

Draft Regulation

Environment Quality Act
(chapter Q-2)

An Act mainly to ensure effective governance of the fight against climate change and to promote electrification (2020, chapter 19)

Halocarbon destruction projects eligible for the issuance of offset credits

Notice is hereby given, in accordance with sections 10 and 11 of the Regulations Act (chapter R-18.1), that the Regulation respecting halocarbon destruction projects eligible for the issuance of offset credits, appearing below, may be made by the Minister of the Environment and the Fight Against Climate Change on the expiry of 45 days from the date of publication.

The contents of many of the provisions in the draft Regulation constitute an improved version of the provisions of Appendix D of the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances (chapter Q-2, r. 46.1).

The draft Regulation sets out, in a manner consistent with the amendments introduced by the draft Regulation to amend the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances, the conditions on which a halocarbon destruction project will be eligible for the issuance of offset credits. It also contains the general conditions that apply to such a project.

The draft Regulation introduces a system of project notices to inform the Minister that the promoter of an eligible project intends to file a request for the issuance of offset credits. This mechanism replaces project registration, which the draft Regulation to amend the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances revokes for halocarbon destruction projects.

The draft Regulation also defines the methods to be used to quantify the greenhouse gas emission reductions attributable to an eligible project, as well as the contents of the project report that the promoter must produce for each reporting period for emission reductions. It sets the conditions that apply to the verification of project reports, in particular concerning the accreditation of the verification organization and the independence of the organization, the verifier and the other members of the verification team from the promoter.

Lastly, the draft Regulation includes monetary administrative penalties for failures to comply with the Regulation and penal sanctions for offences, along with transitional provisions to place under the new rules projects that have already begun and projects registered under the old rules in the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances.

The draft Regulation will have a limited impact on enterprises since it essentially simplifies the future regulatory amendments for halocarbon destruction projects eligible for the issuance of offset credits.

Further information on the draft Regulation may be obtained by contacting Pierre Bouchard, Coordinator, Direction du marché du carbone, Direction générale de la réglementation carbone et des données d'émission, Ministère de l'Environnement et de la Lutte contre les changements climatiques, Édifice Marie-Guyart, 675, boulevard René-Lévesque Est, boîte 30, Québec (Québec) G1R 5V7; email: pierre.bouchard@environnement.gouv.qc.ca.

Any person wishing to comment on the draft Regulation is requested to submit written comments within the 45-day period to Kim Ricard, Associate Director for Market Operations, Direction du marché du carbone, Direction générale de la réglementation carbone et des données d'émission, Ministère de l'Environnement et de la Lutte contre les changements climatiques, Édifice Marie-Guyart, 675, boulevard René-Lévesque Est, boîte 31, Québec (Québec) G1R 5V7; email: kim.ricard@environnement.gouv.qc.ca.

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the Fight Against Climate Change*

Regulation respecting halocarbon destruction projects eligible for the issuance of offset credits

Environment Quality Act

(chapter Q-2, ss. 46.1, 46.5, 46.8.2, 115.27 and 115.34)

Act mainly to ensure effective governance of the fight against climate change and to promote electrification

(2020, chapter 19, s. 21)

CHAPTER I**OBJECT, SCOPE AND INTERPRETATION**

1. The object of this Regulation is to

(1) determine the halocarbon destruction projects eligible for the issuance of offset credits pursuant to section 46.8.2 of the Environment Quality Act (chapter Q-2);

(2) determine the conditions and methods applicable to such projects;

(3) determine the information and documents that a person or municipality responsible for carrying out an eligible project or a project whose eligibility for credits must be determined must keep or provide to the Minister.

2. In this Regulation, unless otherwise indicated by context,

(1) “container” means an air-tight, waterproof unit used for storing, circulating or transporting halocarbons without leakage or escape of halocarbons into the environment;

(2) “officer” means the president, chief executive officer, chief operating officer, chief financial officer or secretary of a legal person or a person holding a similar position, or any person designated as an officer by a resolution of the board of directors;

(3) “greenhouse gas” or “GHG” means a gas referred to in the second paragraph of section 46.1 of the Environment Quality Act or in the second paragraph of section 70.1 of the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances (chapter Q-2, r. 46.1), namely carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆), nitrogen trifluoride (NF₃), chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs);

(4) “halocarbon” means a substance designated in Appendix A, when contained in foam or when used or intended to be used as refrigerants for refrigeration, freezing or air conditioning in equipment, systems or appliances from industrial, commercial, institutional or residential sources;

(5) “foam” means insulating foam from refrigeration, freezer or air-conditioning appliances;

(6) “professional” means a professional within the meaning of section 1 of the Professional Code (chapter C-26); any other person authorized by a professional order to carry on an activity carried on by a professional belonging to that order is also deemed to be a professional;

(7) “promoter” means a person or municipality responsible for carrying out a project eligible for the issuance of offset credits;

(8) “cap-and-trade system for emission allowances” means a cap-and-trade system for greenhouse gas emission allowances established pursuant to the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances.

CHAPTER II

ELIGIBILITY

DIVISION I

ELIGIBILITY CONDITIONS

3. A halocarbon destruction project is eligible for the issuance of offset credits pursuant to section 46.8.2 of the Environment Quality Act, for the eligibility period provided for in Division II of this Chapter, if it meets the following conditions:

(1) the project is carried out by a promoter registered for the cap-and-trade system for emission allowances in accordance with the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances, that is domiciled in Québec in the case of a natural person or has an establishment in Québec in other cases;

(2) the GHG emission reductions attributable to the project are achieved as an initiative of the promoter, without the promoter being required to do so, on the date of filing of the project notice or renewal notice provided for in Chapter IV, under a law or regulation, an authorization, an order made pursuant to a law or regulation or a court decision;

(3) the halocarbons destroyed during the project are recovered in Canada or are removed from a refrigeration, freezer or air-conditioning appliance recovered in Canada;

(4) where the halocarbons destroyed during the project are removed from a refrigeration, freezer or air-conditioning appliance, the removal of foam and refrigerants from the appliance and the extraction of halocarbons from the foam are performed in Canada;

(5) the destruction of the halocarbons is performed in Canada or the United States.

When halocarbons used as refrigerants targeted by a project are removed from refrigeration, freezer or air-conditioning appliances that also contain halocarbons contained in foam, the project must, for any destruction activity taking place after 22 October 2016, also provide for the extraction and destruction of the halocarbons contained in the foam in accordance with the provisions of this Regulation.

In the cases provided for in the second paragraph, the halocarbons removed from a same refrigeration, freezer or air-conditioning appliance must be destroyed during a same reporting period referred to in section 21.

DIVISION II

ELIGIBILITY PERIOD

4. For the purposes of this Regulation, “eligibility period” means the period during which a project remains eligible for the issuance of offset credits, subject to compliance with the eligibility conditions in force when the project notice provided for in either section 12 or the second paragraph of section 14, or the renewal notice provided for in section 15, is filed.

5. The eligibility period has a term of one year and begins on the project start date.

The eligibility period may be renewed for the same term by filing the renewal notice provided for in section 15. The renewed eligibility period begins on the day following the end of the preceding period.

For the purposes of this Regulation, a project eligible for the issuance of offset credits is deemed to begin on the date on which the first halocarbon destruction activities occur, as documented by the destruction certificate.

Despite the third paragraph, an eligible project may include activities completed before the project start date.

CHAPTER III

GENERAL CONDITIONS APPLICABLE TO AN ELIGIBLE PROJECT

DIVISION I

GENERAL CONDITIONS

6. A project eligible for the issuance of offset credits must be carried out in accordance with all the requirements applicable to the project based on its type and the place where it is carried out.

7. A promoter who intends to transfer responsibility for carrying out the project to another person or another municipality must send to the Minister, within 30 days before the transfer, a notice including the following documents and information:

- (1) the scheduled date of the transfer;
- (2) the name of the transferee and all the information needed to identify the transferee, including the number of the general account opened by the Minister for the transferee pursuant to section 14 of the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances after the transferee registers for the cap-and-trade system for emission allowances;
- (3) an estimate of the offset credits that will be requested, for the reporting period during which the transfer is planned, by the promoter and by the transferee in accordance with the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances;
- (4) a declaration by the promoter and the transferee, or their representatives, stating that all the information provided is complete and accurate.

8. The promoter must use the forms or templates available on the website of the Ministère de l'Environnement et de la Lutte contre les changements climatiques to submit any information or document required pursuant to this Regulation.

9. The promoter must keep a copy of any information or document that must be submitted pursuant to this Regulation for the duration of the project and for a minimum period of 7 years after the project's end date.

The promoter must also keep any other information or document needed to quantify the GHG emission reductions attributable to the promoter's project pursuant to Chapter V of this Regulation for the duration of the project and for a minimum period of 7 years after the project's end date.

The documents and information referred to in this section must also be provided to the Minister on request.

DIVISION II

CONDITIONS FOR OPERATION

10. Halocarbons must be extracted and destroyed as follows:

- (1) the halocarbons must be collected, stored and transported in hermetically sealed containers;
- (2) the halocarbons contained in foam must be extracted in concentrated form using a negative pressure process;

(3) the halocarbons must be destroyed in concentrated form.

11. Each stage in a project eligible for the issuance of offset credits that is carried out in the United States must be conducted in accordance with the requirements of the protocol entitled “Compliance Offset Protocol Ozone Depleting Substances Projects: Destruction of U.S. Ozone Depleting Substances Banks” published by the California Air Resources Board.

CHAPTER IV

PROJECT NOTICE AND RENEWAL NOTICE

12. The promoter must, not later than the date of filing of the first issuance request for offset credits under the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances, file a project notice with the Minister containing the following documents and information:

(1) the information needed to identify the promoter and the promoter’s representative, if any;

(2) the number of the general account opened by the Minister for the promoter pursuant to section 14 of the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances following the promoter’s registration for the cap-and-trade system for emission allowances;

(3) a summary description of the project and information about its location and the identification of all project sites, including

(a) the storage sites for the appliances and halocarbons recovered;

(b) the facility sites where the halocarbons are extracted;

(c) the facility sites where the halocarbons are destroyed;

(d) the facility sites where the appliances are recycled, if any;

(4) an estimate of the expected annual and total GHG emission reductions attributable to the project, in metric tonnes CO₂ equivalent;

(5) the duration of the project and the start date for the project, when known, or in other cases an estimate of the duration and start date;

(6) when the promoter has retained or intends to retain the services of a professional or another person to prepare or carry out the project,

(a) the information needed to identify that professional or person;

(b) a summary of the tasks that have been or will be entrusted to that professional or person;

(c) if applicable, a declaration by the professional or person that the information and documents provided are complete and accurate;

(7) the information needed to identify the owners, and the owners' representatives, if any, for each project site;

(8) a declaration by the promoter or the promoter's representative that the documents and information provided are accurate.

13. On receiving a project notice, the Minister gives it a project code and communicates the code to the promoter.

14. The project described in a notice filed in accordance with section 12 must start within 2 years following the filing.

After that time, a promoter that has not yet started the project must file a new project notice containing the information and documents referred to in section 12.

15. The promoter must, between the sixth and the first month preceding the end of the eligibility period for the project, ask the Minister to renew the eligibility period by filing a renewal notice containing, in addition to what is required by section 12, the following information:

(1) the project code given to the project by the Minister pursuant to section 13;

(2) a description of any change planned to the project for the new eligibility period.

CHAPTER V

QUANTIFICATION OF GHG EMISSION REDUCTIONS ATTRIBUTABLE TO AN ELIGIBLE PROJECT

16. The object of the provisions of this Chapter is to

(1) identify the GHG sources, sinks and reservoirs forming the project boundaries and determine the GHG emission reductions attributable to the project for quantification purposes;

(2) define the period during which the GHG emission reductions attributable to the project are quantified and specify the calculation methods used for quantification;

(3) establish the conditions for project surveillance, including the conditions for collecting and recording the data needed to quantify the GHG emission reductions attributable to the project, for using, maintaining and calibrating the instruments used for data collection, and for using and maintaining the devices and equipment used for project activities.

DIVISION I**PROJECT BOUNDARIES AND GHG EMISSION REDUCTIONS ATTRIBUTABLE TO THE PROJECT**

17. Only the GHG sources, sinks and reservoirs identified in the area of Figure 1 that lies within the dotted line and described in Table 1 of Appendix B may be used by the promoter to quantify the GHG emission reductions attributable to the destruction of halocarbons contained in foam. The GHG sources, sinks and reservoirs identified in this way form the boundaries of the project for the destruction of halocarbons contained in foam.

18. Only the GHG sources, sinks and reservoirs identified in the area of Figure 2 that lies within the dotted line and described in Table 2 of Appendix B may be used by the promoter to quantify the GHG emission reductions attributable to the destruction of halocarbons used or intended to be used as refrigerants. The GHG sources, sinks and reservoirs identified in this way form the boundaries of the project for the destruction of halocarbons used as refrigerants.

19. GHG emission reductions may only be deemed to be attributable to an eligible project if no offset credits have previously been issued for those emissions pursuant to the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances and if no credits have been issued under another voluntary or regulatory program for GHG emission reductions.

DIVISION II**REPORTING PERIOD AND CALCULATION METHODS FOR QUANTIFICATION***§ 1. – Reporting period*

20. For the purposes of this Regulation, “reporting period” means a continuous period of time, within an eligibility period, during which the GHG emission reductions attributable to a project eligible for the issuance of offset credits are quantified in accordance with this Chapter for the issuance of offset credits.

The reporting periods of a project eligible for the issuance of offset credits cover 1 to 12 months and succeed each other in an uninterrupted fashion during the eligibility period for the project.

§ 2. – Quantification of total GHG emission reductions

21. To quantify the total GHG emission reductions attributable to a project during the reporting period, the promoter uses Equation 1.

Equation 1

$$ER_T = ER_M + ER_R$$

Where:

ER_T = total GHG emission reductions attributable to the project, in metric tonnes CO₂ equivalent;

ER_M = GHG emission reductions attributable to the destruction of halocarbons contained in foam during the reporting period, calculated using Equation 2 in section 23, in metric tonnes CO₂ equivalent;

ER_R = GHG emission reductions attributable to the destruction of halocarbons used or intended to be used as refrigerants during the reporting period, calculated using Equation 8 in section 25, in metric tonnes CO₂ equivalent.

The GHG emission reductions attributable to the destruction of halocarbons contained in foam and the GHG emission reductions attributable to the destruction of halocarbons used or intended to be used as refrigerants must be calculated separately, in accordance with the provisions of subdivisions 3 and 4 of this Division.

22. For the purposes of this Division, the promoter must use the global warming potential factors for halocarbons shown in the following table:

Type of halocarbon	Global warming potential factor (metric tonnes CO ₂ equivalent per metric tonne of halocarbon)	
	until 31 December 2020	from 1 January 2021
CFC-11	4,750	4,750
CFC-12	10,900	10,900
CFC-13	14,400	14,400
CFC-113	6,130	6,130
CFC-114	10,000	10,000
CFC-115	7,370	7,370
HCFC-22	1,810	1,810
HCFC-141b	725	725
HFC-134a	1,300	1,430
HFC-245fa	950	1,030

§ 3. – *Quantification of GHG emission reductions attributable to the destruction of halocarbons contained in foam*

23. The GHG emission reductions attributable to the destruction of halocarbons contained in foam are calculated using equations 2 to 7:

Equation 2

$$ER_M = BE_M - PE_M$$

Where:

ER_M = GHG emission reductions attributable to the destruction of halocarbons contained in foam during the reporting period, in metric tonnes CO₂ equivalent;

BE_M = Baseline GHG emissions attributable to the destruction of halocarbons contained in foam during the reporting period, calculated using Equation 3, in metric tonnes CO₂ equivalent;

PE_M = GHG emissions under the project attributable to the destruction of halocarbons contained in foam during the reporting period, calculated using Equation 5, in metric tonnes CO₂ equivalent.

Equation 3

$$BE_M = \sum_{i=1}^n [BA_{init,i} \times EF_{M,i} \times GWP_i]$$

Where:

BE_M = Baseline GHG emissions attributable to the destruction of halocarbons contained in foam during the reporting period, in metric tonnes CO₂ equivalent;

i = Type of halocarbon;

n = Number of types of halocarbons;

$BA_{init,i}$ = Initial quantity of halocarbons of type i contained in foam prior to removal from appliances, calculated using Equation 4, in metric tonnes of halocarbon of type i;

$EF_{M,i}$ = GHG emission factor for halocarbon of type i contained in the foam, as indicated in section 24;

GWP_i = Global warming potential factor for halocarbon of type i as indicated in section 22, in metric tonnes CO₂ equivalent per metric tonne of halocarbon of type i .

Equation 4

$$BA_{init,i} = BA_{final,i} + \left(BA_{final,i} \times \left(\frac{1 - EE_M}{EE_M} \right) \right)$$

Where:

$BA_{init,i}$ = Initial quantity of halocarbons of type i contained in foam prior to removal from appliances, in metric tonnes of halocarbon of type i ;

$BA_{final,i}$ = Total quantity of halocarbons of type i extracted and sent for destruction, determined in accordance with the method in Appendix D, in metric tonnes of halocarbon of type i ;

EE_M = Extraction efficiency of the extraction process for halocarbons contained in foam, determined in accordance with the method in Appendix E;

i = Type of halocarbon.

Equation 5

$$PE_M = BA_{pr} + (Tr + DEST)_M$$

Where:

PE_M = GHG emissions under the project attributable to the destruction of halocarbons contained in foam during the reporting period, in metric tonnes CO₂ equivalent;

BA_{pr} = Total quantity of halocarbons contained in foam that are emitted during extraction, calculated using Equation 6, in metric tonnes CO₂ equivalent;

$(Tr + DEST)_M$ = GHG emissions attributable to the transportation and destruction of halocarbons contained in foam, calculated using Equation 7, in metric tonnes CO₂ equivalent.

Equation 6

$$BA_{pr} = \sum_{i=1}^n [BA_{init,i} \times (1 - EE_M) \times GWP_i]$$

Where:

BA_{pr} = Total GHG emissions attributable to the extraction of halocarbons contained in foam removed from appliances, in metric tonnes CO₂ equivalent;

i = Type of halocarbon;

n = Number of types of halocarbons;

$BA_{init,i}$ = Total quantity of halocarbons of type i contained in foam removed from appliances prior to extraction, calculated using Equation 4, in metric tonnes of halocarbon of type i ;

EE_M = Extraction efficiency of the extraction process for halocarbons contained in foam, determined in accordance with the method in Appendix E;

GWP_i = Global warming potential factor for halocarbon of type i as indicated in section 22, in metric tonnes CO₂ equivalent per metric tonne of halocarbon of type i .

Equation 7

$$(Tr + DEST)_M = BA_{final} \times 7.5$$

Where:

$(Tr + DEST)_M$ = GHG emissions attributable to the transportation and destruction of halocarbons contained in foam, in metric tonnes CO₂ equivalent;

BA_{final} = Total quantity of halocarbons contained in foam sent for destruction under the project, calculated using Equation 17 in Appendix E, in metric tonnes of halocarbons;

7.5 = Default emission fact for the transportation and destruction of halocarbons, in metric tonnes CO₂ equivalent per metric tonne of halocarbon.

24. For the purposes of this subdivision, the emission factors for each type of halocarbon contained in foam are shown in the following table:

Type of halocarbon	Emission factor for halocarbons contained in foam removed from appliances ($EF_{M, i}$)
CFC-11	0.44
CFC-12	0.55
HCFC-22	0.75
HCFC-141b	0.50
HFC-134a	0.70
HFC-245fa	0.70

§ 4. – *Quantification of GHG emission reductions attributable to the destruction of halocarbons used or intended to be used as refrigerants*

25. The GHG emission reductions attributable to the destruction of halocarbons used or intended to be used as refrigerants are calculated using equations 8 to 13:

Equation 8

$$ER_R = BE_R - PE_R$$

Where:

ER_R = GHG emission reductions attributable to the destruction of halocarbons used or intended to be used as refrigerants during the reporting period, in metric tonnes CO₂ equivalent;

BE_R = Baseline GHG emissions attributable to the destruction of halocarbons used or intended to be used as refrigerants during the reporting period, calculated using Equation 9, in metric tonnes CO₂ equivalent;

PE_R = GHG emissions under the project attributable to the destruction of halocarbons used or intended to be used as refrigerants during the reporting period, calculated using Equation 10, in metric tonnes CO₂ equivalent.

Equation 9

$$BE_R = \sum_{i=1}^n (Q_i \times EF_{R,i} \times GWP_i)$$

Where:

BE_R = Baseline GHG emissions attributable to the destruction of halocarbons used or intended to be used as refrigerants during the reporting period, in metric tonnes CO₂ equivalent;

i = Type of halocarbon;

n = Number of types of halocarbons;

Q_i = Total quantity of halocarbons of type i used or intended to be used as refrigerants that are recovered and sent for destruction, determined in accordance with the method in Appendix D, in metric tonnes of halocarbon of type i ;

$EF_{R,i}$ = GHG emission factor for halocarbon of type i used or intended to be used as a refrigerant, as indicated in section 26;

GWP_i = Global warming potential factor for halocarbon of type i , as indicated in section 22, in metric tonnes CO₂ equivalent per metric tonne of halocarbon of type i .

Equation 10

$$PE_R = Sub + (Tr + Dest)_R$$

Where:

PE_R = GHG emissions under the project attributable to the destruction of halocarbons used or intended to be used as refrigerants during the reporting period, in metric tonnes CO₂ equivalent;

Sub = Total GHG emissions attributable to substitute refrigerants, calculated using Equation 11, in metric tonnes CO₂ equivalent;

$(Tr + DEST)_R$ = GHG emissions attributable to the transportation and destruction of halocarbons used or intended to be used as refrigerants, calculated using Equation 12, in metric tonnes CO₂ equivalent;

Equation 11

$$Sub = \sum_{i=1}^n (Q_i \times EFS_i)$$

Where:

Sub = Total GHG emissions attributable to substitute refrigerants, in metric tonnes CO₂ equivalent;

i = Type of halocarbon;

n = Number of types of halocarbons;

Q_i = Total quantity of halocarbons of type i used or intended to be used as refrigerants that are recovered and sent for destruction, determined in accordance with the method in Appendix D, in metric tonnes of halocarbon of type i;

EFS_i = Emission factor for substitutes for halocarbons of type i as indicated in section 27, in metric tonnes CO₂ equivalent per metric tonne of halocarbon;

Equation 12

$$(TR + Dest)_R = Q \times 7.5$$

Where:

(Tr + DEST)_R = GHG emissions attributable to the transportation and destruction of halocarbons used or intended to be used as refrigerants, in metric tonnes CO₂ equivalent;

Q = Total quantity of halocarbons used or intended to be used as refrigerants that are recovered and sent for destruction, calculated using Equation 13, in metric tonnes of halocarbon;

7.5 = Default emission fact for the transportation and destruction of halocarbons, in metric tonnes CO₂ equivalent per metric tonne of halocarbon;

Equation 13

$$Q = \sum_{i=1}^n Q_i$$

Where:

Q = Total quantity of halocarbons used as refrigerants that are recovered and sent for destruction, in metric tonnes of halocarbons;

i = Type of halocarbon;

n = Number of types of halocarbons;

Q_i = Total quantity of halocarbons of type i used or intended to be used as refrigerants that are recovered and sent for destruction, determined in accordance with the method in Appendix D, in metric tonnes of halocarbon of type i .

26. For the purposes of this subdivision, the emission factors for each type of halocarbon used or intended to be used as a refrigerant are shown in the following table:

Type of halocarbon	Emission factor for halocarbons used or intended to be used as refrigerants ($EF_{R, i}$)
CFC-11	0.89
CFC-12	0.95
CFC-13	0.61
CFC-113	0.89
CFC-114	0.78
CFC-115	0.61
HCFC-22	0.72

27. For the purposes of this subdivision, the emission factors for substitute refrigerants for each type of halocarbon used or intended to be used as a refrigerant are shown in the following table:

Halocarbure used or intended to be used as a refrigerant	Emission factor for substitute refrigerants (EFS_i)
CFC-11	223
CFC-12	686
CFC-13	7,144
CFC-113	220
CFC-114	659
CFC-115	1,139
HCFC-22	389

DIVISION III

CONDITIONS APPLICABLE TO PROJECT SURVEILLANCE

28. The promoter is responsible for project surveillance, which includes all tasks relating to the collecting and recording of the data needed to quantify the GHG emission reductions attributable to the project, all tasks relating to the use, maintenance, verification and calibration of the measurement instruments used for data collection, and all tasks relating to the use and maintenance of devices and equipment used for project activities.

The promoter measures and monitors the surveillance parameters in accordance with the table in Appendix C.

§ 1. – *Destruction facility*

29. During the destruction of halocarbons, the operating parameters of the destruction facility must be monitored and recorded in accordance with good practice and the standards and regulatory requirements that apply to that type of activity.

30. The promoter must ensure the continuous monitoring of the following parameters during the entire halocarbon destruction process:

- (1) the halocarbon feed rate;
- (2) the operating temperature and pressure of the destruction facility during halocarbon destruction;
- (3) effluent discharges in terms of water and pH levels;
- (4) carbon monoxide emissions.

§ 2. – *Surveillance plan*

31. To ensure surveillance of the project, the promoter must establish a project surveillance plan, which must

- (1) specify the methods used to collect and record the data required for all the surveillance parameters in Appendix C, and specify the frequency of data acquisition;
- (2) specify the role of the person responsible for each monitoring activity, as well as the quality assurance and quality control measures taken to ensure that data acquisition and the verification of measurement instrument accuracy and calibration are carried out consistently, precisely and in accordance with this Chapter.

CHAPTER VI
PROJECT REPORT

DIVISION I
GENERAL CONDITIONS

32. The promoter must produce a project report for each reporting period referred to in section 20 not later than 4 months following the end of the reporting period concerned, with the content specified in Division II of this Chapter.

33. Every project report verified in accordance with Chapter VII in which the verifier has noted errors, omissions or inaccuracies must be corrected by the promoter before any issuance request for offset credits is made under the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances

34. The promoter must, on request, provide the Minister with the project reports produced.

DIVISION II

CONTENTS OF THE PROJECT REPORT

35. The project report produced for the first reporting period must contain the following information and documents:

- (1) the information needed to identify the promoter and the promoter's representative, if any;
- (2) where the promoter has retained the services of a professional or of another person to prepare or carry out the project,
 - (a) the information needed to identify the professional or person;
 - (b) a summary of the tasks entrusted to the professional or person;
 - (c) where applicable, a declaration by the professional or person that the information and documents produced are complete and accurate;
- (3) the project code given to the project by the Minister after receiving the project notice referred to in Chapter IV;
- (4) a detailed description of the project;
- (5) information about the location of the project and identification of all project sites, including
 - (a) the storage sites for appliances and the halocarbons recovered;
 - (b) the facility sites where the halocarbons are extracted;
 - (c) halocarbon destruction facilities;
 - (d) the facility sites for recycling appliances, if any;
- (6) the information needed to identify the owners and the owners' representatives, if any, for each project site;

- (7) a description of the GHG sources, sinks and reservoirs forming the project boundaries;
- (8) a demonstration that the project meets the conditions set out in Division I of Chapter II, including a copy of any relevant document;
- (9) a copy of any authorization needed to carry out the project;
- (10) when the environmental impacts of the project have been analyzed, a summary of the analysis and its conclusions;
- (11) information about financial assistance received for the project under any other program for GHG emission reductions;
- (12) the project surveillance plan referred to in subdivision 2 of Division II of Chapter V;
- (13) the start and end dates for the reporting period covered by the project report;
- (14) a description of any problem occurring during the operation of the project that may affect the quantity of GHG emission reductions attributable to the project;
- (15) the GHG emission reductions attributable to the project for the reporting period, quantified annually in accordance with Chapter V, in metric tonnes CO₂ equivalent, along with the calculation methods and all the information and documents used to make the quantification, including a copy of the raw measurement data used for quantification purposes;
- (16) the following information on the chain of traceability for halocarbons:
 - (a) the location information for each storage site where recovered appliances or a quantity of halocarbons exceeding 225 kg are transferred;
 - (b) in the case of equipment containing more than 225 kg of halocarbons, the address of the last place where the equipment was located before being decommissioned;
 - (c) the information needed to identify each party involved in each stage of the project, and the quantity of appliances, foam or halocarbons transferred, sold or handled by each party;
 - (d) any document identifying persons in possession of appliances, foam and halocarbons at each stage in the project, and showing the transfer of possession and ownership of the appliances, foam and halocarbons;

- (e) for each appliance containing foam that is recovered:
 - i. the type of appliance;
 - ii. its size;
 - iii. its storage capacity;
 - iv. its serial number, if available;
- (17) the serial number or identification number of the containers used for halocarbon storage and transportation;
- (18) the following information on halocarbon extraction:
 - (a) the number of appliances containing foam from which halocarbons have been extracted;
 - (b) the number of appliances of residential origin containing refrigerants from which halocarbons been extracted;
 - (c) processes, training, and quality assurance, quality control and extraction process management processes;
- (19) the certificates of destruction for all the halocarbons destroyed during the project, issued by the facility that destroyed the halocarbons, specifying
 - (a) the name of the project promoter;
 - (b) the information needed to identify and locate the destruction facilities;
 - (c) the name and signature of the person responsible for the destruction operations;
 - (d) the identification number on the certificate of destruction;
 - (e) the serial, tracking or identification number of all containers for which halocarbon destruction occurred;
 - (f) the weight and type of halocarbons destroyed for each container, including the weight tickets generated in accordance with Appendix D;
 - (g) the destruction start date and time;
 - (h) the destruction end date and time;

- (20) a description of the methods used to extract foam or refrigerant from appliances, extract halocarbons from foam and destroy halocarbons;
- (21) for projects to destroy halocarbons contained in foam, an estimate of the quantity of foam recovered, in metric tonnes;
- (22) the procedures used to analyze halocarbon mixtures, if Division 2 of Appendix D applies;
- (23) for each site not owned by the promoter, a declaration signed by the owner of the site attesting that the owner has authorized the carrying out of the project by the promoter and undertakes, with respect to the GHG emission reductions covered by the project report, not to make a request for offset credits under the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances or a request for credits under another voluntary or regulatory program for GHG emission reductions;
- (24) a declaration signed by the promoter or the promoter's representative attesting that no offset credits for the GHG emission reductions covered by the project report have been issued pursuant to the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances and that no credits have been or will be issued under another voluntary or regulatory program for GHG emissions reduction;
- (25) a declaration signed by the promoter or the promoter's representative attesting that the project is carried out in accordance with this Regulation and that the documents and information provided are complete and accurate.

The information and documents relating to halocarbons contained in foam must be kept separate from the information and documents relating to halocarbons used or intended to be used as refrigerants.

36. Every subsequent project report must include the following information and documents:

- (1) the information and documents listed in subparagraphs 1 to 3 and 13 to 25 of the first paragraph of section 35;
- (2) a detailed description of any change made to the project since the end of the preceding reporting period or to the information contained in the project report produced for that period and, where applicable, a demonstration that the project still meets the requirements of Division I of Chapter II and of the project surveillance plan if that plan has been amended.

The information and documents relating to halocarbons contained in foam must be kept separate from the information and documents relating to halocarbons used or intended to be used as refrigerants.

CHAPTER VII

VERIFICATION

DIVISION I

GENERAL CONDITIONS

37. The promoter must entrust every verification of a project report to a verification organization accredited under ISO 14065 by a member of the International Accreditation Forum in Canada or the United States and according to an ISO 17011 program, with respect to the sector of activity for the project.

Despite the first paragraph, the verification of a project report may be entrusted to a verification organization that is not yet accredited, provided it is accredited in accordance with the first paragraph in the year following the verification of the project report.

38. The promoter may entrust the verification of a project report to a verification organization in accordance with section 37 if the organization, the verifier designated by that organization and the other members of the verification team

(1) have not acted for the promoter, in the 3 preceding years, as a consultant for the purpose of developing the project or calculating the GHG emission reductions attributable to the project;

(2) have not verified project reports covering more than six consecutive reporting periods for the project being verified;

(3) have verified the project reports for fewer than seven out of the last nine of the promoter's projects. Project order is determined by the start date for each project.

In addition, when the promoter wishes to have the project report verified by a verification organization other than the organization that verified the report for the preceding reporting period, the verification organization to which the verification is entrusted, the verifier designated by that organization to carry out the verification and the other members of the verification team, must not have verified a project report covering the three preceding project periods for that project.

39. In addition to the requirements of the standards ISO 14064-3 and ISO 14065 concerning conflicts of interest, the promoter must ensure that none of the following situations exists between the promoter, its officers, the verification organization and the members of the verification team referred to in section 38:

(1) a member of the verification team or a close relative of that member has personal ties with the promoter or one of its officers;

(2) during the 3 years preceding the year of the verification, one of the members of the verification team was employed by the promoter;

- (3) during the 3 years preceding the year of the verification, one of the members of the verification team provided the promoter with one of the following services:
- (a) the design, development, commissioning or maintenance of a data inventory or data management system for GHG emissions from the establishment or facility of the promoter or, where applicable, for data on electricity or fuel transactions;
 - (b) the development of GHG emission factors, or the design and development of other data used for quantification purposes for any GHG emission reductions;
 - (c) a consultation concerning GHG emission reductions or GHG withdrawals from the atmosphere, in particular the design of an energy efficiency or renewable energy project and the assessment of assets relating to greenhouse gas sources, sinks and reservoirs;
 - (d) the preparation of manuals, guides or procedures connected with the reporting of the promoter's GHG emissions under the Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere (chapter Q-2, r. 15);
 - (e) consultation in connection with a GHG allowances market, including
 - i. brokerage, with or without registration, while acting as a promoter or subscriber on behalf of the promoter;
 - ii. advice concerning the suitability of a GHG emissions transaction;
 - iii. the holding, purchase, sale, negotiation or withdrawal of emission allowances referred to in the second paragraph of section 46.6 of the Environment Quality Act;
 - (f) a consultation in the field of health and safety and environmental management, including a consultation leading to ISO 14001 certification;
 - (g) actuarial consulting, bookkeeping or other consulting services relating to accounting documents or financial statements;
 - (h) a service connected with the management systems of data related to a project of the promoter that is eligible for the issuance of offset credits;
 - (i) an internal audit of GHG emissions;
 - (j) a service provided in connection with litigation or an inquiry into GHG emissions;

(k) a consultation for a GHG emissions reduction project carried out in accordance with this Regulation or the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances;

(4) the independent verification examiner has previously provided the promoter with a verification service or other services referred to in subparagraph 3 for the reporting periods covered by the verification.

The existence of one of the situations described in the first paragraph or contravening section 38 is considered to be a conflict of interest that invalidates the verification.

For the purposes of this section, a close relative of a member of the verification team is that person's spouse, child, spouse's child, mother or father, mother's or father's spouse, child's spouse or spouse's child's spouse.

DIVISION II

CONDUCT OF THE VERIFICATION

40. The verification of a project report must be conducted in accordance with ISO 14064-3 and also in accordance with the terms and conditions of this Division, and in compliance with the provisions of the Professional Code.

41. For the purposes of a verification the promoter and, where applicable, the owner of each project site, including storage sites for the appliances and halocarbons recovered during the project, the facility sites where halocarbons are extracted, the facility sites where halocarbons are destroyed and, where applicable, the facility where appliances are recycled, must provide the verifier with any information or document needed for the conduct of the verification and give access to the site or facility where the project is carried out.

42. The verification of a project report must include a visit by the verifier to each facility where halocarbons are destroyed as part of the project.

In addition, the verification of the project report produced for the first reporting period must include a visit of every facility where halocarbons are extracted from foam.

The visit of the facilities must allow the verifier, in particular, to observe the proper conduct and operation of the project and any change made to the project since the preceding verification. During the visit of a facility, the verifier must be accompanied by the promoter, the promoter's representative or the person responsible for the facility.

43. The verifier must use the operating data from the halocarbon destruction facility to determine whether, during the halocarbon destruction process, the facility was operating in conditions that met the requirements of any authorization necessary to pursue activities at that facility.

44. The verifier must conduct the verification in a way that supports a conclusion, with reasonable assurance, that the project report meets the conditions set out in this Regulation and that the GHG emission reductions attributable to the project are quantified and recorded in the project report with no significant errors, omissions or inaccuracies.

For the purposes of this Regulation, “significant errors, omissions or inaccuracies” means any errors, omissions or inaccuracies in the GHG emission reductions quantified and recorded in the project report for a reporting period that, individually or as an aggregate, result in an over-estimate or under-estimate of GHG emission reductions greater than 5%.

45. A verifier who, during a verification, observes an error, omission or inaccuracy in the quantification of the GHG emission reductions attributable to the project, or a failure to comply with a condition of this Regulation, must inform the promoter.

46. A verifier who, following the verification of a project report, concludes that the report meets the conditions of this Regulation and contains no significant errors, omissions or inaccuracies, must give the promoter a notice of positive verification attesting, with reasonable assurance, that the quantification of the GHG emission reductions attributable to the project is free of any significant error, omission or inaccuracy and that the project report meets the conditions of this Regulation.

A verifier who, following the verification of a project report, observes a failure to comply with a condition for the quantification of GHG emission reductions that cannot be corrected by the promoter must assess its impact on the GHG emission reductions recorded in the project report and determine if it leads to significant errors, omissions or inaccuracies. If a failure to comply with a condition for the quantification of GHG emission reductions cannot be corrected by the promoter but does not lead to significant errors, omissions or inaccuracies, and if the verifier concludes that the other conditions of the Regulation have been complied with and that there are no significant errors, omissions or inaccuracies, the verifier gives the promoter a notice of positive verification.

DIVISION III

VERIFICATION REPORT

47. The verification of a project report must be recorded in a verification report.

48. The verification report must include the following information and documents:

(1) the information needed to identify the verification organization and the verifier designated to conduct the verification, the other members of the verification team and the independent examiner;

- (2) the information needed to identify the accrediting organization that accredited the verification organization for the verification, the sector of activity covered by the accreditation of the verification organization, and the period of validity of the accreditation;
- (3) information about the project, the project report or reports covered by the verification, and the quantity of GHG emission reductions attributable to the project for each reporting period concerned;
- (4) the verification plan and a description of the activities completed by the verifier to verify the project report or reports, along with all exchanges of information between the verifier and the promoter for the purposes of the verification;
- (5) the period during which the verification was conducted and the date of any visits to facilities where halocarbons are destroyed or facilities where halocarbons are extracted from foam;
- (6) a list of any errors, omissions or inaccuracies observed in the quantification of the GHG emission reductions attributable to the project, and of any conditions of this Regulation that have not been met, including the following information concerning the error, omission, inaccuracy or condition:
 - (a) its description;
 - (b) the date on which the promoter was informed of it;
 - (c) where applicable, a description of any action taken by the promoter to correct it, and the date of that action;
 - (d) in the case of a failure to comply with a condition governing the quantification of the GHG emission reductions attributable to the project that cannot be corrected by the promoter, an assessment of the impact of each failure on the quantification of GHG emission reductions and a notice from the verifier concerning any significant errors, omissions or inaccuracies within the meaning of the second paragraph of section 44 that may result from that failure;
- (7) if applicable, the version and date of each project report revised following the verification;
- (8) where the verifier observes errors, omissions or inaccuracies in the quantification of GHG emission reductions attributable to the project made by the promoter, the annual and total quantity of GHG emission reductions which, according to the verifier, are actually attributable to the project, expressed in metric tonnes CO₂ equivalent;

- (9) the verification notice given to the promoter pursuant to section 50, along with the justification for the notice;
- (10) a declaration by the verification organization and verifier that the verification was conducted in accordance with this Regulation and ISO 14064-3;
- (11) a declaration concerning conflicts of interest, including
 - (a) the information needed to identify the verification organization, the members of the verification team and the independent examiner;
 - (b) a copy of the organization chart for the verification organization;
 - (c) a declaration signed by a representative of the verification organization attesting that the conditions of sections 38 and 39 of this Regulation have been met and that the risk of conflict of interest is acceptable.

CHAPTER VIII

ADMINISTRATIVE AND PENAL

DIVISION I

MONETARY ADMINISTRATIVE PENALTIES

49. 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

- (1) in contravention of this Regulation, refuses or fails to file any notice, information, report or other document, or fails to produce it within the required time;
- (2) contravenes the first and second paragraphs of section 9, the first paragraph of section 37 or section 41;
- (3) contravenes any other requirement of this Regulation, if no other monetary administrative penalty is otherwise specified for that contravention by this Chapter or by the Environment Quality Act

50. 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 contravenes section 38

DIVISION II

PENAL SANCTIONS

51. Every person who

- (1) refuses or fails to file any notice, information, report or other document, or fails to produce it within the required time;

(2) contravenes the first and second paragraphs of section 9, the first paragraph of section 37 or section 41;

(3) contravenes any other requirement of this Regulation, if no other penal sanction is otherwise specified for that contravention by this Chapter or by the Environment Quality Act;

commits an offence and is liable, in the case of a natural person, to a fine of \$3,000 to \$100,000 and, in other cases, to a fine of \$3,000 to \$600,000.

52. Every person who contravenes section 38 commits an offence and is liable, in the case of a natural person, to a fine of \$6,000 to \$250,000 and, in other cases, to a fine of \$25,000 to \$1,500,000.

53. Every person who, for the purposes of this Regulation, communicates to the Minister information that is false or misleading 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, and, in other cases, to a fine of \$15,000 to \$3,000,000.

CHAPTER IX

TRANSITIONAL AND FINAL

DIVISION I

TRANSITIONAL

54. Projects to destroy ozone depleting substances referred to in Appendix D of the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances and registered in accordance with Chapter IV of Title III of that Regulation as it read on (*insert the date preceding the date of coming into force of this Regulation*) are deemed to be projects eligible for the issuance of offset credits for which a project notice was filed with the Minister in accordance with section 11 of this Regulation on the date of coming into force of this Regulation.

Despite the first paragraph of section 5 of this Regulation, the eligibility period for a project referred to in the first paragraph is the period beginning on the project start date and ending on (*insert the date occurring 1 year after the date of coming into force of this Regulation*).

The other provisions of this Regulation apply, adapted as required.

55. Despite section 12, a project that began between 1 January 2017 and (*insert the date occurring 1 year before the date of coming into force of this Regulation*) may be covered by a project notice filed with the Minister in the 6 months following the date of coming into force of this Regulation if the project meets the conditions of section 3 and one of the following conditions:

(a) the halocarbons destroyed during the project are of type HCFC-22, when destroyed after 31 December 2019, CFC-11, CFC-12, CFC-13, CFC-113, CFC-114 or CFC-115, and were used or intended to be used as refrigerants in refrigeration, freezer or air-conditioning appliances or systems from industrial, commercial or institutional sources;

(b) the halocarbons destroyed during the project are of type HFC-143a or HFC-254fa and were contained in foam;

(c) the halocarbons destroyed during the project are of type HCFC-22, used or intended to be used as refrigerants in refrigeration, freezer or air-conditioning appliances of residential origin, and are destroyed after 31 December 2019.

A project notice filed with the Minister pursuant to the first paragraph must contain the documents and information listed in paragraphs 1 to 8 of section 12 and must be filed before the filing of the first request for the issuance of offset credits under the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances.

56. Despite section 5, the eligibility period for a project referred to in the first paragraph of section 55 is the period beginning on the project start date and ending on (*insert the date of coming into force of this Regulation*)

57. Despite the second paragraph of section 20, the first reporting period for a project referred to in the first paragraph of section 55 covers the whole of the period between the project start date and (*insert the date of coming into force of this Regulation*).

DIVISION II

FINAL

58. This Regulation comes into force on the fifteenth day following the date of its publication in the *Gazette officielle du Québec*.

APPENDIX A

(section 2)

LIST OF HALOCARBONS

1. When contained in foam:

CFC-11: trichlorofluoromethane;

CFC-12: dichlorodifluoromethane;

HCFC-22: chlorodifluoromethane;

HCFC-141b: 1,1-dichloro-1-fluoroethane;

HFC-134a: 1,1,1,2-tetrafluoroethane;

HFC-245fa: 1,1,1,3,3-pentafluoropropane.

2. When used or intended to be used as refrigerants for refrigeration, freezer or air-conditioning appliances:

CFC-11: trichlorofluoromethane;

CFC-12: dichlorodifluoromethane;

CFC-13: chlorotrifluoromethane;

CFC-113: 1,1,2-trichloro-1,2,2-trifluoroethane;

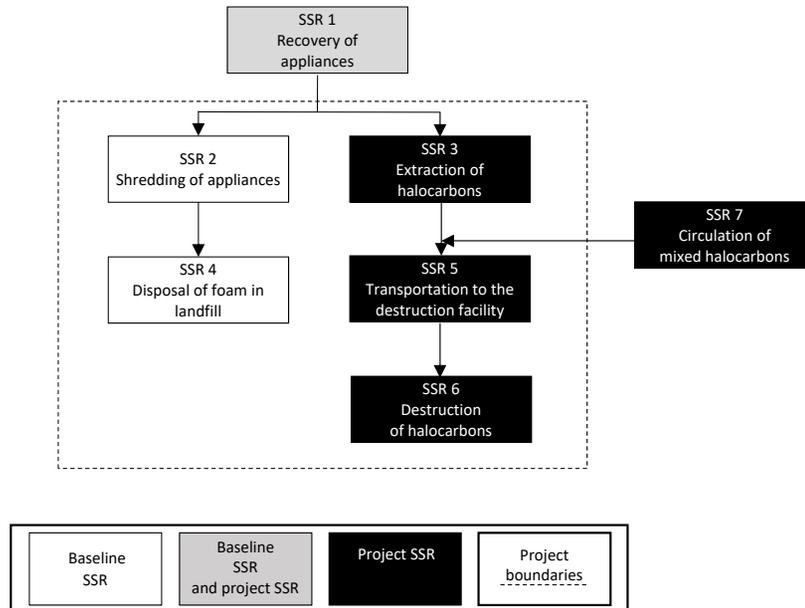
CFC-114: 1,2-dichloro-1,1,2,2-tetrafluoroethane;

CFC-115: 1-chloro-1,1,2,2,2-pentafluoroethane;

HCFC-22: chlorodifluoromethane, when destroyed after 31 December 2019.

APPENDIX B*(sections 17 and 18)***PROJECT BOUNDARIES**

Figure 1: Illustration of the project boundaries that apply to the destruction of halocarbons contained in foam



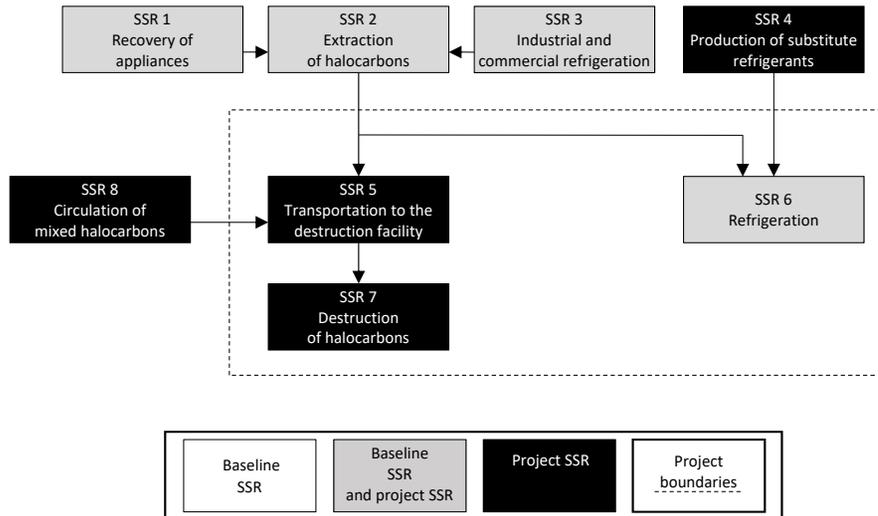
Explanatory note: The baseline scenario shows the GHG sources, sinks and reservoirs (SSRs) that are present in the absence of any project eligible for the issuance of offset credits. The project scenario shows the SSRs that are present when a project is implemented. Not all of these SSRs necessarily form part of the project eligible for the issuance of offset credits; only the SSRs within the project boundaries must be considered.

Table 1. Description of the GHG sources, sinks and reservoirs (SSRs) that apply to the destruction of halocarbons contained in foam

SSR #	Description	GHG targeted	Applicability: Baseline scenario (B) and/or Project scenario (P)	Included in or Excluded from project boundaries
1 -Appliance collection	Fossil fuel emissions attributable to the collection and transportation of end-of-life appliances	CO ₂	B, P	Excluded
		CH ₄	B, P	Excluded
		N ₂ O	B, P	Excluded
2 - Appliance shredding	Emissions of halocarbons attributable to the shredding of appliances for materials recovery	Halocarbons	B	Included
3 - Extraction of halocarbons	Emissions of halocarbons attributable to the removal of foam from appliances	Halocarbons	P	Included
4 – Disposal of foam in landfill	Emissions of halocarbons attributable to the disposal of foam at a landfill site	Halocarbons	B	Included
	Emissions of halocarbon degradation products attributable to the disposal of foam at a landfill site	HCFC	B	Excluded
	Fossil fuel emissions attributable to the transportation of shredded foam and disposal at a landfill site	CO ₂	B	Excluded
		CH ₄	B	Excluded
		N ₂ O	B	Excluded

5 - Transportation to the destruction facility	Fossil fuel emissions attributable to the transportation of halocarbons to the destruction facility	CO ₂	P	Included
		CH ₄	P	Excluded
		N ₂ O	P	Excluded
6 - Destruction of halocarbons	Emissions of halocarbons attributable to incomplete destruction at destruction facility	Halocarbons	P	Included
	Emissions attributable to the oxidation of carbon contained in the halocarbons destroyed	CO ₂	P	Included
	Fossil fuel emissions attributable to the destruction of halocarbons in a destruction facility	CO ₂	P	Included
		CH ₄	P	Excluded
		N ₂ O	P	Excluded
	Indirect emissions attributable to the use of electricity	CO ₂	P	Included
		CH ₄	P	Excluded
		N ₂ O	P	Excluded
	7 - Circulation of mixed halocarbons	Emissions from the fossil fuels consumed during the circulation of mixed halocarbons	CO ₂	P
CH ₄			P	Excluded
N ₂ O			P	Excluded

Figure 2 : Illustration of the project boundaries that apply to the destruction of halocarbons used or intended to be used as refrigerants



Explanatory note: The baseline scenario shows the GHG sources, sinks and reservoirs (SSRs) that are present in the absence of any project eligible for the issuance of offset credits. The project scenario shows the SSRs that are present when a project is implemented. Not all of these SSRs necessarily form part of the project eligible for the issuance of offset credits; only the SSRs within the project boundaries must be considered.

Table 2. Description of the GHG sources, sinks and reservoirs (SSRs) that apply to the destruction of halocarbons used or intended to be used as refrigerants

SSR #	Description	GHGs targeted	Applicability: Baseline scenario (B) and/or Project scenario (P)	Included in or Excluded from project boundaries
1 - Appliance collection	Fossil fuel emissions attributable to the collection and transportation of end-of-life appliances	CO ₂	B, P	Excluded
		CH ₄	B, P	Excluded
		N ₂ O	B, P	Excluded
2 - Extraction of halocarbons	Emissions of halocarbons attributable to the extraction and collection of refrigerants from end-of-life equipment or equipment undergoing maintenance	Halocarbons	B, P	Excluded
	Fossil fuel emissions attributable to the extraction and collection of refrigerants from end-of-life equipment or equipment undergoing maintenance	CO ₂	B, P	Excluded
		CH ₄	B, P	Excluded
		N ₂ O	B, P	Excluded

3 – Industrial and commercial refrigeration	Emissions of halocarbons attributable to equipment leakage and maintenance	Halocarbons	B, P	Excluded
	Fossil fuel emissions attributable to the operation of refrigeration and air-conditioning equipment	CO ₂	B, P	Excluded
		CH ₄	B, P	Excluded
		N ₂ O	B, P	Excluded
4 - Production of substitute refrigerant	Substitute refrigerant emissions during production	CO ₂ e	P	Excluded
	Fossil fuel emissions during the production of substitute refrigerants	CO ₂	P	Excluded
		CH ₄	P	Excluded
		N ₂ O	P	Excluded
5 – Transportation to the destruction facility	Fossil fuel emissions attributable to transportation of halocarbons to the destruction facility	CO ₂	P	Included
		CH ₄	P	Excluded
		N ₂ O	P	Excluded
6 - Refrigeration	Emissions of halocarbons attributable to leakage and maintenance during the continuous operation of equipment	Halocarbons	B	Included
	Substitute refrigerant emissions attributable to leakage and maintenance during the continuous operation of equipment	CO ₂ e	P	Included
	Indirect emissions attributable to the use of electricity	CO ₂	B, P	Excluded
		CH ₄	B, P	Excluded
		N ₂ O	B, P	Excluded
	7 - Destruction of halocarbons	Emissions of halocarbons attributable to incomplete destruction at the destruction facility	Halocarbons	P
Emissions attributable to the oxidation of carbon contained in the halocarbons destroyed		CO ₂	P	Included
	Fossil fuel emissions attributable to the destruction of halocarbons in a destruction facility	CO ₂	P	Included
		CH ₄	P	Excluded
		N ₂ O	P	Excluded
	Indirect emissions attributable to the use of electricity	CO ₂	P	Included
		CH ₄	P	Excluded
		N ₂ O	P	Excluded
8 - Circulation of mixed halocarbons	Emissions from the fossil fuels consumed during the circulation of mixed halocarbons	CO ₂	P	Excluded
		CH ₄	P	Excluded
		N ₂ O	P	Excluded

APPENDIX C

(sections 28 and 31)

SURVEILLANCE PARAMETERS

1. Surveillance parameters applicable to the destruction of halocarbons contained in foam:

Parameter	Description of parameter	Unit of measurement	Method	Frequency of measurement	Equation applicable
Foam _{rec}	Total quantity of foam recovered prior to extraction of halocarbons	Metric tonnes of foam	Measured and calculated	At each reporting period	Equation 8 in section 25
BA _{final, i}	Total quantity of halocarbons contained in foam of type i extracted and sent for destruction during the project	Metric tonnes of halocarbons of type i	Measured and calculated, using the method in Appendix D	At each reporting period	Equation 4 in section 23, Equation 10 in section 25 and Equation 17 in Appendix E
N/A	Mass of each container filled with halocarbons from foam	Metric tonnes	Measured	At each reporting period	N/A
N/A	Mass of each empty container for projects to destroy halocarbons contained in foam	Metric tonnes	Measured	At each reporting period	N/A

N/A	Quantity of halocarbons contained in foam, in each container	Metric tonnes	Calculated	At each reporting period	N/A
N/A	Concentration of each type of halocarbons contained in foam, in each container	%	Measured	At each reporting period	N/A
N/A	Quantity of each type of halocarbons contained in foam, in each container	Metric tonnes of halocarbon of type i	Calculated	At each reporting period	N/A
CBA	Concentration of halocarbons in foam prior to removal from appliances	Metric tonnes of halocarbons per metric tonne of foam	Measured and calculated	At each reporting period	Equation 8 in section 25
N ₁	Number of appliances of type 1	None	Measured	At each reporting period	Equation 7 in section 23
N ₂	Number of appliances of type 2	None	Measured	At each reporting period	Equation 7 in section 23
N ₃	Number of appliances of type 3	None	Measured	At each reporting period	Equation 7 in section 23
N ₄	Number of appliances of type 4	None	Measured	At each reporting period	Equation 7 in section 23

2. Surveillance parameters applicable to the destruction of halocarbons used or intended to be used as refrigerants:

Parameter	Description of parameter	Unit of measurement	Method	Frequency of measurement	Equation applicable
N/A	Mass of each container filled with halocarbons used as refrigerants	Metric tonnes	Measured	At each reporting period	N/A
N/A	Mass of each empty container for projects to destroy halocarbons used as refrigerants	Metric tonnes	Measured	At each reporting period	N/A
N/A	Quantity of halocarbons used as refrigerants, in each container	Metric tonnes	Calculated	At each reporting period	N/A
N/A	Concentration of each type of halocarbons used as refrigerants, in each container	%	Analyzed in the laboratory	At each reporting period	N/A
N/A	Quantity of each type of halocarbons used as refrigerants, in each container	Metric tonnes of halocarbon of type <i>i</i>	Calculated	At each reporting period	N/A
Q_i	Total quantity of halocarbons used as refrigerants of type <i>i</i> recovered and sent for destruction	Metric tonnes of halocarbons of type <i>i</i>	Measured and calculated, using the method in Appendix D	At each reporting period	Equations 9, 11 et 13 in section 25

APPENDIX D

(sections 23, 25 and 35)

METHOD TO DETERMINE THE TOTAL QUANTITY OF HALOCARBONS OF EACH TYPE

1. Determination of the quantity of halocarbons in each container

The quantity of halocarbons destroyed must be determined at the destruction facility by an authorized person, by weighing each container when it is full of halocarbons prior to destruction and after it has been emptied and its contents have been destroyed.

The quantity of halocarbons is equal to the difference between the mass of the container when full and when empty.

Each halocarbon container must be weighed at the destruction facility:

- (1) using a single scale to generate both full and empty weight tickets;
- (2) ensuring that the scale has been calibrated by the manufacturer or by a third person certified for that purpose less than 3 months before the weighing, to an accuracy of $\pm 5\%$;
- (3) weighing the full container not more than 2 days prior to commencing the destruction of the halocarbons;
- (4) weighing the empty container not more than 2 days after the destruction of the halocarbons.

2. Circulation of mixed halocarbons

For each sample that does not contain over 90% of the same type of halocarbon, the promoter must, in addition to the conditions provided for in Division 1 of this Appendix, also meet the following conditions concerning mixed halocarbon.

The circulation of the halocarbon mixture must be conducted at the destruction facility or prior to delivery of the halocarbon to such a facility, by a person who is independent of the promoter and of the destruction facility and who is properly trained to carry out this task.

Prior to sampling, the halocarbon mixture must be circulated in a container that meets all of the following conditions:

- (1) the container has no solid interior obstructions other than mesh baffles or other interior structures that do not impede circulation;
- (2) the container was fully evacuated prior to filling;
- (3) the container has ports to sample liquid and gas phase halocarbons;
- (4) the sampling ports are located in the middle third of the container and not at one end or the other;
- (5) the container and associated equipment can circulate the mixture through a closed loop system from the bottom to top.

If the original mixed halocarbon container does not meet these requirements, the mixed halocarbon must be transferred into a compliant temporary container.

The mass of the halocarbon mixture transferred into the temporary container must be calculated and recorded. In addition, transfers of halocarbons between containers must be carried out at a pressure that meets the applicable standards for the place where the project is located.

Once the mixed halocarbons are in a container that meets the above criteria, they must be circulated as follows:

- (1) liquid mixtures must be circulated from the liquid port to the vapour port;
- (2) a volume of the mixture equal to 2 times the volume in the container must be circulated;
- (3) circulation must occur at a rate of at least 114 litres per minute unless the liquid mixture has been circulating continuously for at least 8 hours;
- (4) the start and end times must be recorded.

3. Sampling

Sampling must be conducted for each halocarbon container:

- (1) in the case of pure halocarbons, 1 sample must be taken at the destruction facility;
- (2) in the case of halocarbon mixtures that have been circulated at the destruction facility, a minimum of 2 samples must be taken during the last 30 minutes of circulation and the samples must be taken from the bottom liquid port;

(3) in the case of halocarbon mixtures that have been circulated prior to delivery to the destruction facility, a minimum of 2 samples must be taken in accordance with subparagraph 2, and 1 additional sample must be taken at the destruction facility.

If more than one sample is taken for a single container, the promoter must use the results from the sample with the weighted halocarbon concentration with the least global warming potential.

The sampling must be conducted in accordance with the following conditions:

(1) the samples must be taken by a person who is independent of the promoter and of the destruction facility and has the necessary training to carry out this task;

(2) the samples must be taken with a clean, fully evacuated sample bottle with a minimum capacity of 0.454 kg;

(3) each sample must be taken in a liquid state;

(4) a minimum sample size of 0.454 kg must be drawn for each sample;

(5) each sample must be individually labeled and tracked according to the container from which it was taken;

(6) the following information must be recorded for each sample:

(a) the time and date of the sample;

(b) the name of the promoter for whom the sampling is conducted;

(c) the name and contact information of the technician who took the sample, and of the technician's employer;

(d) the volume of the container from which the sample was drawn;

(e) the ambient air temperature at the time of sampling;

(f) the chain of traceability of each sample, from the point of sampling to the accredited laboratory.

4. Analysis of samples

The quantity and type of halocarbon must be determined by having a sample from each container analyzed by one of the following laboratories:

(1) the Centre d'expertise en analyse environnementale du Québec;

(2) a laboratory that is independent of the promoter and of the destruction facility and accredited for analysis of halocarbons by the Air-Conditioning, Heating and Refrigeration Institute in accordance with the most recent version of AHRI 700 of that organization.

All the halocarbon samples for the project must be sampled to determine the following:

- (1) the type of each halocarbon;
- (2) the quantity, in metric tonnes, and concentration, in metric tonnes of halocarbon of type i per metric tonne of gas, in each type of halocarbon in the gas, using gas chromatography;
- (3) the moisture content of each sample;
- (4) the high boiling residue from the halocarbon sample, which must be below 10% of the total mass of the sample.

In the case of halocarbon mixtures, the analysis must determine the weighted concentrations of the halocarbon on the basis of their global warming potential for samples taken in accordance with subparagraph 2 of the first paragraph of Division 3 of this Appendix.

A certificate of the sampling results must be issued by the laboratory that conducted the analysis and a copy of the certificate must be included with the project report.

If the moisture content determined under subparagraph 3 of the second paragraph is above 75% of the saturation point for the halocarbon, the promoter must dry the halocarbon mixture and, in the case of mixed halocarbons, conduct the circulation again in accordance with the method provided for in Division 2 of this Appendix, and sample and analyze it in accordance with the method in Divisions 3 and 4 of this Appendix.

5. Determination of the total quantity of halocarbons of type i contained in foam extracted and sent for destruction ($BA_{\text{final}, i}$) and the total quantity of halocarbons of type i used as refrigerants that are extracted and sent for destruction (Q_i)

Based on the mass of the halocarbons in each container and the concentration of each sample, the promoter must

- (1) calculate the quantity of each type of halocarbon in each container, by deducting the weight of the high boiling residue;
- (2) add together the quantities of each type of halocarbon in each container to obtain the factor $BA_{\text{final}, i}$, namely the total quantity of halocarbons of type i contained in the foam, or the factor Q_i , namely the total quantity of halocarbons of type i used as refrigerants extracted and sent for destruction under the project.

APPENDIX E

(section 23)

METHOD TO DETERMINE THE EFFICIENCY OF THE EXTRACTION PROCESS FOR HALOCARBONS CONTAINED IN FOAM**1. Calculation methods for the initial quantity of halocarbons contained in foam**

To calculate the extraction efficiency, the promoter must first calculate the quantity of halocarbons contained in the foam prior to its removal from the appliances, based on the storage capacity of the appliances using method A, or based on foam samples using method B.

Method A - Calculation of the initial quantity of halocarbons contained in foam based on the storage capacity of the appliances

The promoter may calculate the initial quantity of halocarbons contained in foam using Equation 14 and data from Table 1:

Equation 14

$$BA_{init} = (N_1 \times M_1) + (N_2 \times M_2) + (N_3 \times M_3) + (N_4 \times M_4)$$

Where:

BA_{init} = Initial quantity of halocarbons contained in foam prior to removal from appliances, in metric tonnes;

N_1 = Number of appliances of type 1;

N_2 = Number of appliances of type 2;

N_3 = Number of appliances of type 3;

N_4 = Number of appliances of type 4;

M_1 = Metric tonnes of halocarbon per appliance of type 1;

M_2 = Metric tonnes of halocarbon per appliance of type 2;

M_3 = Metric tonnes of halocarbon per appliance of type 3;

M_4 = Metric tonnes of halocarbon per appliance of type 4.

Table 1 - Quantity of halocarbon by type of appliance

Type of appliance	Storage capacity (SC)	Metric tonnes of halocarbons per appliance
Type 1	SC < 180 litres	0.00024
Type 2	180 litres ≤ SC < 350 litres	0.00032
Type 3	350 litres ≤ SC < 500 litres	0.0004
Type 4	SC ≥ 500 litres	0.00048

Method B - Calculation of the initial quantity of halocarbons contained in foam based on samples

The initial quantity of halocarbons contained in foam may be calculated using samples from at least 10 appliances and the following method:

(1) have the initial concentration of halocarbons in the foam determined by a laboratory independent of the promoter in accordance with Division 4 of Appendix D and in the following manner:

(a) by cutting 4 foam samples from each appliance (left side, right side, top, bottom) using a reciprocating saw, each sample being at least 10 cm² and the full thickness of the insulation;

(b) by sealing the cut edges of each foam sample using aluminum tape or a similar product that prevents off gassing;

(c) by individually labelling each sample to record appliance model and site of sample (left, right, top, bottom);

(d) by analyzing the samples using the procedure in paragraph 4; the samples may be analyzed individually (4 analyses per appliance) or a single analysis may be done using equal masses of foam from each sample (1 analysis per appliance);

(e) based on the average concentration of halocarbons in the samples from each appliance, by calculating the 90% upper confidence limit of the halocarbon concentration in the foam, and using that value as the “CBA” factor in Equation 15 to calculate the initial quantity of halocarbons contained in foam from appliances;

(2) determine the quantity of foam removed from the appliances processed, namely the factor “Foam_{rec}” in equation 15, using a default value of 5.85 kg per appliance and multiplying by the number of appliances processed or using the following method:

(a) by separating and collecting all foam residual, which may be in a fluff, powder or pelletized form, and by documenting the processes to demonstrate that no significant quantity of foam residual is lost in the air or other waste streams;

(b) by separating non-foam components in the residual (such as metal or plastic);

(c) by weighing the recovered foam residual prior to halocarbon extraction to calculate the total mass of foam recovered;

(3) calculate the initial quantity of halocarbons contained in foam prior to removal from appliances using equation 15:

Equation 15

$$BA_{init} = Foam_{rec} \times CBA$$

Where:

BA_{init} = Initial quantity of halocarbons contained in foam prior to removal from appliances, in metric tonnes;

$Foam_{rec}$ = Total quantity of foam recovered prior to extraction of halocarbons, in metric tonnes;

CBA = Concentration of halocarbon in foam prior to removal from appliances, in metric tonnes of halocarbon per metric tonne of foam;

(4) analyze the foam samples from appliance in accordance with the following requirements:

(a) the analysis of the content and mass ratio of the halocarbons from foam must be done at a laboratory in accordance with Division 4 of Appendix D;

(b) the analysis must be done using the heating method to extract halocarbons from the foam in the foam samples, as described in the article "Release of Fluorocarbons from Insulation Foam in Home Appliances during Shredding" published by Scheutz, Fredenslund, Kjeldsen and Tant in the Journal of the Air & Waste Management Association (December 2007, Vol. 57, pages 1452-1460), and set out below:

i. each sample must be prepared to a thickness no greater than 1 cm, placed in a 1123 ml glass bottle, weighed using a calibrated scale, and sealed with Teflon-coated septa and aluminum caps;

ii. to release the halocarbons, the sample must be incubated in an oven for 48 hours at 140 °C;

iii. when cooled to room temperature, gas samples must be redrawn from the headspace and analyzed by gas chromatography;

iv. the lids must be removed after analysis, and the headspace must be flushed with atmospheric air for approximately 5 minutes using a compressor; afterwards, the septa and caps must be replaced and the bottles subjected to a second 48-hour heating step to drive out the remaining halocarbons from the sampled foam;

v. when cooled down to room temperature after the second heating step, gas samples must be redrawn from the headspace and analyzed by gas chromatography;

(c) the quantity of each type of halocarbon recovered must then be divided by the total mass of the initial foam samples prior to analysis to determine the mass ratio of halocarbons present, in metric tonnes of halocarbons per metric tonne of foam.

2. Calculation method for extraction efficiency

The promoter must calculate the extraction efficiency using Equations 16 and 17:

Equation 16

$$EE = \frac{BA_{final}}{BA_{init}}$$

Where:

EE = Extraction efficiency;

BA_{final} = Total quantity of halocarbons contained in foam extracted and sent for destruction, calculated using Equation 17, in metric tonnes;

BA_{init} = Initial quantity of halocarbons contained in foam prior to removal from appliances, calculated using Equation 14 or 15, as the case may be, in metric tonnes;

Equation 17

$$BA_{final} = \sum_{i=1}^n BA_{final,i}$$

Where:

BA_{final} = Total quantity of halocarbons contained in foam extracted and sent for destruction, in metric tonnes;

i = Type of halocarbon;

n = Number of types of halocarbons;

$BA_{\text{final}, i}$ = Total quantity of halocarbons of type i extracted and sent for destruction, determine in accordance with Appendix D, in metric tonnes.

104892

Draft Regulation

Environment Quality Act
(chapter Q-2)

An Act mainly to ensure effective governance of the fight against climate change and to promote electrification (2020, chapter 19)

Landfill methane reclamation and destruction projects eligible for the issuance of offset credits

Notice is hereby given, in accordance with sections 10 and 11 of the Regulations Act (chapter R-18.1), that the Regulation respecting landfill methane reclamation and destruction projects eligible for the issuance of offset credits, appearing below, may be made by the Minister of the Environment and the Fight Against Climate Change on the expiry of 45 days from the date of publication.

The contents of many of the provisions in the draft Regulation constitute an improved version of the provisions of Appendix D of the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances (chapter Q-2, r. 46.1).

The draft Regulation sets out, in a manner consistent with the amendments introduced by the draft Regulation to amend the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances, the conditions on which a project to reclaim or destroy methane from a landfill site will be eligible for the issuance of offset credits. It also contains the general conditions that apply to such a project.

The draft Regulation introduces a system of project notices to inform the Minister that the promoter of an eligible project intends to file a request for the issuance of offset credits. This mechanism replaces project registration, which the draft Regulation to amend the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances repeals for landfill methane reclamation or destruction projects.

The draft Regulation also defines the methods to be used to quantify the greenhouse gas emission reductions attributable to an eligible project, as well as the contents of the project report that the promoter must produce for each reporting period for emission reductions. It sets the conditions that apply to the verification of project reports, in particular concerning the accreditation of the verification organization and the independence of the organization, the verifier and the other members of the verification team from the promoter.

The draft Regulation sets the conditions applicable to the use, maintenance, verification and calibration of the measurement instruments used to quantify the greenhouse gas emission reductions attributable to an eligible project and to the use and maintenance of the reclamation or destruction devices used by the promoter.

Lastly, the draft Regulation includes monetary administrative penalties for failures to comply with the Regulation and penal sanctions for offences, along with transitional provisions to place under the new rules the projects that were registered under the old rules in the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances.