraph

of section 88, 92 or 125, any of sections 133 to 135, section 144 or 145, any of sections 148 to 150, the first paragraph of section 153, section 154, the first paragraph of section 155 or 164, paragraph 1 of section 168, or section 176, 180, 181 or 185;

(b) of volatile organic compounds in accordance with section 26 or 27, in any of sections 30 to 32, section 34, 35, 37 or 38 or in any of sections 40 to 42;

(c) of sulphur dioxide in accordance with the second paragraph of section 58, or section 184 or 189 or paragraph 1 of section 190;

(d) of nitrogen oxides in accordance with any of sections 65 to 68, or section 76 or 89;

(e) of carbon monoxide or, where applicable, combustion gases that contain carbon monoxide in accordance with section 69, subparagraph 1 of the first paragraph of section 78, section 103, the second paragraph of section 148 or paragraph 2 of section 168;

(f) of chromium, copper or arsenic in accordance with paragraph 2 of section 77;

(g) of a contaminant referred to in the second paragraph of section 91 or section 173;

(h) of combustion gases in accordance with section 70, the second paragraph of section 78 or section 104;

(i) of mercury in accordance with section 105 or 186;

(j) of total fluorides in accordance with any of sections 132 to 135, or section 137 or 138;

(k) of PAHs in accordance with section 133, 134 or 138;

(l) of formaldehyde in accordance with the fifth paragraph of section 75 or the second paragraph of section 153;

(m) of asbestos fibres in accordance with section 158;

(n) of lead in accordance with the second paragraph of section 164;

(2) emits particles that are visible at more than 2 m from the emission point, in contravention of section 12 or 14;

(3) fails to comply with the opacity standards of grey or black emissions from a source of contamination prescribed by section 16;

(4) uses solvents or substances referred to in section 19 in contravention of section 19;

(5) fails to comply with the limits that apply to emissions from a stationary internal combustion engine prescribed by section 52 in the cases referred to in that section;

(6) fails to use fuel burning equipment or an industrial furnace having a destruction and removal efficiency complying with section 81 where it uses fuels referred to in that section;

(7) fails to comply with the emission limit values or other standards prescribed by any of subparagraphs 2, 4 or 5 of the first paragraph of section 90, subparagraphs 2 to 6 of the second paragraph of section 92 or paragraph 1 of section 94;

(8) fails to use an incinerator having a destruction and removal efficiency that complies with the requirements of section 107 in respect of the substances provided for in that section;

(9) fails to handle, to transport or to transfer asbestos tailings or lead substances so that no emission is visible more than 2 m from the emission point in accordance with section 160 or 166;

(10) fails to comply with the standards related to a sulphuric acid plant in accordance with section 187 or paragraph 2 of section 190;

(11) fails to comply with the maximum period of sulphur emission provided for in section 188 in the cases and on the conditions provided for in that section;

(12) fails to take the necessary measures where the limits are exceeded in accordance with section 193.

O.C. 657-2013, s. 5; O.C. 987-2023, s. 12.

TITLE VI

PENAL SANCTIONS

O.C. 501-2011, title IV; O.C. 657-2013, s. 6.

203. Every person who contravenes section 5 commits an offence and is liable, in the case of a natural person, to a fine of \$1,000 to \$100,000 or, in other cases, to a fine of \$3,000 to \$600,000.

O.C. 501-2011, s. 203; O.C. 657-2013, s. 7.

204. Every person who contravenes section 4, the portion before subparagraph 1 of the first paragraph or the second paragraph of section 12.1, section 21, 25, 29, 36 or 43, the first paragraph of section 51, section 59, 99, 121 or 142, the third paragraph of section 192 or section 200 commits an offence and is liable, in the case of a natural person, to a fine of \$2,000 to \$100,000 or, in other cases, to a fine of \$6,000 to \$600,000.

O.C. 501-2011, s. 204; O.C. 657-2013, s. 7; O.C. 987-2023, s. 13.

205. Every person who contravenes the third paragraph of section 12.1, section 13, any of sections 22 to 24, section 28, 33, 39, 44, 45, 53, 60 or 61, any of sections 72 to 74, section 83, 84, 86, 87, 128, 129, 146, 147 or 152, the second paragraph of section 155, section 156, 170, 171 or 174, the second paragraph of section 175, or section 177, 178, 182, 183 or 201 commits an offence and is liable, in the case of a natural person, to a fine of \$2,500 to \$250,000 or, in other cases, to a fine of \$7,500 to \$1,500,000.

O.C. 501-2011, s. 205; O.C. 657-2013, s. 7; O.C. 987-2023, s. 14.

206. Every person who

(1) contravenes section 6, subparagraph 1 or 2 of the first paragraph of section 12.1, any of sections 46 to 50, section 54, the first, second or third paragraph of section 57, subparagraph 1 of the second paragraph of section 92, any of paragraphs 2 to 4 of section 94, any of sections 95 to 98, section 108, 109, 112, 113, 115 or 116, any of sections 118 to 120 or 139 to 141.1, section 143, 151, 159, 161, 162, 165, 167, 169 or 191 or the first or second paragraph of section 192,

(2) uses as fuel materials referred to in the second paragraph of section 75 in fuel burning equipment that does not have the rated power prescribed in that section or materials that have not been generated in connection with the activities of the establishment concerned, contrary to the third paragraph of that section,

(2.1) uses fuels containing total halogens that do not meet the limit provided for in the fourth paragraph of section 75;

(3) fails to comply with the rated power required for fuel burning equipment referred to in section 77 or 78 in the cases and on the conditions provided for therein,

(4) fails to comply with the rated heat capacity required for an industrial furnace referred to in section 80 in the case provided for in that section,

(4.1) fails to comply with the rated heat capacity required for fuel burning equipment or an industrial furnace referred to in section 81, in the cases and on the conditions provided for therein;

(4.2) fails to comply with the standards for fuel burning equipment provided for in subparagraph 1 or 3 of the first paragraph of section 90;

(5) fails to comply with the ventilation conditions prescribed by section 150 as to the activities referred to in that section,

commits an offence and is liable, in the case of a natural person, to a fine of \$4,000 to \$250,000 or, in other cases, to a fine of \$12,000 to \$1,500,000.

O.C. 501-2011, s. 206; O.C. 657-2013, s. 7; O.C. 987-2023, s. 15.

206.1. Every person who

(1) fails to notify the Minister if the limits referred to in section 193 are exceeded in accordance with that section,

(2) *(paragraph revoked)*.

commits an offence and is liable, in the case of a natural person, to a fine of \$5,000 to \$500,000 or, despite article 231 of the Code of Penal Procedure (chapter C-25.1), to a maximum term of imprisonment of 18 months, or to both the fine and imprisonment, or, in other cases, to a fine of \$15,000 to \$3,000,000.

O.C. 657-2013, s. 7; O.C. 987-2023, s. 16.

206.2. Every person who contravenes section 11, subparagraph 3 or 4 of the first paragraph of section 12.1, section 85, the first paragraph of section 91, or section 110, 111, 117, 122, 123, 126, 127, 194 or 197 commits an offence and is liable, in the case of a natural person, to a fine of \$8,000 to \$500,000 or, despite article 231 of the Code of Penal Procedure (chapter C-25.1), to a maximum term of imprisonment of 18 months, or to both the fine and imprisonment, or, in other cases, to a fine of \$24,000 to \$3,000,000.

O.C. 657-2013, s. 7; O.C. 987-2023, s. 17.

206.3. Every person who

(1) contravenes section 9, 10, 12, 14, 16, 19, 26 or 27, any of sections 30 to 32, 34, 35, 37 or 38, any of sections 40 to 42, section 52, the second paragraph of section 58, any of sections 64 to 70, the first or fifth paragraph of section 75, section 76, the second paragraph of section 78, section 88 or 89, the second paragraph of section 91, the first paragraph or any of subparagraphs 2 to 6 of the second paragraph of section 92, paragraph 1 of section 94, any of sections 103 to 105, section 107 or 125, any of sections 132 to 135, section 137, 138, 144 or 145, any of sections 148 and 149, the first or second paragraph of section 153, section 154, the first paragraph of section 155, section 158, 160, 164, 166, 168, 173, 176, 180 or 181 or any of sections 184 to 190,

(2) fails to comply with the emission limits prescribed by the second or fourth paragraph of section 75, subparagraph 1 or 2 of the first paragraph of section 78 or section 80 or 150,

(2.1) fails to comply with the emission limit values prescribed by paragraph 1 or 2 of section 75;

(2.2) fails to use a unit having a destruction and removal efficiency compliant with section 81;

(2.3) fails to comply with the emission limit values or other standards prescribed by subparagraph 2, 4 or 5 of the first paragraph of section 90;

(3) fails to take the necessary measures where the limits are exceeded in accordance with section 193,

commits an offence and is liable, in the case of a natural person, to a fine of \$10,000 to \$1,000,000 or, despite article 231 of the Code of Penal Procedure (chapter C-25.1), to a maximum term of imprisonment of 3 years, or to both the fine and imprisonment, or, in other cases, to a fine of \$30,000 to \$6,000,000.

O.C. 657-2013, s. 7; O.C. 987-2023, s. 18.

206.4. Every person who contravenes any other requirement imposed by this Regulation also commits an offence and is liable, where no other penalty is provided for by this Title or the Environment Quality Act (chapter Q-2), to a fine of \$1,000 to \$100,000 in the case of a natural person or, in other cases, to a fine of \$3,000 to \$600,000.

O.C. 657-2013, s. 7.

TITLE VII

MISCELLANEOUS, AMENDING AND TRANSITIONAL

207. A facility in operation on 30 June 2011, governed up to that date by the provisions of section 16 and paragraph *i* of section 96 of the Regulation respecting the quality of the atmosphere (chapter Q-2, r. 38), remains governed for a 5-year period following that date by those provisions as they read on 29 June 2011.

O.C. 501-2011, s. 207.

208. Subparagraphs 1 to 13 of the first paragraph of section 10 apply to industrial facilities, activities and processes referred to in that section and in operation on 30 June 2011 as of 30 June 2013. Until that date, they remain governed by sections 24 and 25 of the Regulation respecting the quality of the atmosphere (chapter Q-2, r. 38) that apply to them, as they read on 29 June 2011.

Subparagraph 14 of the first paragraph of section 10 applies to the activities referred to in that section and in operation on 30 June 2011 as of 30 June 2013.

The second paragraph of section 10 applies to the activities referred to in that section and in operation on 30 June 2011 as of 30 June 2013. Until that date, they remain governed by paragraph *a* of section 19 of the Regulation respecting the quality of the atmosphere as it read on 29 June 2011.

O.C. 501-2011, s. 208.

209. Section 19 applies to emission sources in operation on 30 June 2011 as of 30 June 2014. Until that date, they remain governed by sections 12 and 13 of the Regulation respecting the quality of the atmosphere (chapter Q-2, r. 38) as they read on 29 June 2011.

O.C. 501-2011, s. 209.

209.1. Existing above-ground tanks in the territory of Municipalité de l'Île-d'Anticosti, in the territory of Municipalité de Gros-Mécatina (La Tabatière sector) and in the territory of Municipalité de Côte-Nord-du-Golfe-du-Saint-Laurent (La Romaine sector) are not covered by section 45 of this Regulation.

O.C. 1228-2013, s. 39; O.C. 987-2023, s. 19.

210. The first paragraph of section 68 applies to stationary combustion turbines with an electricity generating capacity less than 50 MW and in operation on 30 June 2011 as of 1 January 2013. Until that date,

they remain governed by section 35 of the Regulation respecting the quality of the atmosphere (chapter Q-2, r. 38) as it read on 29 June 2011.

O.C. 501-2011, s. 210.

211. The first paragraph of section 75 applies to fuel burning equipment in operation on 30 June 2011 as of 30 June 2016. Until that date, the equipment remains governed by section 45 of the Regulation respecting the quality of the atmosphere (chapter Q-2, r. 38) as it read on 29 June 2011 or, in the case of pulp and paper mill residual materials, section 94 of the Regulation respecting pulp and paper mills (chapter Q-2, r. 27) as it read on 29 June 2011.

Despite the first paragraph, as of 30 June 2011, the provisions of section 86 related to the emission monitoring measures of fuel burning equipment referred to in the first paragraph of section 75 apply, with the necessary modifications, to the operators of that fuel burning equipment with respect to the provisions of the regulations referred to in the first paragraph that apply to the equipment.

O.C. 501-2011, s. 211.

212. Section 145 applies to a source of sporadic emission, other than a kiln or a clinker cooler, from a cement plant in operation on 30 June 2011 as of 30 June 2013. Until that date, the sources remain governed by the applicable provisions of section 42 of the Regulation respecting the quality of the atmosphere (chapter Q-2, r. 38) as it read on 29 June 2011.

O.C. 501-2011, s. 212.

213. The activities referred to in section 150 that take place in an establishment in operation on 30 June 2011 remain governed for a period of 2 years after that date by section 62 of the Regulation respecting the quality of the atmosphere (chapter Q-2, r. 38) as it read on 29 June 2011.

O.C. 501-2011, s. 213.

214. *(Revoked).*

O.C. 501-2011, s. 214; O.C. 868-2020, s. 3.

215. This Regulation replaces the Regulation respecting the quality of the atmosphere (chapter Q-2, r. 38), except paragraph 33 of section 1 and sections 96.1 to 96.10.

Despite the foregoing, the provisions of the Regulation continue to apply to existing establishments, facilities, equipment and furnaces to the extent provided for in this Title.

O.C. 501-2011, s. 215; O.C. 657-2013, s. 8.

216. *(Amendment integrated into c. C-61.1, r. 6, s. 2).*

O.C. 501-2011, s. 216.

217. *(Amendments integrated into c. Q-2, r. 27, ss. 91, 92, 94 and 141).*

O.C. 501-2011, s. 217.

218. *(Omitted).*

O.C. 501-2011, s. 218.

SCHEDULE A

(s. 3)

LIST OF POLYCYCLIC AROMATIC HYDROCARBONS (PAHs) TO WHICH TITLE II APPLIES

Polycyclic aromatic halocarbons (PAHs)

Fluorene

Phenanthrene

Anthracene

Pyrene

Fluoranthene

Chrysene

Benzo [a] anthracene

Benzo [a] pyrene

Benzo [e] pyrene

Benzo [b] fluoranthene

Benzo [j] fluoranthene

Benzo [k] fluoranthene

Benzo [g,h,i] perylene

Indeno [1,2,3, - cd] pyrene

Dibenzo [a,h] anthracene

O.C. 501-2011, Sch. A.

SCHEDULE B

(s. 9)

PARTICLE EMISSION LIMIT VALUES ACCORDING TO THE PROCESS FEED RATE FOR CERTAIN EXISTING SOURCES INSTALLED OR PUT INTO OPERATION ON OR BEFORE 14 NOVEMBER 1979

Process feed rate (t/h)	Particle emission limits (kg/h)
1	2.0
2	3.2
5	5.9
10	9.4
20	14.9
50	20.4
100	23.5
200	26.8
500	31.5

For the purposes of this Schedule,

(1) “feed rate” means the feed rate as defined in section 8 of this Regulation;

(2) interpolation and extrapolation of the values in this Schedule for a feed rate under 25 t/h are effected using the equation $E = 2.0 p^{0.67}$, where E is the emission standard in kg/h and p is the feed rate in t/h; for a feed rate equal to or greater than 25 t/h, the formula used is $E = 25 p^{0.11} - 18$;

(3) in the case of intermittent process operation, the feed rate is calculated by dividing the total feed weight by the number of hours of full operation and subtracting the time during which the equipment was not in operation. The hourly feed rate is calculated by dividing the feed weight for a typical time period by the number of hours in that period; and

SCHEDULE C

(ss. 9, 148, 154 and 180)

PARTICLE EMISSION LIMIT VALUES ACCORDING TO THE PROCESS FEED RATE FOR CERTAIN EXISTING SOURCES INSTALLED OR PUT INTO OPERATION AFTER 14 NOVEMBER 1979 AND FOR CERTAIN NEW SOURCES

Process feed rate (t/h)	Particle emission limits (kg/h)
1	1.7
2	2.6
5	4.6
10	7.1
20	10.9
50	15.0
100	16.7
200	18.7
500	21.6

For the purposes of this Schedule,

- (1) “feed rate” means the feed rate as defined in section 8 of this Regulation;
- (2) interpolation and extrapolation of the values in this Schedule for a feed rate under 25 t/h are effected using the formula $E = 1.7 p^{0.62}$, where E is the emission standard in kg/h and p is the feed rate in t/h; for a feed rate equal to or greater than 25 t/h, the formula used is $E = 8 p^{0.16}$;
- (3) in the case of intermittent process operation, the feed rate is calculated by dividing the total feed weight by the number of hours of full operation and subtracting the time during which the equipment was not in

operation. The hourly feed rate is calculated by dividing the feed weight for a typical time period by the number of hours in that period; and

(4) where the process has a number of production lines, the limit value of the process is the limit value corresponding to the total of the feed rates of each of the lines.

O.C. 501-2011, Sch. C.

SCHEDULE D

(s. 16)

CHART TO MEASURE OPACITY OF GREY OR BLACK EMISSIONS

Opacity of grey or black emissions into the atmosphere is measured using a Micro Ringelmann Chart in good condition, printed within the last 5 years, that meets the following specifications:

The Micro Ringelmann Chart is printed on a card 12.8 cm long by 8.6 cm wide on which opacities of 20%, 40%, 60% and 80% (No. 1, No. 2, No. 3 and No. 4 respectively) are represented in order, in an alignment of vertical rectangles 24 mm by 58 mm (± 1 mm), within which a 13 mm (± 1 mm) slit is made. Each degree of opacity is represented by an ultra fine grid of black lines on a white background, according to the following specifications:

For opacity No. 1: Black grid lines measuring 0.055 mm that are 0.555 mm apart with white spaces 0.5 mm by 0.5 mm.

For opacity No. 2: Black grid lines measuring 0.128 mm that are 0.555 mm apart with white spaces 0.427 mm by 0.427 mm.

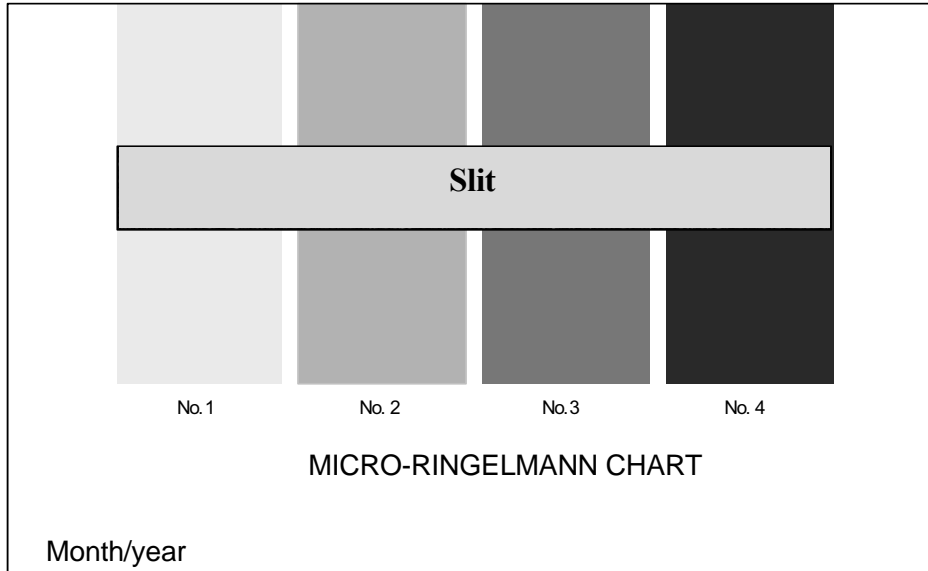
For opacity No. 3: Black grid lines measuring 0.205 mm that are 0.555 mm apart with white spaces 0.35 mm by 0.35 mm.

For opacity No. 4: Black grid lines measuring 0.305 mm that are 0.555 mm apart with white spaces 0.25 mm by 0.25 mm.

The month and year the chart was printed must be indicated in the lower left-hand corner.

CHART SPECIMEN

CHART SPECIMEN



Opacity is measured from an observation point located between 30 m and 400 m from the emission point. The observation point must be such that the observer's line of vision is perpendicular to the direction of the plume and that the sun is oriented in the 140° sector to the observer's back.

The observer holds the chart at arm's length and looks at the emission through the slit in the card. The observer notes the scale number (No. 1, 2, 3 or 4) that best suits the opacity observed. No. 0 is used to indicate that no emission is visible and No. 4 applies to opacity of 100%. Momentary and punctual observations are noted every 15 seconds. Opacity evaluation is carried out over a 60-minute period without interruption (240 observations over 60 minutes) or over 2 30-minute periods with an interruption after the first 30-minute period (120 observations over 30 minutes, twice). Each observation is considered to be representative of the opacity for a 15-second period.

Opacity evaluation must be carried out at the point of maximum opacity, in a part of the plume where there is no condensed water vapour. Where water vapour condenses and becomes visible at a certain distance from the emission point, the opacity must be evaluated between the emission point and the condensation point of the water vapour. When condensed water vapour is present in the plume, at its emission point, the opacity of the plume must be observed at the point where the vapour is no longer visible.

Opacity is measured from an observation point located between 30 m and 400 m from the emission point. The observation point must be such that the observer's line of vision is perpendicular to the direction of the plume and that the sun is oriented in the 140 ° sector to the observer's back.

The observer holds the chart at arm's length and looks at the emission through the slit in the card. The observer notes the scale number (No. 1, 2, 3 or 4) that best suits the opacity observed. No. 0 is used to indicate that no emission is visible and No. 4 applies to opacity of 100%. Momentary and punctual observations are noted every 15 seconds. Opacity evaluation is carried out over a 60-minute period without interruption (240 observations over 60 minutes) or over 2 30-minute periods with an interruption after the first 30-minute period (120 observations over 30 minutes, twice). Each observation is considered to be representative of the opacity for a 15-second period.

Opacity evaluation must be carried out at the point of maximum opacity, in a part of the plume where there is no condensed water vapour. Where water vapour condenses and becomes visible at a certain distance from the emission point, the opacity must be evaluated between the emission point and the condensation point of the water vapour. When condensed water vapour is present in the plume, at its emission point, the opacity of the plume must be observed at the point where the vapour is no longer visible.

O.C. 501-2011, Sch. D.

SCHEDULE E

(s. 51)

FORMULAS FOR CALCULATING ESTIMATIONS OF VOLATILE ORGANIC COMPOUND EMISSIONS

Table I

Category of operation	Category of equipment parts	Formula
PETROLEUM REFINERY	Overpressure valves	$E=1.36 \times 10^{-5} \times C^{0.589}$
PETROCHEMICAL PLANT	Gate valves and other valves	$E=2.29 \times 10^{-6} \times C^{0.746}$
OIL TERMINAL	Pump, compressor and agitator seals	$E=5.03 \times 10^{-5} \times C^{0.610}$
	Joints and connections	$E=4.61 \times 10^{-6} \times C^{0.703}$
	Open pipes	$E=2.20 \times 10^{-6} \times C^{0.704}$
ORGANIC CHEMICAL PLANT	Gate valves and other valves (gas)	$E=1.87 \times 10^{-6} \times C^{0.873}$
	Gate valves and other valves (liquid)	$E=6.41 \times 10^{-6} \times C^{0.797}$
	Pump, compressor, agitator and overpressure valve seals and other valve seals (liquid)	$E=1.9 \times 10^{-5} \times C^{0.824}$
	Joints and connections	$E=3.05 \times 10^{-6} \times C^{0.885}$
	Open pipes	$E=6.41 \times 10^{-6} \times C^{0.797}$

Table II

Category of operation	Category of equipment parts	Formula
PETROLEUM REFINERY	Overpressure valves	$E=4 \times 10^{-6}$ kg/h/part
PETROCHEMICAL PLANT	Gate valves and other valves	$E=7.8 \times 10^{-6}$ kg/h/part
OIL TERMINAL	Pump, compressor and agitator seals	$E=2.4 \times 10^{-5}$ kg/h/part
	Joints and connections	$E=3.1 \times 10^{-7}$ kg/h/part
	Open pipes	$E=2.0 \times 10^{-6}$ kg/h/part
ORGANIC CHEMICAL PLANT	Gate valves and other valves (gas)	$E=6.6 \times 10^{-7}$ kg/h/part
	Gate valves and other valves (liquid)	$E=4.9 \times 10^{-7}$ kg/h/part
	Pump, compressor, agitator, overpressure valve and other valve seals (liquid)	$E=7.5 \times 10^{-6}$ kg/h/part
	Joints and connections	$E=6.1 \times 10^{-7}$ kg/h/part
	Open pipes	$E=2.0 \times 10^{-6}$ kg/h/part

For the purposes of the above tables,

“E” is the total or specific organic compound emissions in kg/h per part; and

“C” is the measured concentration of total or specific organic compounds expressed in ppmv; if the concentration “C” measured for a part is greater than 10,000 ppmv ($C > 10,000$ ppmv), use $C = 33,620$ ppmv in the emission calculation equation for that part.

O.C. 501-2011, Sch. E.

SCHEDULE F*(ss. 148 and 154)***PARTICLE EMISSION LIMIT VALUES ACCORDING TO THE PROCESS FEED RATE FOR CERTAIN EXISTING SOURCES**

Process feed rate (t/h)	Particle emission limits (kg/h)
1	2.0
2	3.2
5	5.9
10	9.4
20	14.9
50	27.5
100	43.8
200	69.6
500	128.6

For the purposes of this Schedule,

(1) “feed rate” means the feed rate as defined in section 8 of this Regulation;

(2) interpolation and extrapolation of the values in this Schedule are effected using the equation $E = 2.0 p^{0.67}$, where E is the emission standard in kg/h and p is the feed rate in t/h;

(3) in the case of intermittent process operation, the feed rate is calculated by dividing the total feed weight by the number of hours of full operation and subtracting the time during which the equipment was not in operation. The hourly feed rate is calculated by dividing the feed weight for a typical time period by the number of hours in that period; and

SCHEDULE G*(ss. 77, 91, 92, 97, 99 and 202)*

LIMIT VALUES FOR CERTAIN METALS AND METALLOIDS IN THE AIR

Nature of contaminants	CAS ¹	Column 1	Column 2	Period
		Limit ($\mu\text{g}/\text{m}^3$)	Initial concentration ($\mu\text{g}/\text{m}^3$)	
Antimony	7440-36-0	0.17	0.007	1 year
Arsenic	7440-38-2	0.003	0.002	1 year
Barium	7440-39-3	0.05	0.025	1 year
Beryllium	7440-41-7	0.0004	0	1 year
Cadmium	7440-43-9	0.0036	0.003	1 year
Chromium (trivalent chromium compounds)	16065-83-1	0.1	0.01	1 year
Chromium (hexavalent chromium compounds)	18540-29-9	0.004	0.002	1 year
Copper	7440-50-8	2.5	0.2	24 hours
Lead	7439-92-1	0.1	0.025	1 year
Mercury	7439-97-6	0.005	0.002	1 year
Nickel compounds (expressed as Ni, measured measured in PM_{10}) ²	7440-02-0	0.07	0.005	24 hours
Nickel compounds (expressed as Ni, measured in PM_{10}) ²	7440-02-0	0.02	0.002	1 year
Silver	7440-22-4	0.23	0.005	1 year
Thallium	7440-28-0	0.25	0.05	1 year
Vanadium	7440-62-2	1	0.01	1 year
Zinc	7440-66-6	2.5	0.1	24 hours

¹ The figures appearing opposite the contaminants listed in the Schedule are those of the identification code assigned by the Chemical Abstract Services of the American Chemical Society.

² PM_{10} : particles of less than 10 microns.

O.C. 501-2011, Sch. G; O.C. 1228-2013, s. 40; O.C. 628-2022, s. 1.

SCHEDULE H

(ss. 75, 77, 87, 91, 92, 97, 153, 156 and 197)

AIR DISPERSION MODEL**Dispersion models**

The dispersion models that may be used are those in the latest edition of the US-EPA Guideline on Air Quality Models (Appendix W to Part 51). A recognized alternative may be used if the operator establishes that, in the case at hand, that model performs better than the models indicated in the guideline. The choice of the alternative model must be motivated by theoretical considerations and be supported by a comparative statistical analysis of the results, following the prescriptions of the Guideline on Air Quality Models. The latest version of the model must be used.

Calculation of the concentration of a contaminant in the atmosphere

Using the model, the operator must calculate the concentration in the atmosphere of each contaminant emitted for which a limit value is prescribed by sections 75 and 153 and in Schedules G and K.

The concentration of a contaminant in the atmosphere for a single source must be calculated by modeling with one of the following methods:

- (1) a simple model, called a level 1 model, for a single source; or
- (2) a multi-source complex model, called a level 2 model, simulating a single source.

Modeling with a level 2 model is required if the concentration of contaminants calculated with a level 1 model is deemed significant according to the following formula:

$$C \geq 4 \times (LV-IC)/5$$

where LV and IC are, respectively, the limit value and the initial concentration provided for in Schedules G and K.

If the establishment has several emission sources, the concentrations of contaminants in the atmosphere must be calculated using a level 2 model.

Parameters

All the parameters required for the model must be presented, namely,

- (1) the model used and its version;
- (2) the non-default options;
- (3) the choice of environment (rural/urban);
- (4) the dimensions of the modeling domain;
- (5) the modeling scenario or scenarios;
- (6) the physical features of the emission sources; and
- (7) the calculations made to obtain the emission rates.

For level 2 modeling, the following parameters must also be presented:

- (1) a description of the calculation points table;
- (2) the origin and period of the meteorological data;
- (3) the surface characteristics required to prepare the meteorological data files.

Modeling scenarios

The modeling scenarios must make it possible to reproduce the highest projected concentrations of contaminants on the basis of the period of application of the limit value. However, those scenarios do not include contaminant emissions attributable to unplanned and unpredictable situations, such as the use of generators in an emergency.

By using the concentration obtained for the calculation with a level 1 model, the daily and annual concentrations are obtained in the following manner:

$$C_{\text{daily}} = C_{\text{MAX-H}} \times 0.24$$

$$C_{\text{AN}} = C_{\text{MAX-H}} \times 0.04$$

where C_{daily} is the daily concentration, C_{AN} is the annual concentration and $C_{\text{MAX-H}}$ is the highest hourly concentration calculated.

For a level 2 model, the operator must prepare meteorological data files on the basis of 5 years of complete meteorological data representative of the location of the establishment. When such files are made available by the Ministère du Développement durable, de l'Environnement et des Parcs, they must be used.

In the case of a contaminant referred to in Schedule K for which the limit value established in column 1 is over a period of less than 1 hour, the concentration is calculated using the following formula:

$$C(T) = C_{\text{MAX-H}} \times 0.97 T^{-0.25}$$

where T is the time in hours and $C_{\text{MAX-H}}$ is the maximum concentration for 1 hour.

The operator must take into account the topography and include calculation points on the property limits or the limits of the industrial zone.

The initial concentrations of contaminants in the atmosphere, without the contribution of the source or sources considered for the modeling, must be added to the concentrations calculated. The resulting concentrations must be presented to enable comparison with the limit values prescribed by Schedules G and K.

Information to be retained

The operator must retain the following information and documents for a minimum of 5 years:

- (1) one or more topographic maps showing the region for which the calculations have been made, indicating the pertinent geographical, physical and human elements. Each map must include a scale and the direction of geographical North;
- (2) a top view and a sectional view indicating the dimensions of the establishment's buildings, as taken into account in the model, and the location of the sources;
- (3) the physical features of each source and the operating characteristics;
- (4) for each contaminant and each period for which a limit value is prescribed, a table showing the maximum annual concentrations calculated for all the calculation points and years and their locations, the

initial concentrations, the sum of the maximum concentrations calculated and the initial concentrations, and the limit value. When preparing that table, the calculation points located within the property limits or the limits of the industrial zone are excluded;

(5) the input data required for the operation of the model in a form compatible with its use (model input file) for the modeling carried out;

(6) the data generated by the operation of the model in a form compatible with its use (model input file) for the modeling carried out.

For level 2 modeling, the operator must also retain the following information and documents for a minimum of 5 years:

(1) the map or maps provided for in subparagraph 1 of the first paragraph, which will show the calculation points table, the establishment, and the property limits or the limits of the industrial zone;

(2) a 16-direction wind rose obtained from the meteorological data used in the model and indicating the average wind speed, the calm wind frequency and the proportion of missing data;

(3) for the contaminant whose maximum concentration calculated is the highest for each period for which a limit value is prescribed and for each contaminant whose maximum concentration calculated is significant, maps showing the modeling calculation results in the form of isopleth curves for each calculation point, except for the points located within the property limits, and for the entire calculation period. For each map, the results presented must include the initial concentration;

(4) for each contaminant and each applicable period, maps showing the number of exceedances for each calculation point, except for the points located within the property limits, and for the entire calculation period. The number of exceedances is calculated taking into account the initial concentration;

(5) the table provided for in subparagraph 4 of the first paragraph, which will also show the maximum number of exceedances calculated at the worst calculation point for all the calculation points and years, and their locations. When preparing that table, the calculation points located within the property limits or the limits of the industrial zone are excluded.

O.C. 501-2011, Sch. H; O.C. 868-2020, s. 4.

SCHEDULE I

(ss. 78, 90, 92 and 104)

TOXICITY EQUIVALENCY FACTORS FOR POLYCHLORINATED DIBENZOFURAN AND POLYCHLORINATED DIBENZO [b,e] [1,4] DIOXIN CONGENERS

Congeners	Toxicity equivalency factor
2,3,7,8-tetrachlorodibenzodioxin	1
1,2,3,7,8-pentachlorodibenzodioxin	1
1,2,3,4,7,8-hexachlorodibenzodioxin	0.1
1,2,3,6,7,8-hexachlorodibenzodioxin	0.1
1,2,3,7,8,9-hexachlorodibenzodioxin	0.1
1,2,3,4,6,7,8-heptachlorodibenzodioxin	0.01
Octachlorodibenzodioxin	0.0001
2,3,7,8-tetrachlorodibenzofuran	0.1
1,2,3,7,8-pentachlorodibenzofuran	0.05
2,3,4,7,8-pentachlorodibenzofuran	0.5
1,2,3,4,7,8-hexachlorodibenzofuran	0.1
1,2,3,6,7,8-hexachlorodibenzofuran	0.1
1,2,3,7,8,9-hexachlorodibenzofuran	0.1
2,3,4,6,7,8-hexachlorodibenzofuran	0.1
1,2,3,4,6,7,8-heptachlorodibenzofuran	0.01
1,2,3,4,7,8,9-heptachlorodibenzofuran	0.01
Octachlorodibenzofuran	0.0001

O.C. 501-2011, Sch. I.

SCHEDULE J

(ss. 66, 67 and 68)

QUÉBEC NITROGEN OXIDE EMISSION MANAGEMENT AREA**Technical description**

The Québec nitrogen oxide emission management area is that part of the territory of Québec delimited as follows:

commencing at point A situated at the intersection of the border between Québec and Ontario having parallel of latitude 46°00'00" N.;

thence, easterly, following parallel of latitude 46°00'00" N. to its intersection with meridian of longitude 76°09'00" W., or Point B;

thence, northerly, following meridian of longitude 76°09'00" W. to its intersection with parallel of latitude 46°13'48" N., or Point C;

thence, easterly, following parallel of latitude 46°13'48" N. to its intersection with meridian of longitude 75°00'00" W., or Point D;

thence, northerly, following meridian of longitude 75°00'00" W. to its intersection with parallel of latitude 46°21'00" N., or Point E;

thence, easterly, following parallel of latitude 46°21'00" N. to its intersection with meridian of longitude 73°28'12" W., or Point F;

thence, northerly, following meridian of longitude 73°28'12" W. to its intersection with parallel of latitude 46°36'36" N., or Point G;

thence, easterly, following parallel of latitude 46°36'36" N. to its intersection with meridian of longitude 73°00'00" W., or Point H;

thence, northerly, following meridian of longitude 73°00'00" W. to its intersection with parallel of latitude 46°51'00" N., or Point I;

thence, easterly, following parallel of latitude 46°51'00" N. to its intersection with meridian of longitude 72°16'12" W., or Point J;

thence, northerly, following meridian of longitude 72°16'12" W. to its intersection with parallel of latitude 47°09'36" N., or Point K;

thence, easterly, following parallel of latitude 47°09'36" N. to its intersection with meridian of longitude 70°34'48" W., or Point L;

thence, southerly, following meridian of longitude 70°34'48" W. to its intersection with parallel of latitude 46°49'48" N., or Point M;

thence, easterly, following parallel of latitude 46°49'48" N. to its intersection with meridian of longitude 70°00'00" W., or Point N;

thence, southerly, following meridian of longitude 70°00'00" W. to its intersection with the border between Québec (Canada) and the United States of America, or Point O;

thence, in average southwesterly and westerly directions, following the border between Québec (Canada) and the United States of America to its intersection with the border between Québec and Ontario, or Point P;

thence, in average northerly and westerly directions, following the border between Québec and Ontario to its intersection with parallel of latitude 46°00'00" N., or point of commencement A.

The area as delimited covers an area of 76,120 square kilometres.

The area is represented on the attached extract, at a scale of 1:2 000 000, of a general map of Québec prepared by the Ministère des Ressources naturelles du Québec.

Prepared at Québec, this 18th day of December 2002, under number 510 of my minutes.

By: _____

DENIS FISET,

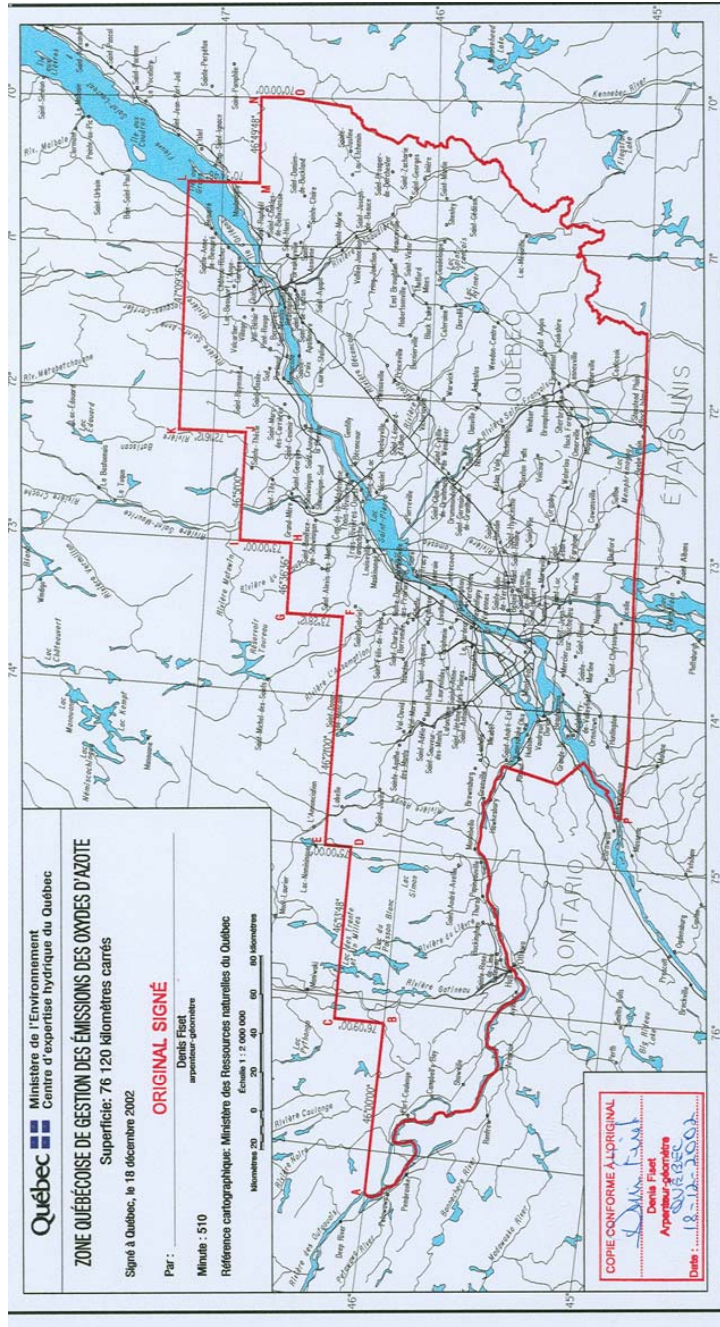
Land Surveyor

Ministère de l'Environnement

Centre d'expertise hydrique du Québec

Service de la gestion du domaine hydrique de l'État

QUÉBEC NITROGEN OXIDE EMISSION MANAGEMENT AREA



O.C. 501-2011, Sch. J.

SCHEDULE K

(ss. 196, 197 and 202)

AIR QUALITY STANDARDS

Nature of contaminants	CAS ¹	Column 1	Column 2	Period
		Limit ($\mu\text{g}/\text{m}^3$)	Initial concentration ($\mu\text{g}/\text{m}^3$)	
Acetone	67-64-1	8,600	170	4 minutes
Acetone	67-64-1	380	4	1 year
Acetophenone	98-86-2	100	0	1 year
Acetophenone	98-86-2	830	0	4 minutes
Acrylic acid	79-10-7	270	0	4 minutes
Acrylic acid	79-10-7	1	0	1 year
Acrylonitrile	107-13-1	12	0	1 year
Ammonia	7664-41-7	350	100	4 minutes
Amyl acetate-n ⁵	628-63-7	25	0	4 minutes
Aniline	62-53-3	0.5	0	1 year
Antimony, metal and compounds (expressed as Sb)	7440-36-0	0.17	0.007	1 year
Arsenic, elemental and inorganic compounds (except arsine), (expressed as As)	7440-38-2	0.003	0.002	1 year
Barium, metal and soluble compounds (expressed as Ba)	7440-39-3	0.05	0.025	1 year
Benzaldehyde	100-52-7	100	0	1 year
Benzaldehyde	100-52-7	200	0	4 minutes
Benzene	71-43-2	10	3	24 hours
Benzo[a]pyrene	50-32-8	0.0009	0.0003	1 year
Beryllium, metal and compounds (expressed as Be)	7440-41-7	0.0004	0	1 year
Bromoform	75-25-2	0.45	0.03	1 year
Bromomethane	74-83-9	5	0.4	1 year
2-Butoxyethanol	111-76-2	210	0	4 minutes
Butyl acetate-n ⁵	123-86-4	30	0	4 minutes

ENVIRONMENT QUALITY — CLEAN AIR

Cadmium compounds (expressed as Cd)	7440-43-9	0.0036	0.003	1 year
Carbon disulphide	75-15-0	25	0	4 minutes
Carbon monoxide	630-08-0	34,000	2,650	1 hour
Carbon monoxide	630-08-0	12,700	1,750	8 hours
Chlorine dioxide	10049-04-4	0.2	0	1 year
Chlorobenzene	108-90-7	8.5	0.3	1 year
Chloroethane	75-00-3	10,900	0	4 minutes
Chloroethane	75-00-3	500	0	1 year
Bis (chloromethyl) ether	542-88-1	0.000016	0	1 year
3-Chloropropene	107-05-1	0.05	0	1 year
Chromium (trivalent chromium compounds)	16065-83-1	0.1	0.01	1 year
Chromium (hexavalent chromium compounds)	18540-29-9	0.004	0.002	1 year
Copper	7440-50-8	2.5	0.2	24 hours
Cumene	98-82-8	40	0	4 minutes
1,2-Dibromoethane	106-93-4	0.022	0.02	1 year
o-Dichlorobenzene	95-50-1	4,200	0	4 minutes
o-Dichlorobenzene	95-50-1	40	0	1 year
p-Dichlorobenzene	106-46-7	730	0	4 minutes
p-Dichlorobenzene	106-46-7	160	0	1 year
Dichloroethyl ether	111-44-4	0.0015	0	1 year
Dichloromethane	75-09-2	14,000	6	1 hour
Dichloromethane	75-09-2	3.6	1	1 year
1,2-Dichloropropane	78-87-5	4	0	1 year
Dichloropropene	542-75-6	0.2	0	1 year
Diisobutyl ketone	108-83-8	640	0	4 minutes
Dimethylaniline - N,N	121-69-7	2	0	1 year
Dimethylformamide - N,N	68-12-2	6	0	1 year
Dioxins and furans (in toxic equivalents of 2,3,7,8T ₄ CDD)	1746-01-6	0.00000006	0.00000004	1 year
1,2-Epoxybutane	106-88-7	20	0	1 year
Epychlorohydrin	106-89-8	0.8	0	1 year
Ethanol	64-17-5	340	0	4 minutes

ENVIRONMENT QUALITY — CLEAN AIR

Ethyl acetate ⁵	141-78-6	20	0	4 minutes
Ethylbenzene	100-41-4	200	3	1 year
Ethylbenzene	100-41-4	740	140	4 minutes
Ethylene oxide	75-21-8	0.0005	0	1 year
Ethyl-3-ethoxy propionate	763-69-9	300	0	4 minutes
Fine particles (PM _{2,5})	-	30	20	24 hours
Formaldehyde	50-00-0	37	3	15 minutes
Hexachloroethane	67-72-1	0.03	0	1 year
Hexane-n	110-54-3	140	3	1 year
Hexane-n	110-54-3	5,300	140	4 minutes
Hydrogen chloride	7647-01-0	1,150	0	4 minutes
Hydrogen chloride	7647-01-0	20	0	1 year
Hydrogen sulphide	7783-06-4	6	0	4 minutes
Hydrogen sulphide	7783-06-4	2	0	1 year
Isobutyl acetate ⁵	110-19-0	35	0	4 minutes
Isobutyl isobutyrate	97-85-8	440	0	4 minutes
Isopropanol	67-63-0	7,800	0	4 minutes
Lead	7439-92-1	0.1	0.025	1 year
Mercury	7439-97-6	0.005	0.002	1 year
Methanol	67-56-1	5,500	120	4 minutes
Methanol	67-56-1	50	10	1 year
Methyl ethyl ketone	78-93-3	740	1.5	4 minutes
Methyl isobutyl ketone	108-10-1	400	0	4 minutes
Methyl methacrylate	80-62-6	200	0	4 minutes
Methyl tert butyl ether	1634-04-4	180	0	4 minutes
Naphthalene	91-20-3	200	5	4 minutes
Naphthalene	91-20-3	3	0	1 year
Nickel compounds (expressed as Ni, measured in PM ₁₀) ²	7440-02-0	0.07	0.005	24 hours
Nickel, compounds (expressed as Ni, measured in PM ₁₀) ²	7440-02-0	0.02	0.002	1 year
Nitrogen dioxide	10102-44-0	414	150	1 hour
Nitrogen dioxide	10102-44-0	207	100	24 hours

ENVIRONMENT QUALITY — CLEAN AIR

Nitrogen dioxide	10102-44-0	103	30	1 year
Ozone	10028-15-6	160	130	1 hour
Ozone	10028-15-6	125	120	8 hours
Pentachlorophenol	87-86-5	0.001	0.0005	1 year
Phenol	108-95-2	160	0	4 minutes
Phosphine	7803-51-2	0.15	0	1 year
Phosphoric acid	7664-38-2	10	0	1 year
Propylene oxide	75-56-9	3,100	0	1 hour
Propylene oxide	75-56-9	0.3	0	1 year
Silver (soluble compounds, expressed as Ag)	7440-22-4	0.23	0.005	1 year
Styrene monomer ⁴	100-42-5	150	0	1 hour
Sulphur dioxide ³	7446-09-5	1,050	150	4 minutes
Sulphur dioxide	7446-09-5	288	50	24 hours
Sulphur dioxide	7446-09-5	52	20	1 year
1,1,2,2-Tetrachloroethane	79-34-5	0.05	0.03	1 year
Tetrachloroethylene	127-18-4	2	1	1 year
Tetrachloromethane	56-23-5	1	0.7	1 year
Thallium	7440-28-0	0.25	0.05	1 year
Toluene	108-88-3	600	260	4 minutes
Total particles	-	120	90	24 hours
1,1,2-Trichloroethane	79-00-5	0.06	0.04	1 year
Trichloroethylene	79-01-6	0.4	0.3	1 year
Triethylamine	121-44-8	22	0	4 minutes
Triethylamine	121-44-8	7	0	1 year
Vanadium	7440-62-2	1	0.01	1 year
Vinyl acetate	108-05-4	400	0	4 minutes
Vinyl acetate	108-05-4	200	0	1 year
Vinyl chloride	75-01-4	0.05	0.03	1 year
Vinylidene chloride	75-35-4	0.5	0.04	1 year
Xylene (o-,m-,p-isomers)	1330-20-7	350	150	4 minutes
Xylene (o-,m-,p-isomers)	1330-20-7	20	8	1 year
Zinc	7440-66-6	2.5	0.1	24 hours

¹ The figures appearing opposite the contaminants listed in the Schedule are those of the identification code assigned by the Chemical Abstract Services of the American Chemical Society.

² PM₁₀: particles of less than 10 microns.

³ The limit may be exceeded up to 0.5% of the time on an annual basis, without exceeding 1,310 µg/m³.

⁴ The limit may be exceeded up to 2% of the time on an annual basis, without exceeding 1,910 µg/m³.

⁵ The limit may be exceeded up to 1% of the time on an annual basis.

O.C. 501-2011, Sch. K; O.C. 1228-2013, s. 41; O.C. 628-2022, s. 2.

UPDATES

O.C. 501-2011, 2011 G.O. 2, 1263

O.C. 657-2013, 2013 G.O. 2, 1738

O.C. 1228-2013, 2013 G.O. 2, 3597

O.C. 1060-2015, 2015 G.O. 2, 3259

O.C. 239-2019, 2019 G.O. 2, 521

O.C. 868-2020, 2020 G.O. 2, 2327A

O.C. 1131-2020, 2020 G.O. 2, 3086

S.Q. 2020, c. 26, s. 149

O.C. 628-2022, 2022 G.O. 2, 1035

O.C. 987-2023, 2023 G.O. 2, 1224