

Draft Regulations

Draft Regulation

Environment Quality Act
(R.S.Q., c. Q-2)

Elimination of residual materials

Notice is hereby given, in accordance with sections 10 and 11 of the Regulations Act (R.S.Q., c. R-18.1) and section 124 of the Environment Quality Act (R.S.Q., c. Q-2), that the draft Regulation respecting the elimination of residual materials, the text of which appears below, may be made by the Government upon the expiry of 60 days following this publication.

The purpose of the proposed Regulation is to replace the Regulation respecting solid waste in force in Québec since 1978, in order to ensure increased protection of persons and the environment by applying more stringent standards and conditions for the establishment, operation and closure of residual material elimination facilities. It shall apply to the solid waste disposal sites in operation, within a maximum three-year period.

The scope of the draft Regulation will be extended to non-hazardous industrial residual materials not covered by another regulation, end the operation of sanitary landfills laid out in permeable ground, progressively end the operation of dry material deposits, considerably reduce the number of in-trench landfills by revising the eligibility criteria, allow a particular residual material elimination method for certain isolated territories, strengthen the emission standards for incinerators and require from the operators of most elimination facilities an increased and strict follow-up of the compliance with the established standards, as much during the operation period as during the post-closure period that is estimated at 30 years.

The replacement of first generation sanitary landfills will result in the increase of the residual material elimination costs, which shall be between \$30/tonne and \$60/tonne depending on the size of the site in question, which shall on the other hand be an incentive to the reclamation of residual materials.

The draft Regulation follows up on several actions provided for in the Québec Action Plan for Waste Management, 1998-2008, made public by the Minister of the Environment in September 1998. That action plan results from the public consultation held by the Bureau d'audiences publiques sur l'environnement (BAPE) in 1996.

Further information related to the draft Regulation respecting the elimination of residual materials may be obtained by contacting Claude Trudel, p. eng. M. Sc., Service de la gestion des résidus solides, Direction des politiques du secteur municipal, Ministère de l'Environnement, édifice Marie-Guyart, boîte 42, 675, boulevard René-Lévesque Est, 8^e étage, Québec (Québec) G1R 5V7, by telephone at (418) 521-3885, extension 4888, by fax at (418) 644-2003 or by e-mail at Claude.Trudel@mef.gouv.qc.ca.

Any interested person having comments to make on the draft Regulation respecting the elimination of residual materials is asked to send them in writing, before the expiry of the 60-day period, to the Minister of the Environment, édifice Marie-Guyart, 675, boulevard René-Lévesque Est, 30^e étage, Québec (Québec) G1R 5V7.

PAUL BÉGIN,
Minister of the Environment

Regulation respecting the elimination of residual materials

Environment Quality Act
(R.S.Q., c. Q-2, s. 56; 1999, c. 36, 40, 43, 75 and 76; 2000, c. 34)

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Schedule I

Schedule II

CHAPTER I**DEFINITIONS AND SCOPE****1.** For the purposes of this Regulation,

(1) the following terms mean:

“ADMINISTRATIVE REGION”: any region established by Décret 2000-87 dated 22 December 1987 respecting the Révision des régions administratives du Québec; (région administrative)

“BIOGAS”: all gases produced by residual materials disposed of; (*biogaz*)

“FLY ASH”: residues that are carried by waste gas from any urban residual material incineration facility and that are collected by a fume treatment system or energy recovery systems; (*cendres volantes*)

“DUMPING”: burial or final deposit of residual materials on or in the soil; (*mise en décharge*)

“LEACHATE”: any residual material seepage liquid disposed of and flowing from a landfill or contained in the latter; (*lixiviat*)

“MEAT UNFIT FOR HUMAN CONSUMPTION”: the products referred to in section 7.1.1 of the Regulation respecting food (R.R.Q., 1981, c. P-29, r. 1); (*viandes impropres à la consommation humaine*)

“MUNICIPAL SLUDGE”: sludge or all other residues from municipal waste water or drinking water treatment facilities, septic sludge or septic sludge treatment facilities, including residues from sewer cleaning; (*boues municipales*)

“OPERATOR”: any person or municipality that holds a certificate of authorization for a residual material elimination facility; (*exploitant*)

(2) the term “watercourse or body of water” includes ponds, marshes and swamps, but excludes intermittent watercourses, bogs and ditches. Any distance related to a watercourse or body of water is measured from the natural high water mark as defined in the Politique de protection des rives, du littoral et des plaines inondables made by Décret 103-96 dated 24 January 1996.

2. This Regulation applies to the residual material elimination facilities referred to hereafter:

(1) disposal sites, respectively governed by Divisions 2 to 6 of Chapter II, belonging to any of the following categories:

- technical landfills;
- in-trench landfills;
- disposal sites in the North;
- construction and demolition waste landfills;
- isolated territory landfills;

(2) urban residual material incineration facilities governed by Chapter III.

It also governs, by its Chapter IV, residual material transfer stations.

The purpose of the Regulation is to prescribe which residual materials may be received in those facilities, the conditions in which they must be laid out and operated as well as, where applicable, the conditions applicable to their closure and post-closure.

CHAPTER II DUMPS

DIVISION I GENERAL

3. The following may not be dumped:

- (1) residual materials imported in Québec;
- (2) gaseous substances;
- (3) hazardous materials within the meaning of paragraph 21 of section 1 of the Environment Quality Act (R.S.Q., c. Q-2);
- (4) tailings within the meaning of paragraph 20 of section 1 of the Environment Quality Act;
- (5) residual materials in a liquid state at 20°C, except those from household garbage;
- (6) residual materials that, when tested by a laboratory accredited by the Minister under section 118.6 of the Environment Quality Act, contain a free liquid;
- (7) manure to which the Regulation respecting the prevention of water pollution in livestock operations (R.R.Q., 1981, c. Q-2, r. 18) applies;
- (8) pesticides governed by the Pesticides Act (R.S.Q., c. P-9.3);
- (9) biomedical residual materials to which the Regulation respecting biomedical waste made by Order in Council 583-92 dated 15 April 1992 applies and that are not treated by disinfection;
- (10) sludge whose dryness is lower than 15 % that has not passed the test on the measure of the free liquid as defined in paragraph 6 above, except in isolated territory landfills referred to in Division 6 of this Chapter;
- (11) contaminated soils containing one or several substances with concentrations greater than the limits in Schedule I Column B;
- (12) motor vehicle wrecks, except in disposal sites in the North referred to in Division 4 of this Chapter;

(13) residual materials from pulp and paper mills referred to in section 93 of the Regulation respecting pulp and paper mills made by Order in Council 1353-92 dated 16 September 1992 and the sawmill residual materials whose dryness is lower than 25 % that have not passed the test on the measure of the free liquid as defined in paragraph 6 above, except sludge from biological treatment of process water from mills whose dryness ranges from 15 % to 25 %;

(14) the following residual materials from pulp and paper mills whose dryness is lower than 55 %:

- lime sludge;
- residue from lime slaking;

(15) used tires within the meaning of the Regulation respecting used tire storage made by Order in Council 29-92 dated 15 January 1992, except in a disposal site in the North referred to in Division 4 of this Chapter and in isolated territory landfills referred to in Division 6 of this Chapter.

4. Except for the dumps authorized under Divisions 3 to 6 of this Chapter or any other statutory provision, technical landfills governed by Division 2 of this Chapter are the only sites where residual materials may be disposed of definitely on or in the ground.

Notwithstanding the provisions of the first paragraph, residual materials from sawmills may be disposed of definitely in a landfill site authorized for that purpose by the Minister under section 22 of the Environment Quality Act.

DIVISION 2 TECHNICAL LANDFILLS

§1. *General*

5. For the purposes of this Regulation, “TECHNICAL LANDFILL” means any site laid out and operated in accordance with this Division.

6. The residual materials set out below may only be buried in technical landfills:

- (1) residues from the shredding of motor vehicle wrecks;
- (2) residues from any urban residual material incineration facility, including incinerators of biomedical residual materials, in particular bottom ash and fly ash;

(3) subject to Division VI of the Regulation respecting pulp and paper mills, the residual materials from pulp and paper mills referred to in section 93 of the aforementioned Regulation, and sawmill residual materials without prejudice to the cases where those materials may be buried in a landfill site authorized for that purpose by the Minister of section 22 of the Environment Quality Act;

(4) oil refinery sludge;

(5) meat unfit for human consumption that, pursuant to the Regulation respecting food (R.R.Q., 1981, c. P-29, r. 1), may be shipped to an elimination site;

(6) non-hazardous industrial residual materials non-assimilable to urban residual materials.

7. The burial of bottom ash, fly ash and any other residue containing ash, that come from any residual material incineration facility, including biomedical residual material incinerators, may be carried out only if they have cooled.

In addition, the burial of fly ash and residues that contain ash must be carried out in distinct cells reserved exclusively for that type of residual materials and laid out in accordance with any of the provisions of sections 18 to 21. The burial in distinct cells does not apply if, after treatment, the chemical composition of that ash or that residue is not more harmful to the environment than bottom ash.

8. Meat unfit for human consumption may only be eliminated according to the methods of elimination prescribed by the Regulation respecting food.

9. The operator of a technical landfill is required to receive therein residual materials that are produced

(1) in the territory of the regional county municipality or of the urban community where that site is located, with the exception of the municipalities located in the territories referred to in section 133 of the Environment Quality Act;

(2) in the territory of municipalities with a population of less than 2000 inhabitants that are located less than 100 kilometres, by roads opened year-round, from the technical landfill;

(3) by the populations of the territories not organized as a local municipality that are located less than 100 kilometres, by roads opened year-round, from the technical landfill.

He is also required to receive therein meat unfit for human consumption from the territory of his administrative region, if it consists in carcasses or parts of animals covered by a disposal order issued under section 3.4, 11.1 or 11.2 of the Animal Health Protection Act (R.S.Q., c. P-42) or section 114 of the Regulation respecting the health of animals (C.R.C., c. 296).

He is required to meet the obligations referred to in the first and second paragraphs only if the tariffs payable are paid and if the other conditions, if any are fixed in the certificate of authorization, are complied with. In addition, that obligation to receive residual materials does not apply in the case of a site that only receives one category of residual materials or whose use is reserved exclusively to an establishment, nor in the case of any of the following residual materials:

(1) residual materials from pulp and paper mills referred to in section 93 of the Regulation respecting pulp and paper mills;

(2) fibrous waste from sawmills or any other establishment using wood;

(3) residual materials with a concentration in asbestos equal to or greater than 1 % weight and that are likely to be scattered into the air;

(4) shredding of automobile hulks;

(5) sludge other than municipal sludge;

(6) residues from any residual material incineration facility, including biomedical residual material incinerators, in particular bottom ash and fly ash;

(7) non-hazardous industrial residual materials non-assimilable to urban residual materials.

10. Any operator of a technical landfill is required to publish, in accordance with section 64.1 of the Environment Quality Act, replaced by section 18 of Chapter 75 of the Statutes of 1999, a notice indicating the tariff he intends to apply for his services and the date of its coming into force. The same applies should the tariff change.

§2. *Layout* *General layout conditions*

11. Any technical landfill must be located at a minimum distance of one kilometre from any water intake used for the production of spring water or mineral water within the meaning of the Regulation respecting bottled water (R.R.Q., 1981, c. Q-2, r. 5), or used to supply a

municipal waterworks or a waterworks system operated by the holder of a permit issued under section 32.1 of the Environment Quality Act. The prescription is not applicable however if the Minister receives an attestation, signed by a certified professional, together with any technical report, any study, any analysis or result of the analysis proving in an appropriate, complete and detailed manner that the site is not likely to spoil the quality of that water.

The distance prescribed by the first paragraph shall be measured from the inside limit of the buffer zone that must surround any technical landfill under section 16.

12. It is prohibited to lay out a technical landfill in the flood zone of a watercourse or body of water, where such a zone is located within the 100-year flood plain.

“100-year flood plain” means the line that corresponds to the limit line of flood likely to occur once every one hundred years.

13. It is prohibited to lay out a technical landfill where ground movement is likely to occur.

14. It is also prohibited to lay out a technical landfill on land underneath which there is free ground water having a high aquifer potential.

For the purposes of this section, a “high aquifer potential” exists where pumping tests show that at least 25 cubic metres of water per hour may be drawn, on a permanent basis, from the same interceptor well.

15. Technical landfills must fit into the surrounding landscape. For that purpose, the following elements shall be taken into account:

(1) the physical characteristics of the landscape within a radius of one kilometre, in particular its topography and the form, area and height of its landforms;

(2) the visual characteristics of the landscape also within a radius of one kilometre, in particular its visual accessibility and its recreational and tourist interest (visibility, landscape organization and structure, its aesthetic value, its integrity, etc.);

(3) the capacity of the landscape to integrate or assimilate with that type of facility;

(4) the effectiveness of measures to mitigate visual impact (screen, buffer zone, revegetation, reforestation, etc.).

16. Any technical landfill must comprise, on its periphery, a buffer zone at least 50 metres wide and no more than 150 metres wide intended to safeguard the isolation of the site, mitigate the nuisances thereof, and allow, if need be, the carrying out of remedial works. Any activity that may harm the objectives of the buffer zone referred to previously or that is likely to emit contaminants into the environment is prohibited therein except for those that are necessary for access to the site and to the water treatment system if any, and the monitoring of its operation. That zone may not comprise any watercourse or body of water.

That provision also applies to the water treatment systems, whether they are located inside or outside the limits of the site. The inside limits of the buffer zone shall correspond to the limits of the treatment works installed.

The outside limits of the buffer zone, which correspond to the limits of the site, shall be laid out in such a way that they may be located at all times; the same applies to the inside limits of that zone.

17. For the layout of a technical landfill, geotechnical properties of existing soils and synthetic materials to be used as well as hydrogeological conditions that prevail and that may be subject to alterations following the proposed layouts must be taken into account.

Tightness

18. In order to prevent soil and ground water from being contaminated by leachates, technical landfills may only be laid out on lands where the unconsolidated deposits on which residual materials will be deposited are composed of a natural homogenous layer having on a permanent basis a hydraulic conductivity equal to or less than 1×10^{-6} cm/s at least six metres thick, that hydraulic conductivity to be established *in situ*.

The surface of that natural layer must be laid out so as to have a slope of at least 2 % to allow the flow, by gravity, of leachates towards the drains.

19. A technical landfill may, notwithstanding section 18, be laid out on a given site where there is a deep layer of unconsolidated deposits complying with the requirements of section 18. In that case, the zone where the residual materials will be disposed of shall comprise

(1) a peripheral tightness shield

– made up of materials having on a permanent basis a hydraulic conductivity equal to or less than 1×10^{-6} cm/s;

- at least one metre wide;
- whose apex reaches the ground surface;
- whose bottom is buried at least one metre deep into the unconsolidated deposits complying with the requirements of section 18; or

(2) any other system comprising a peripheral tightness shield ensuring effectiveness at least equivalent to that of the system provided for in subparagraph 1 of the first paragraph.

Excavation within the peripheral screen must leave unconsolidated deposits at least six metres thick complying with the requirements of section 18.

Measures are also required in order to reduce the infiltration of rain and runoff within the perimeter of the peripheral screen.

20. A technical landfill may still be laid out on lands where the soil does not meet the impermeability conditions set out in the first paragraph of section 18, provided that the zone where residual materials will be deposited is equipped, on its bed and walls, with an impermeabilization system with a double liner made up as follows:

(1) a bottom protection level made up of

(a) a layer of clayish materials at least 60 centimetres thick after compaction

- made up of at least 50 % weight of particles of a diameter equal to or less than 0.08 millimetre and at least 25 % weight of particles of a diameter equal to or less than 0.005 millimetre;

- having on a permanent basis, on all its thickness, a hydraulic conductivity equal to or less than 1×10^{-7} cm/s;

- and whose base is located at least 1.5 metres above the rock;

(b) an impermeable synthetic membrane at least 1.5 millimetres thick, installed on that layer of clayish materials;

(2) a top protection level made up of a second impermeable synthetic membrane at least 1.5 millimetres thick.

Each of the two impermeable membranes referred to above must be installed so as to have a slope of at least 2 %.

Any other impermeabilization system with a double liner may also be installed in the case provided for in the first paragraph, as long as its components ensure an effectiveness at least equivalent to that of the system prescribed by that paragraph and that the base of its bottom protection level is located at least 1.5 metres above the rock.

The lowering of the groundwater-level by pumping, drainage or other means is prohibited for the layout of a technical landfill with an impermeabilization system with a double liner on lands where the soil is composed of a natural homogenous layer having on a permanent basis a hydraulic conductivity greater than 5×10^{-5} cm/s, that hydraulic conductivity to be established *in-situ*. Where such condition is not complied with, the base of the bottom protection level described in subparagraph 1 of the first paragraph must be above the groundwater-level.

21. A technical landfill may also be laid out in a quarry or a mine, except that where the quarry or mine floor is located above the groundwater-level as long as the following conditions are complied with:

(1) that quarry or mine must be open-pit;

(2) the daily average flow of ground water infiltration, calculated on an annual basis, must be equal to or less than 5×10^{-4} cubic metres of water per square metre of the quarry wall or mine wall area located below such water level, the value being established from the pumping rate necessary to keep the quarry dry, less the water supply due to rain and runoff from outside the quarry, if any, and corrected on an annual basis by taking into account seasonal changes.

Collection and treatment of leachates

22. Technical landfills must be equipped with a system that collects all the leachates and drains them towards their treatment or discharge site. The leachates collection system must comprise the following elements:

(1) a drainage layer placed on the bed and walls of the site over the impermeable soil layer or the impermeable membrane, as the case may be, and which, over at least 50 centimetres thick,

- is composed of materials having less than 5 % weight of particles with a diameter equal to or less than 0.08 millimetre;

- has on a permanent basis a minimum hydraulic conductivity of 1×10^{-2} cm/s.

The properties of that type of layer should provide protection for any underlying impermeable membrane;

(2) a drainage system installed within the drainage layer covering the bed of the site. The drains must

– have a smooth interior and a minimum diameter of 150 millimetres;

– be free from synthetic filter sock;

– have a minimum slope of 0.5 %;

(3) a filter layer composed of either granular soil having less than 5 % weight of particles with a diameter equal to or less than 0.08 millimetre, or of a geosynthetic filter with an effectiveness at least equivalent, and that is intended to prevent the migration of finer particles into the collection system while allowing liquids and gases to circulate freely therein without causing clogging.

Notwithstanding the preceding, where, pursuant to section 19, a technical landfill was equipped with a peripheral tightness shield or another impermeabilization system in lieu thereof, the leachates may be collected and disposed of by means of any other system meeting the requirements of section 24 in respect of the height of the liquid on the bed of the site.

Where a portion of the collection system used to drain leachates towards their treatment or discharge site is located outside the impermeabilized part of the site, the pipes of which this portion is composed must be watertight.

23. Any technical landfill which, under this Regulation, must be impermeabilized by means of an impermeabilization system with a double liner must also be equipped, in addition to the collection system to be installed over the top impermeable membrane under section 22, with a second collection system placed between the two impermeable membranes and made up of either

(1) a system comprising the elements prescribed by subparagraphs 1 and 2 of the first paragraph of section 22, subject to the following particularities:

– the minimum thickness of the drainage layer shall be reduced to 30 centimetres;

– the minimum diameter of drains shall be reduced to 100 millimetres; or

(2) any other system whose components ensure an effectiveness at least equivalent to that of the system referred to in paragraph 1.

The layout of that collection system should provide a surveillance separate from that of other collection systems with which the site is equipped.

24. Leachates collection systems prescribed by this Regulation must be designed and installed so that the height of the liquid likely to accumulate on the bed of the site does not reach the level of residual materials that are deposited thereon. In addition, in the case of sites laid out as prescribed in section 20, the height of the liquid likely to accumulate on the top protection level must not exceed 30 centimetres.

25. All the components of the treatment system must be watertight. Every pond or basin laid out on lands that do not comply with the requirements of the first paragraph of section 18 must have on its bed and walls an impermeabilization system with a composite liner described in clauses *a* and *b* of subparagraph 1 of the first paragraph of section 20 or any other impermeabilization system whose components ensure an effectiveness at least equivalent.

26. In order to limit the access thereto, the water treatment facilities must be located inside a building or be surrounded by a fence. Those facilities must be accessible at all times by roads suitable for motor vehicles.

Collection of biogas

27. Subject to the second paragraph, technical landfills must be equipped with a system that can collect and dispose of, reclaim or eliminate all the biogas that is produced therein, so as to guarantee the compliance with the limits prescribed by section 53.

Where those sites have a maximum capacity greater than 1 500 000 cubic metres or as soon as they receive 50 000 tonnes of residual materials or more per year, the biogas collection system must be equipped with a mechanical suction device. Notwithstanding the preceding, that provision does not apply if the Minister receives an attestation, signed by a certified professional, together with any technical report, any study, any analysis or result of the analysis proving in an appropriate, complete and detailed manner that the nature of the residual materials to be buried and that the quantity of generated biogas do not justify the installation of such a device. The biogas thus collected must in addition be reclaimed or eliminated. The elimination must be carried out by means of equipment that ensures a thermal destruction

of 98 % or more of volatile organic compounds other than methane and with a minimum retention time of 0.3 second at a minimum temperature of 760 °C. That obligation respecting the elimination of biogas lasts for as long as the concentration of methane generated by residual materials exceeds 25 % per volume.

Notwithstanding the foregoing, the obligation to operate a mechanical suction system, for a part of or the entire landfill area, does not apply if, over a period of five consecutive years, all the measures of concentration of methane generated by the eliminated residual materials, in that portion of the landfill area, are lower than 25 % per volume.

Any biogas collection system must be in operation no later than one year after the installation of the final cover. Where a collection system having a mechanical suction device is required, that equipment, as well as that related to the elimination or reclamation of biogas, must also be in operation less than five years after the burial of residual materials.

In order to limit the access thereto, the elements of the mechanical suction device and those related to the elimination of the biogas where required must be located inside a building or be surrounded by a fence. That equipment must be accessible at all times, by roads suitable for motor vehicles.

Collection of ground water and surface water

28. Technical landfills must be laid out so as to prevent surface water from being contaminated by residual materials or from penetrating into the sites where they are deposited.

29. Any technical landfill that, as authorized by this Regulation, has an impermeabilization system below groundwater-level must, where the pressure exerted by ground water might affect the integrity of the impermeabilization system, be equipped with a system that collects and discharges ground water so as to reduce the pressure exerted by that water.

The ground water collection system must comply with the following conditions:

(1) it has all the elements prescribed by section 22, subject to the following specifications:

– the minimum thickness of the drainage layer shall be reduced to 30 centimetres;

– the minimum diameter of drains shall be reduced to 100 millimetres; or

(2) it has other elements ensuring an effectiveness at least equivalent to that of the elements referred to in subparagraph 1 of the second paragraph.

The layout of that collection system should provide a collection and surveillance separate from those of other collection systems with which the site is equipped.

The operation of the system may end where the hydraulic pressure exerted by ground water is compensated for by the weight of buried residual materials.

§3. Operation

General operating conditions

30. The operator of a technical landfill is required to check if the residual materials that enter the site may be received.

For that purpose, the operator must, for any load of residual materials, apply and record in an annual operation register:

– the name of the carrier;

– the nature of residual materials, the results of tests on the dryness and measure of the free liquid as defined in paragraph 6 of section 3, in the case of sludge and the result of a test on the measure of the free liquid as defined in paragraph 6 of section 3, in the case of a residual material likely to contain a free liquid;

– the source of residual materials, including the name of the producer in the case of industrial residual materials;

– the quantity of residual materials, expressed in weight if the site is equipped with a device to weigh them, or in volume in the opposite case;

– the date on which they were received.

The operating registers and their schedules shall be kept on the premises of the landfill during its operation; after the site is closed, the registers shall still be kept by the operator for at least five years from the date of the last entry.

31. Residual materials must, as soon as they are received, be spread and compacted; however those prescriptions do not apply to sludge, residual materials that are baled or to carcasses or parts of animals.

In addition, a complete covering of residual materials with earth or other materials that meet the requirements of section 33 must be made after each day of operation

in order to limit the release of odours, the spreading of fire, the proliferation of animals or insects and the blowing away of light elements.

Residual materials that contain asbestos in a concentration equal to or greater than 1 % weight and that are likely to be scattered into the air must, as soon as they are received and before their compaction, be completely covered with materials that meet the requirements of section 33, or with other residual materials. This section applies to the carcasses or parts of animals and other residual materials that are likely to release dust into the atmosphere.

32. The burial of residual materials must be carried out in limited surface deposit sites that, successively filled up, enable the site to be reorganized as prescribed in sections 42 and 43 as the operation progresses.

33. The soil used to cover residual materials must have on a permanent basis a minimum hydraulic conductivity of 1×10^{-4} cm/s and less than 20 % weight of particles with a diameter equal to or less than 0.08 millimetre.

The covering of residual materials may also be carried out by means of soils whose hydraulic conductivity is less than that provided for in the first paragraph; in such a case, a new layer of residual materials may only be superposed after the removal of that cover.

Any other material, as well as a contaminated soil containing one or several substances with concentrations equal to or less than the limits in Schedule I Column B for volatile organic compounds and in Schedule I Column C for the others, may be used to cover residual materials provided that such material allows the objectives set forth in the second paragraph of section 31 to be achieved and that it complies with the requirements of this section. Where contaminated soil is used, the maximum thickness shall however be fixed at 30 centimetres.

34. Water collection and treatment systems, the system for the collection and disposal of reclamation or elimination of biogas and the ground water monitoring facilities referred to in section 56 must at all times be kept in working order; for that purpose, they are subject to tests and maintenance work or cleaning depending on the frequency indicated in the application for a certificate of authorization.

35. Technical landfills must be equipped with a device that weighs residual materials.

36. Any technical landfill must be equipped with the following at the entrance:

(1) a conspicuous sign that indicates in particular the type of site in question, the name, address and telephone number of the holder of the certificate of authorization and of the person in charge of the site, as well as the hours of operation;

(2) a gate or any other device that prevents access to the site outside the hours of operation or in the absence of the personnel in charge of the monitoring of residual materials or their compaction and cover;

(3) an apparatus that detects the presence of radioactive material so as to ensure compliance with paragraph 3 of section 3.

37. Burial operations of residual materials in a technical landfill must not be visible from a public site nor from the ground floor of any dwelling located within a radius of one kilometre; that distance shall be measured from the residual material deposit sites.

38. The burning of residual materials is prohibited in every technical landfill.

39. The operator of a technical landfill must take the necessary measures to limit any blowing away or scattering of residual materials and the scattering of dust.

If need be, he shall clean up the roads on the site, the entrances and devices set up to contain residual materials in the deposit sites as well as on the surroundings of the site, so as to leave those places free of residual materials.

40. The operator of a technical landfill is required to take the necessary measures to prevent or eliminate any invasion of pests, on the site and the surrounding area.

41. Where leachates resurface on a technical landfill, the operator is required to take the necessary measures to bring the resurgent leachates back into the existing collection system, or to install another system that complies with the applicable conditions prescribed by section 22 and that collects them and drains them towards their treatment or discharge site.

42. Residual materials buried in a technical landfill must be subject to a final covering as soon as the weather conditions allow it after they have reached the maximum height authorized for that site.

The final cover must comprise, from the bottom up,

(1) a drainage layer made up of soil having on a permanent basis, for a minimum thickness of 30 centimetres, a minimum hydraulic conductivity of 1×10^{-3} cm/s, intended to collect gas while allowing the circulation of liquids;

(2) an impermeable layer made up of soil having on a permanent basis a maximum hydraulic conductivity of 1×10^{-5} cm/s for a minimum thickness of 45 centimetres after compaction, or an impermeable synthetic membrane at least 1 millimetre thick;

(3) a layer of soil at least 45 centimetres thick and whose characteristics protect the impermeable layer;

(4) a layer of soil suitable for vegetation at least 15 centimetres thick.

The layer referred to in subparagraph 1 of the second paragraph may also be made up of contaminated soils containing one or several substances with concentrations equal to or less than the limits in Schedule I Column B for volatiles and in Schedule I Column C for others.

The layers referred to in subparagraphs 2 and 3 of the second paragraph may also be made up of contaminated soils containing one or several substances with concentrations equal to or less than the limits in Schedule I Column B.

The layers referred to in subparagraphs 1 to 4 of the second paragraph may also be made up of any other material whose effectiveness is at least equivalent to that of the materials prescribed therein. Where applicable, the materials must also comply with the requirements of the third and fourth paragraphs and the minimum thickness of the layers shall be that prescribed in the cases of subparagraphs 1, 3 and 4 of the second paragraph.

The criteria with which the cover materials must comply pursuant to section 33 do not apply to the materials used for the final cover prescribed by this section.

In addition, in order to promote the flow by gravity of runoff towards the outside of the deposit sites while limiting soil erosion, the final cover must have a slope of at least 2 % and no more than 30 %.

43. No later than one year after it is set in place, the layer of materials completing the final cover must be covered with vegetation by means of species not likely to damage the impermeable layer of such cover.

Moreover, any break such as holes, faults and subsidence that may form in the final cover must be repaired so

as to prevent water from accumulating on the different cover layers or from percolating through the site.

44. The operator of a technical landfill shall prepare, for each operating year, a report containing

(1) a compilation of data collected pursuant to the second paragraph of section 30 related to the nature and quantity of buried residual materials;

(2) a plan and data stating the progression, on the site, of the burial operations of residual materials, in particular the filled zones, those in operation and the depository capacity still available;

(3) a summary of the data collected following sampling and analysis plans, measures and work carried out pursuant to sections 34, 54, 55, 57 and 60, where applicable.

The report must, upon request, be provided to the Minister of the Environment, together with other information that the latter may require pursuant to section 68.1 of the Environment Quality Act replaced by section 27 of Chapter 75 of the Statutes of 1999.

Leachates and contaminated water

45. Water collected by any collection system with which a technical landfill is provided may be discharged in the hydrographic surface network only if it complies with the following limits:

- aluminium (Al): 4.4 mg/l;
- arsenic (As): 0.05 mg/l;
- ammoniacal nitrogen (expressed as N): 61 mg/l;
- chromium (Cr): 0.25 mg/l;
- total coliforms: 10 000 C.F.U./100 ml;
- phenolic compounds (phenol index): 0.25 mg/l;
- copper (Cu): 0.25 mg/l;
- total cyanides (expressed as CN): 0.25 mg/l;
- 5-day biochemical oxygen demand (BOD₅): 150 mg/l;
- chemical oxygen demand (COD): 400 mg/l;
- iron (Fe): 15 mg/l;
- total oil and grease: 10 mg/l;
- manganese (Mn): 25 mg/l;
- mercury (Hg): 0.001 mg/l;
- nickel (Ni): 2.8 mg/l;
- nitrites (expressed as N): 1 mg/l;
- pH: greater than 6.5 but less than 9.0;
- total phosphorus (P): 1 mg/l;
- lead (Pb): 0.25 mg/l;
- suspended solids (SS): 65 mg/l;
- selenium (Se): 0.25 mg/l;
- total sulphides (expressed as S⁻²): 0.5 mg/l;
- zinc (Zn): 1.9 mg/l.

In addition, the Minister of the Environment may determine the parameters to be measured and the substances to be analyzed according to the composition of the materials received for elimination, and fix the limits to be complied with for those parameters or substances. Those limits may be added to or substituted for those previously fixed.

Any discharge into the hydrographic surface network must be carried out without batch shockload on the receiving body of water.

For the purposes of this Regulation, any discharge carried out into a sewer system whose wastewater is not carried towards a treatment facility established and operated in accordance with the requirements fixed in its certificate of authorization is considered to be a discharge in the hydrographic surface network.

46. The limits prescribed by section 45 do not apply where the analyses of the quality of surface water, collected by the system required under section 28, carried out upstream reveal that, even before their passage within the limits of the site, the water is unable to comply with the said limits.

In that case, the quality of surface water must not, as for the parameters referred to in section 45, be subject to a deterioration by their passage within the limits of the site; thus, the concentrations of contaminants that surface water contains downstream from the site may not be greater than those contained upstream.

Where an upstream sample is necessary to explain an excess of the prescribed limits, the sampling and analysis become compulsory for the parameters in question and at the same frequency as for the downstream monitoring analyses.

47. Any dilution of collected water that does not comply with the limits prescribed for the purposes of section 45 is prohibited, with the exception of that caused by direct atmospheric precipitation.

48. Notwithstanding paragraph 10 of section 3, the reintroduction in the technical landfill of either water not complying with the limits prescribed for the purposes of section 45, collected by any other collection system of that site, or sludge generated by the water treatment system with which the site is equipped, is only allowed in the following conditions:

(1) that water and sludge may only be reintroduced in the sites where residual materials are deposited with a minimum thickness of four metres;

(2) the reintroduction of water or sludge carried out by means of surface spreading and sprinkling techniques may only take place on the deposit sites still not covered with the final cover provided for in section 40; in addition, those techniques may not cause any surface water or sludge accumulation nor any aerosol formation.

Ground water

49. Subject to section 52, ground water that migrates into the soil on which a technical landfill has been laid out and that must be monitored under section 56, must comply with the following limits:

- aluminium (Al): 0.2 mg/l;
- arsenic (As): 0.025 mg/l;
- ammoniacal nitrogen (expressed as N): 0.5 mg/l;
- boron (B): 5 mg/l;
- cadmium (Cd): 0.005 mg/l;
- chlorides (expressed as Cl⁻): 250 mg/l;
- chromium (Cr): 0.05 mg/l;
- fecal coliforms: 0 C.F.U./100 ml;
- total coliforms: 10 C.F.U./100 ml;
- phenolic compounds (phenol indication): 0.002 mg/l;
- copper (Cu): 1 mg/l;
- total cyanides (expressed as CN⁻): 0.2 mg/l;
- 5-day biochemical oxygen demand (BOD₅): 3 mg/l;
- chemical oxygen demand (COD): 10 mg/l;
- iron (Fe): 0.3 mg/l;
- magnesium (Mg): 50 mg/l;
- manganese (Mn): 0.05 mg/l;
- mercury (Hg): 0.001 mg/l;
- nickel (Ni): 0.013 mg/l;
- nitrite and nitrate (expressed as N): 10 mg/l;
- pH: greater than 6.5 but less than 8.5;
- lead (Pb): 0.01 mg/l;
- selenium (Se): 0.01 mg/l;
- total sulphates (expressed as SO₄²⁻): 500 mg/l;
- total sulphides (expressed as S²⁻): 0.05 mg/l;
- zinc (Zn): 5 mg/l.

In addition, the Minister of the Environment may determine the parameters to be measured and the substances to be analyzed according to the composition of the materials received for elimination, and fix the limits to be complied with for those parameters or substances. Those limits may be added to or substituted for those previously fixed.

50. The limits prescribed by section 49 do not apply where analyses of the quality of ground water carried out upstream from the site reveal that even before their migration into the soil where the site is located, the water does not comply with the said limits.

In that case, the quality of ground water must not, as for the parameters referred to in section 49, be subject to a deterioration of their migration below the site; thus, the concentrations of contaminants that surface water contains downstream from the site may not be greater than those contained upstream.

51. Sections 49 and 50 apply, *mutatis mutandis*, to ground water that is in the soil located outside the limits of the technical landfill and on which a system for the collection or treatment of water coming therefrom was laid out.

52. Ground water that resurfaces within the limits of the technical landfill is subject to section 45 with the exception of total suspended solids.

The same applies to any ground water that, once collected in the soil where the technical landfill is located, is discharged on the surface.

Biogas

53. The concentration of methane contained in biogas produced by any technical landfill must not exceed 25 % of its lower explosive limit, that is 1.25 % per volume, where it is emitted or ends up migrating and accumulating in the following places:

(1) inside buildings and facilities, other than the leachates and biogas collection and treatment systems, that are located within the limits of the site;

(2) in the soil at the limits of the site.

For the purposes of this section, “lower explosive limit” means the lowest concentration, per volume, of a gas in a gas mixture above which a flame in the air may be spread at a temperature of 25°C and a pressure of 101.325 kPa.

Monitoring and supervision measures

54. At least once a year, the operator of a technical landfill must take a sample or have a sample of collected water that comes from each of the collection systems with which the site is equipped taken as well as resurgent water within the limits of the site and have the samples analyzed to measure each of the parameters in section 45.

At least three times a year, where the water is not directed towards a treatment system, the operator must take a sample or have a sample of collected water that comes from each of the collection systems with which the site is equipped taken as well as resurgent water within the limits of the site before their discharge in the

hydrographic surface network and have those samples analyzed to measure each of the parameters in section 45.

At least six times a year, the operator shall also take a sample or have a sample of discharges of any treatment system of collected water and resurgent water with which the site is equipped taken before their discharge in the hydrographic surface network, and have the samples analyzed to measure each of the parameters in section 45.

In any case, the number of analyses of a parameter to be carried out annually may however be reduced to one in the case of a parameter that, during a monitoring period of at least two years, has never exceeded the tenth of the limits prescribed by section 45; that reduction of the number of analyses lasts as long as the annual analyses show that the condition is complied with.

The taking of samples must be carried out at regular intervals even for those related to the collection system of surface water and resurgences which must be carried out in the spring, summer and fall. To determine those intervals in the case of discharges from the water treatment system, only the periods during which water is discharged shall be taken into account. Each of those samples must in addition be constituted by means of a single and same sample (grab sample). In the case of resurgent water, the sampling must be carried out at the outlet of that water.

All the collected water that comes from collection systems required by this Regulation, as well as the discharges from the treatment facility with which the site is equipped, with the exception of the water collected by the surface water collection system required under section 28, must be subject to continuous measure and record of the flow.

55. At least once a year, the operator of any technical landfill must check or have the tightness of the pipes of the collection system located outside the impermeabilized part of the site checked.

Before it is put into operation and every three years thereafter, every component of the water treatment system must be subject to a tightness check.

56. In order to monitor the quality of ground water that migrates into the soil where the residual material disposal sites and the water treatment system are laid out, those components of the site must be equipped with monitoring networks.

Where the water treatment system is 150 metres and less from the residual material deposit sites, a single monitoring network shall be required; the number of wells depends on the total area occupied by the two components in question. In the opposite case, each of the components in question must be equipped with its own monitoring network whose number of wells depends on its area.

The total number of monitoring wells that a network must comprise and their location on the land shall be determined according to the hydrogeological conditions, subject to the following:

- monitoring wells must be distributed downstream from the contemplated component or components, at a distance of 150 metres or less, but without exceeding the outside limits of the buffer zone, so as to monitor the quality of ground water that reaches that distance or those limits;

- a monitoring network must comprise at least three monitoring wells for the first eight hectares of land and an additional monitoring well for each eight hectares or part of eight hectares of additional land;

- at least one additional monitoring well must be installed upstream, so as to monitor the quality of ground water before its migration into the soil under the contemplated component or components.

For the purposes of this section, any pond, basin or water accumulation reservoir that does not comply with the requirements for the application of section 45 and likely to release emissions thereof in the soil is considered to form an integral part of the treatment system.

57. At least three times a year, in the spring, summer and fall, the operator of any technical landfill must take a ground water sample or have a ground water sample taken in each of the monitoring wells required under section 56 and have it analyzed to ensure compliance with sections 49 and 50. During sampling, the piezometric level of ground water shall also be measured.

After a monitoring period of at least two full years, the analysis of the samples taken may exclude the parameters with concentrations measured in the leachate before treatment, where applicable, that have always been lower than the limits referred to in section 49. In addition, for two of the three required annual sampling plans, the analysis may pertain only to the following indicating parameters:

- chlorides (expressed as Cl⁻);
- sulphates (SO₄²⁻);

- ammoniacal nitrogen (expressed as N);
- nitrates and nitrites (expressed as N);
- chemical oxygen demand (COD).

In addition, the Minister of the Environment may determine or accept a list of indicating parameters according to the composition of the materials received for elimination that differs from the list that appears in the second paragraph.

However, as soon as the analysis of a sample shows an important parameter fluctuation or that a limit has been exceeded, all the samples taken afterwards in the monitoring well in question must be subject to a full analysis of the required parameters for the purposes of section 49 until the situation is remedied.

58. The taking of water samples prescribed by sections 54 and 57 must be carried out in accordance with the terms and conditions described in the latest version of the Guide d'échantillonnage à des fins d'analyses environnementales published by the Ministère de l'Environnement. In the case of ground water, only the samples for the analysis of metals and metalloids must be filtered during sampling. In every other case, samples may not be filtered in any way, neither at the time they are taken nor in preparation for analysis.

59. The water samples taken pursuant to sections 54 and 57 must be analyzed by a laboratory accredited by the Minister under section 118.6 of the Environment Quality Act.

The analysis report produced by the laboratory must be kept by the operator for at least five years from the date on which it was produced.

60. At least four times a year and at equal intervals, the operator of a technical landfill must measure or have the concentration of methane measured

- (1) inside the buildings and facilities located within the limits of the site;

- (2) in the soil at the limits of the site; that measure must be taken at a minimum of four monitoring points distributed evenly. If the deposit sites exceed eight hectares, a monitoring point per additional land portion of eight hectares must be added or, in the case of a residual part, of less than eight hectares.

The date, time, temperature and barometric pressure must be recorded every time a measure is taken pursuant to the preceding paragraph.

Where the collection system comprising a mechanical suction device is in operation, the operator must measure the concentration of methane generated by the residual materials or have it measured at least four times a year so as to ensure compliance with the concentration set out under the second paragraph of section 27. The biogas collected by that system must be subject to continuous measure and record of its flow.

Where biogas thermal destruction facilities are required, those facilities must continuously measure and record the temperature of destruction and the flow of biogas as well as check, at least once a year, the destruction effectiveness of volatile organic compounds other than methane.

61. The measures required pursuant to section 60 must be carried out by certified professionals and the analyses must be, where applicable, made by a laboratory accredited by the Minister under section 118.6 of the Environment Quality Act.

62. Within thirty days upon their receipt, the operator must forward the results of the analyses or measures made under sections 54, 55, 57 and 60 to the Minister of the Environment. Notwithstanding the foregoing, where the limits prescribed by this Regulation are not complied with, the operator must, within fifteen days following the day on which he is aware thereof, inform the Minister in writing and notify him of the measures he has taken or intends to take.

The following must also be forwarded to the Minister, at the same time as the information required under the first paragraph:

(1) a written statement by which the operator attests that the taking of samples was made in accordance with the rules applicable;

(2) in the case of measures prescribed by section 60, any information pertaining to the places where those measures were taken, in particular the number and location of the monitoring points, the methods and devices used and the names of the laboratory or professionals that took them.

Watchdog committee

63. The operator of any technical landfill must, within the six months following the beginning of the operation of the site, form a watchdog committee.

In order to do so, he shall invite in writing the following bodies or groups to designate a representative:

- the municipality in which the site is located;
- the urban community or the regional county municipality in which the site is located;
- the residents of the surrounding area;
- an environmental group of the region or a regional organization for environmental protection.

The operator's representative and any other person that may be affected by the activities of the site and designated by the Minister of the Environment at the time of the issue of the certificate of authorization or thereafter shall also be part of the committee.

Should a body or group fail to designate a representative, the operator may designate him himself.

64. Any vacancy within the committee shall be filled by following the procedure provided for in the second, third and fourth paragraphs of section 63.

65. The committee may, if all its members agree, invite other bodies or groups to designate a representative.

66. The members of the committee shall designate among them a chairman and a secretary.

67. The members of the committee shall meet at least once a year.

68. The meetings of the committee shall be held in the territory of the municipality in which the landfill is located.

69. The secretary shall post the agenda of that meeting at the places provided for that purpose by the urban community or the regional county municipality in which the landfill is located, at least ten days prior to any meeting of the committee.

70. The committee may make recommendations to the operator on the development and implementation of measures likely to improve the operation of the facilities, to mitigate or eliminate the impact of the site on the surrounding area and the environment.

71. The secretary shall post the minutes of that meeting at the places provided for in section 69, within 30 days following the meeting.

72. The minutes of a meeting shall be accessible to any person who so requests to the secretary.

73. The operator of a technical landfill must inform the committee of any application to modify his certificate of authorization and of any change respecting the management responsibility of the site.

He must also provide the committee with all the documents or relevant information required for the performance of his duties or make them available to the committee, within the prescribed time, in particular the certificate of authorization of the facility, the documents submitted with the application for the certificate of authorization, the data on the origin, except the name of the producer, the nature and quantity of residual materials received on the site, the analysis reports related to the monitoring of the site, the annual reports and the trustee's reports.

74. The operator of a technical landfill shall bear the costs related to the establishment and operation of that committee, in particular those related to the room required for meetings to be held and the stationery and shall provide it with the material resources necessary for performing his duties.

He shall make it possible for the committee to hold four meetings annually.

75. The operator shall make the site and its facilities accessible to the members of the committee during the hours of operation of the landfill.

76. If none of the previous rules bring any solution to a particular case, it is the committee's duty to make a decision on the matter.

§4. Ensuring and monitoring the quality

77. The dimensioning, choice and placing of the materials must guarantee that the systems with which technical landfills are provided under this Regulation, that is the impermeabilization, the water collection and treatment, the collection and discharge, biogas reclamation and elimination systems and the ground water monitoring system referred to in section 56, will work properly, even on a long-term basis, considering the physical, chemical and biological processes, that could intervene on the sites during their layout, operation and after the sites are closed.

78. A material or component proposed as an equivalent to a material or component prescribed in this Regulation may be used if the Minister receives an attestation, signed by a certified professional, together with any technical report, any study, analysis or result of the analysis proving in an appropriate, complete and detailed manner, the effectiveness of that material or component.

In the case of contaminated soil used for placing the cover, the operator must also obtain from an accredited laboratory an analysis report that specifies the contamination level and that allows to check the acceptability of the latter. The report shall then be attached to the operation register.

79. All the materials and facilities intended to be used in the layout of technical landfills, whether it is for their impermeabilization or for the installation of either system referred to in section 77, must be checked by certified and independent professionals, before and during the layout work and by laboratory tests or *in situ*, for the purposes of ensuring that those materials or facilities comply with the applicable standards in that Division.

80. Certified and independent professionals must also supervise the carrying out of development work of technical landfills, in particular the qualification of workers responsible for carrying out that work as well as the quality of the techniques used and the systems already installed.

81. Professionals responsible for verification and supervision work prescribed by sections 79 and 80 shall forward to the Minister of the Environment, once the layout of the site is completed, a report of their activities attesting to, where applicable, the compliance of the installation with the applicable standards or indicating the cases of non-compliance with those standards and the corrective measures to be taken.

§5. Closure

82. The operator must close definitely the technical landfill where it has reached its maximum capacity or where the residual material burial operations are ended. He must immediately notify the Minister in writing of the date on which that site will be closed.

83. Within six months following the date on which the technical landfill has been closed, the operator shall send to the Minister a closing statement that he will have prepared by certified and independent professionals attesting to

(1) the working order, effectiveness and reliability of the systems with which the site is equipped under this Regulation, namely the impermeabilization system of the site, the water collection and treatment systems, the system for the collection and evacuation, reclamation or elimination of biogas and ground water monitoring system;

(2) the compliance with the limits applicable to the discharges of water and with emissions of biogas;

(3) the compliance of the site with the provisions of this Regulation or of the certificate of authorization respecting the final cover of buried residual materials and the integration of the site to the surroundings.

The closing statement shall specify, if any, the cases in which the provisions of this Regulation or the certificate of authorization are not abided by and shall indicate the corrective measures to be taken.

84. The Minister may close the landfill if the operator does not comply with the requirements of sections 82 and 83 or if he refuses to comply with an order issued under section 58 of the Environment Quality Act replaced by section 14 of Chapter 75 of the Statutes of 1999. He shall then notify in writing that operator of the date on which the site will close.

85. A conspicuous sign shall be posted at the entrance of the technical landfill and shall indicate that the site is closed and that the disposal of residual materials is henceforth prohibited.

§6. Post-closure period

86. The obligations prescribed by the provisions of Division 2 of Chapter II shall continue to apply, *mutatis mutandis* and except for the following provisions, to any technical landfill definitely closed and for a 30-year period following the date on which the site is closed or for any shorter or additional period determined pursuant to section 87.

During the aforementioned periods, the owner of the site shall comply with those provisions. He is responsible, particularly,

(1) for the maintenance of the integrity of the final cover of residual materials;

(2) for the monitoring, maintenance and cleaning of water collection and treatment systems, the collection and discharge, reclamation or elimination system of biogas and the ground water monitoring system;

(3) for the carrying out of the sampling, analysis and measuring plans, pertaining to all collected water, resurgent water and biogas;

(4) for checking the tightness of the water collection pipes located outside the impermeabilized part of the site and all the components of the water treatment system.

During the aforementioned periods, the owner of the site must also carry out the monitoring of the concentration of methane generated by residual materials, at least four times a year, so as to meet the requirements in the first paragraph of section 87.

87. The owner of the site may request from the Minister to be released from the obligations that are imposed upon him under section 86 where, during a monitoring period of at least five years carried out after the technical landfill has been definitely closed, the following conditions are complied with:

(1) none of the parameters analyzed in the leachate samples taken before treatment has contravened section 45;

(2) none of the parameters analyzed in the ground water samples has contravened sections 49 to 51;

(3) the measures taken in the mass of residual materials through the collection network indicate that the concentrations of methane are less than 1.25 % per volume.

In order to do so, any time before the expiry of the 30-year period provided for in section 86 or no later than the third trimester of the 29th post-closure year, the owner of the site must have certified and independent professionals prepare an assessment of the site and where applicable, its impact on the environment and have it forwarded to the Minister.

The Minister may release the owner of the site from the obligations imposed upon him under section 86 and a certificate may be issued to him for that purpose where the assessment reveals that the site remains in every way in accordance with the standards applicable and that it is no longer likely to be a source of contamination.

In the opposite case, the obligations prescribed by section 86 for the post-closure period shall continue to apply for as long as the owner of the site is unable to obtain from the Minister a certificate of release issued under the conditions provided for in the third paragraph.

DIVISION 3 IN-TRENCH LANDFILLS

88. Residual materials produced in the places set out in section 89, including sludge produced or treated in the territory, may also be eliminated by burial in trenches dug for that purpose, with the exception of

– residual materials referred to in sections 3 and 6;

- industrial residual materials other than household garbage and sludge;
- sludge from pulp and paper mills and oil refineries.

Those in-trench landfills must be laid out and operated in accordance with this Division, which also prescribes the conditions applicable to their closure and post-closure.

89. The layout and operation of an in-trench landfill are only possible in the following places:

- (1) in the North, as defined in section 96;
- (2) in the parts of territories not organized as a local municipality, that have no access or that are located more than 100 kilometres by roads opened year-round, from a technical landfill or an urban residual material incineration facility;
- (3) in the following municipalities: Fermont, Havre-St-Pierre, Lebel-sur-Quévillon, Matagami, Témiscaming, Ville-Marie and Baie-James;
- (4) in municipalities where the population does not exceed 2000 inhabitants, that have no access or that are entirely located more than 100 kilometres, by roads opened year-round, from a technical landfill or an urban residual material incineration facility, with the exception, for the standard of 100 kilometres, of the municipalities located in the territories referred to in section 133 of the Environment Quality Act;
- (5) in the Category I lands within the meaning of the Act respecting the land regime in the James Bay and New Québec territories (R.S.Q., c. R-13.1).

An in-trench landfill may not serve a population over 2000 inhabitants, except in the places referred to in subparagraphs 1, 3 and 5 of the first paragraph.

90. For the purposes of section 89, the population of a municipality is that registered at the last census indicated in an order made by the Government under section 29 of the Act respecting municipal territorial organization (R.S.Q., c. O-9).

91. Subject to the conditions provided for in the second paragraph, sections 11 to 14, 16, 17, 28 and 77 to 81 shall apply, *mutatis mutandis*, to the layout of in-trench landfills. However, the maximum distance authorized by section 16 is 300 metres.

That layout is also subject to the following conditions:

(1) the minimum distance between an in-trench landfill and any watercourse or body of water shall be 150 metres; that distance is measured from the residual material deposit sites;

(2) the bottom of the trenches must be at a minimum distance of one metre above the rock and at the ground-water-level. Any lowering of the water level by pumping, draining or by any other means is prohibited.

Where the burning of residual materials is authorized under the certificate of authorization, a fireproof zone, bare of vegetation must be laid out on a minimum distance of 15 metres from the burning zone and be provided, within that space of 15 metres, with a backfill or a screen made up of structural and non-combustible materials, at least 2.50 metres high.

92. Sections 26, 30, 34, paragraphs 1 and 2 of section 36, sections 37, 39, 40, 44 to 47, 49 to 52, 54 to 59 and 62 shall apply, *mutatis mutandis*, to the operation of any in-trench landfills. Notwithstanding the foregoing, the maximum distance authorized by the first item of the third paragraph of section 56 for installing wells used for monitoring the quality of ground water, shall be 300 metres from the residual material deposit sites.

The operation of an in-trench landfill is also subject to the following conditions:

(1) residual materials deposited in the trenches must be covered completely with a layer of soil at least once a week, from May to October. At least 30 centimetres thick of any contaminated soil containing one or several substances with concentrations equal to or less than the limits in Schedule I Column B may also be used for the cover of residual materials;

(2) residual materials containing asbestos in a concentration equal to or greater than 1 % weight and that are likely to be scattered in the air, sludge and carcasses or parts of animals must be covered immediately by soil meeting the conditions of the preceding paragraph or by other residual materials;

(3) where the burning of residual materials will be authorized, wood treated to prevent the presence of molds or to increase the resistance to decay may be received only if it is buried in a distinct trench where burning is not practised.

93. Where the height of residual materials deposited in a trench reaches the surface of the natural soil at the limits of the disposal site, that trench must be covered with soil at least 60 centimetres thick comprising, in its upper part, a layer of at least 15 centimetres of soil

suitable for vegetation. A layer of such soil at least 30 centimetres thick may also be made up of any other material suitable for vegetation.

Except for the layer of soil or material suitable for vegetation, the cover of the trench may also be made up of contaminated soils containing one or several substances with concentrations equal to or less than the limits in Schedule I Column B.

In order to allow the runoff to flow outwards from the residual material deposit site while limiting soil erosion, the land shall also be levelled so as to leave a slope of at least 2 % without exceeding

– 5 %, where the slope of the natural ground at the limits of the deposit site is equal to or less than that percentage; or

– the percentage of the slope of the natural ground at the limits of the deposit site, where the slope is greater than 5 %.

The layer of final cover shall be covered with vegetation no later than one year after it has been set up; moreover, holes, faults or subsidence that may form in that layer shall be filled until the residual material deposit site is completely stabilized.

94. Any trench that has been unused for at least six consecutive months must be filled; section 93 shall then apply.

95. Sections 82 to 87 shall apply, *mutatis mutandis*, to the closure of an in-trench landfill and post-closure.

DIVISION 4 DISPOSAL SITES IN THE NORTH

96. In the North, sites may also be laid out where the only residual materials that may be received are the ones produced in the North, including sludge produced or treated in the territory, with the exception of residual materials referred to in paragraphs 1 to 14 of section 3 and in section 6.

Disposal sites in the North must be laid out and operated in accordance with this Division.

For the purposes of this Division, “the North” means territories or municipalities set out thereafter:

(1) the territory located north of the 55th parallel as described in section 168 of the Act;

(2) Municipalité de Côte-Nord-du-Golfe-du-Saint-Laurent, the municipalities of Blanc-Sablon, Bonne-Espérance, Gros-Mécatina and Saint-Augustin as well as the municipalities that will be incorporated under the Act respecting the municipal reorganization of the territory of Municipalité de Côte-Nord-du-Golfe-du-Saint-Laurent (1988, c. 55; 1996, c. 2).

97. Disposal sites in the North must be located at a minimum distance of

(1) 150 metres from any watercourse or body of water;

(2) 500 metres from any ground or surface water intake supplying water for human consumption. However, that distance is not applicable if the Minister receives an attestation, signed by a certified professional, together with a technical report, study, analysis or analysis report proving in an appropriate, complete and detailed manner that the site is not likely to spoil the quality of water.

98. Disposal sites in the North must be surrounded by a fence or any other device so as

(1) to avoid the scattering of residual materials and to contain them in disposal sites;

(2) to prevent animals from entering the site;

(3) to prevent access to the site outside the hours of operation.

A conspicuous sign shall be posted on the sites and shall indicate the type of the site in question, the name and address of the operator and the hours of operation.

Where the sites are located in the municipalities referred to in subparagraph 2 of the last paragraph of section 96, the sites must in addition be surrounded by a buffer zone that, complying with the conditions set out thereafter, is intended to safeguard the isolation of the site and to mitigate the nuisances thereof:

– be at least 15 metres wide;

– be bare of vegetation over a minimum distance of 15 metres from the inside limits of the zone;

– have a backfill or a screen made up of structural and non-combustible materials at least 2.50 metres high within the 15 metres space set out in the preceding item.

Any activity is prohibited in the buffer zone with the exception of the activities necessary for the access to the site and monitoring of its operation. Finally, the outside

limits of the buffer zone, which correspond to the limits of the site, must be laid out so that they may be located at all times; the same applies to the inside limits of the zone.

99. In disposal sites in the North, residual materials shall be deposited on areas where the soil was previously removed to a depth of one metre, to the permafrost line or to a height of 30 centimetres above the rock or the groundwater-level, whichever is reached first. The lowering of groundwater-level by pumping, draining or by any other means is prohibited.

The materials that were removed shall be deposited on the periphery of the site so that they may be used to cover residual materials.

Sludge shall be deposited on an area different from that on which the other residual materials are deposited in order to facilitate the burning of the latter materials.

100. Disposal sites in the North must be equipped with a surface water collection system that can prevent water from being contaminated by residual materials or from penetrating into the deposit sites where residual materials are deposited. Once collected, the surface water shall be discharged outside the site.

101. Residual materials deposited in disposal sites in the North, with the exception of sludge, must be burned at least once a week.

Residual materials that contain asbestos in a concentration equal to or greater than 1 % weight and that are likely to be scattered in the air as well as carcasses or parts of animals must, as soon as they are received, be covered completely with soils or residual materials.

102. Where a disposal site in the North, or a part thereof, is closed or abandoned, residual materials deposited therein must, after they are burned, be covered with a layer of soil having a minimum thickness of 30 centimetres.

DIVISION 5 CONSTRUCTION AND DEMOLITION WASTE LANDFILLS

103. As of (*enter the date of coming into force of this Regulation*), any establishment or expansion of a construction and demolition waste landfill is prohibited. The word "expansion" includes any alteration that results in increasing the burial capacity of the site.

However, that prohibition does not apply to establishment or expansion projects for which, before 1 December 1995, a notice required under section 31.2 of the

Environment Quality Act or an application intended to obtain an authorization was filed, and that, on that date, were not yet subject to a decision of the Government or of the Minister granting or refusing the certificate of authorization.

104. For the purposes of this Division, "construction and demolition waste" means any material that is non-contaminated and in a solid state at 20°C resulting from the construction, remodelling or demolition of immovables, bridges, roads or other structures, in particular stone, debris or rubble, fragments of concrete, masonry and asphalt, coating materials, wood, metal, glass, textile materials and plastics.

Residual materials that are made unrecognizable by burning, shredding or otherwise, paint, solvents, sealants, adhesives or other similar materials, household garbage, wood treated to prevent the presence of molds or to increase the resistance to decay, vegetable waste such as grass, leaves and woodchips, any waste with a concentration in asbestos equal to or greater than 1 % weight and likely to be scattered in the air, as well as movables are excluded from that definition.

Trees, branches or stumps that are removed for carrying out construction works and non-contaminated excavation materials are considered to be construction waste covered by this Division.

105. In addition to the fact that they may be eliminated in any other facility covered by this Regulation, subject to sections 3 and 6, construction and demolition waste may be buried, for filling purposes, in a quarry or a pit within the meaning of the Regulation respecting pits and quarries (R.R.Q., 1981, c. Q-2, r. 2) whose depth allows the burial of approximately three metres of construction and demolition waste.

The construction and demolition waste landfills must be laid out and operated in accordance with this Division, which also prescribes the conditions applicable to their closure and post-closure.

106. Subject to the conditions provided for in the second paragraph, sections 11 to 14, 17, 28 and 77 to 81 shall apply, *mutatis mutandis*, to the layout of construction and demolition waste landfills authorized under section 105.

The layout shall also be subject to the following conditions:

(1) the minimum distance between a construction and demolition waste landfill and any watercourse or body of water shall be 150 metres;

(2) the bed of the site must be at a minimum height of one metre above the groundwater-level. Any lowering of the groundwater-level by pumping, draining or any other means is prohibited.

The minimum distances prescribed by the first paragraph and subparagraph 1 of the second paragraph shall be measured from the residual materials deposit sites in the quarry or pit.

107. Sections 26, 30, 32, 34, paragraphs 1 and 2 of section 36, sections 37, 39, 40, 44 to 47, and 49 to 76 shall apply to the operation of a construction and demolition waste landfill authorized under section 105, *mutatis mutandis* and considering the following in particular: the maximum distance authorized under the first item in the third paragraph of section 56 concerning the installation of a monitoring well used for monitoring the quality of ground water must not exceed the property boundaries of the site.

The operation of the sites shall also be subject to the following conditions:

(1) buried construction and demolition waste must, at least once a month during the operation period, be levelled and covered completely with a layer of soil or material that:

– is made up of less than 20 % weight of particles with a diameter equal to or less than 0.08 millimetre;

– has on a permanent basis a minimum hydraulic conductivity of 1×10^{-4} cm/s;

– may be received in a construction and demolition waste landfill within the meaning of section 104;

– complies with the objectives set out in the second paragraph of section 31.

(2) the burning of construction and demolition waste is prohibited.

Any contaminated soil containing one or several substances with concentrations equal to or less than the limits in Schedule I Column B may be received to cover residual materials on a maximum thickness of 30 centimetres.

108. Where the height of buried construction and demolition waste reaches a level that is 90 centimetres below the natural ground surface at the limits of the zones where such waste is deposited, waste must be subject to a final cover, comprising, from the bottom up:

(1) an impermeable layer made of soil having on a permanent basis a maximum hydraulic conductivity of 1×10^{-5} cm/s, at least 45 centimetres thick after compaction, or an impermeable synthetic membrane at least 1 millimetre thick and placed on a layer of soil at least 30 centimetres thick that can maintain the membrane's integrity;

(2) a layer of soil at least 45 centimetres thick where the above-mentioned impermeable layer is made of soil, and 60 centimetres thick where the impermeable layer is made of a membrane. The layer prescribed by this subparagraph must also, in its upper part that is between 15 and 30 centimetres thick, be made of soils or materials suitable for vegetation. Lastly, the soil or other materials used shall protect the impermeable layer.

With the exception of the layer of soil or material suitable for vegetation, the layers referred to in subparagraphs 1 and 2 of the first paragraph may also be made of contaminated soil containing one or several substances with concentrations equal to or less than the limits in Schedule I Column B or of any other material whose effectiveness is at least equivalent to that of the materials that are prescribed therein.

In order to allow the runoff to flow outwards from the deposit sites while limiting soil erosion, the land shall also be levelled so as to leave a slope of at least 2 % without exceeding

– 5 %, where the slope of the natural ground at the limits of the deposit site is equal to or less than that percentage; or

– the percentage of the slope of the natural ground at the limits of the deposit site, where the slope is greater than 5 %.

The final cover must be covered with vegetation no later than one year after it has been set up; moreover, breakdowns such as holes, faults and subsidence that might form in the cover must be repaired so as to prevent water from accumulating on the different cover layers or from percolating through the site until the residual material deposit sites are completely stabilized.

109. Any construction and demolition waste landfill must be equipped with a system that collects and discharges biogas produced therein.

110. The final profile of a filled construction and demolition waste landfill must not exceed, including the final cover, the natural ground surface at the limits of the deposit sites where waste is deposited, except to the extent that the raising of the surface of the deposit sites,

as compared to that of the natural ground, is necessary to comply with the requirements of section 108, in which case the height of the buried residual materials may exceed the limit prescribed by the said section.

111. Residual materials deposited in a construction and demolition waste landfill that has been unused for at least 12 consecutive months must be covered as prescribed by sections 108 and 110, which shall apply *mutatis mutandis*.

112. Sections 82 to 87 shall apply, *mutatis mutandis*, to the closure of a construction and demolition waste landfill and its post-closure.

DIVISION 6

ISOLATED TERRITORY LANDFILLS

113. Residual materials produced in the places set out in section 114, including sludge that is produced or treated therein, may also be eliminated by burying them in pits dug for that purpose, with the exception of residual materials referred to in paragraphs 1 to 14 of section 3, in section 6, and of industrial residual materials other than household garbage.

Isolated territory landfills must be laid out and operated in accordance with this section, which also prescribes the conditions applicable to their closure.

114. Isolated territory landfills may be laid out and operated only in the following places:

(1) industrial camps governed by the Regulation respecting sanitary conditions in industrial or other camps (R.R.Q., 1981, c. Q-2, r. 3);

(2) the territories or parts of territories not organized as local municipalities;

(3) territories inaccessible by road;

(4) the James Bay territory, as described in section 133 of the Environment Quality Act;

(5) the territory referred to in section 168 of the Environment Quality Act;

(6) the territory of the municipalities referred to in subparagraph 2 of the third paragraph of section 96.

Furthermore, that type of site may be laid out and operated only if the following conditions are met:

– the site must not be served by a residual material collection service;

– the site must be located more than 100 kilometres, by roads suitable for motor vehicles during the operation period, from a technical landfill or an urban residual material incineration facility;

– the site must not serve more than 50 people a year.

115. Isolated territory landfills must be located at a minimum distance of

(1) 150 metres from a watercourse or body of water;

(2) 500 metres from any ground or surface water intake used for human consumption. However, that distance is not applicable if the Minister receives an attestation, signed by a certified professional, together with any technical report, study, analysis or analysis report proving in an appropriate, complete and detailed manner that the site is not likely to spoil the quality of water.

116. Where the burning of residual materials is authorized, with the exception of the territory referred to in subparagraph 5 of the first paragraph of section 114, isolated territory landfills must be equipped with a fire-proof zone bare of vegetation and at least 15 metres wide from the burning zone.

117. The bed of isolated territory landfills must be at a minimum distance of 30 centimetres above the rock and groundwater-level. Any lowering of groundwater-level by pumping, draining or any other means is prohibited.

118. From May to October, residual materials deposited in an isolated territory landfill must, at the end of each day of use, be covered with a layer of lime or a layer of soil at least 15 centimetres thick.

Residual materials containing asbestos in a concentration equal to or greater than 1 % weight and that are likely to be scattered in the air and carcasses or parts of animals must, as soon as they are received, be covered completely with soil or residual materials.

119. In isolated territory landfills, it is prohibited to eliminate sludge whose dryness is not greater than 15 % weight and a consistency such that it can be shovelled with other residual materials; sludge must be deposited in a distinct pit reserved exclusively for that type of residual materials.

120. The burning of residual materials in isolated territory landfills is prohibited, except for territories where a disposal site in the North may be laid out. In such a case, wood treated to prevent the presence of molds or to increase the resistance to decay and tires in

whole or in pieces may be received only if they are buried in a distinct trench where burning is not carried out.

121. Where the height of residual materials deposited in an isolated territory landfill comes up to the natural ground surface at the limits of the deposit site, they must be covered with a layer of materials at least 30 centimetres thick made of soil, of which at least 15 centimetres is suitable for vegetation, or of another material suitable for vegetation no more than 30 centimetres thick. In order to allow the runoff to flow outwards from the deposit site while limiting soil erosion, the layer of final cover must also be levelled so as to leave a minimum slope of 2 % on the surface of the deposit site without exceeding

– 5 %, where the slope of the natural ground at the limits of the deposit site is equal to or less than that percentage; or

– the percentage of the slope of the natural ground at the limits of the deposit site, where the slope is greater than 5 %.

Residual materials deposited in an isolated territory landfill that stopped being used at the end of the season must also be covered as prescribed in the first paragraph.

122. Any isolated territory landfill that is abandoned must be covered with a backfill; the provisions of section 121 shall then apply, *mutatis mutandis*.

CHAPTER III **URBAN RESIDUAL MATERIAL INCINERATION** **FACILITIES**

DIVISION 1 **GENERAL**

123. This Chapter applies to urban residual material incineration facilities.

For the purposes of this Regulation,

(1) the following is considered to be an urban residual material incineration facility:

– any facility that incinerates, in addition to urban residual materials, other residual materials, whether industrial, commercial, institutional or other residual materials;

– any facility that incinerates municipal sludge;

(2) the letter “R” refers to the reference conditions;

(3) the reference conditions refer to a temperature of 25°C and to a barometric pressure of 101.325 kPa.

124. The provisions of the Regulation respecting biomedical waste and of the Regulation respecting the quality of the atmosphere (R.R.Q., 1981, c. Q-2, r. 20) that apply to biomedical residual material incinerators also apply to urban residual material incineration facilities that incinerate biomedical residual materials.

Where the provisions of this Regulation are inconsistent with those of the aforementioned regulations, the provisions that ensure a better environmental protection shall prevail.

125. Residual materials referred to in paragraphs 1 to 8, 10 to 12 and 15 of section 3 may not be incinerated in urban residual material incineration facilities.

DIVISION 2 **LAYOUT AND OPERATION**

126. Urban residual material incineration facilities must be equipped with a residual material handling area or a residual material pit located inside a building that is maintained at all times under a negative pressure as compared to the atmospheric conditions so that no odour generated by residual materials may be perceptible outside the building. Smelly air must be used as makeup air in incinerators or must be purified so as to meet the aforementioned objective. The same applies to any other place in a residual material incineration facility where non-incinerated residual materials may be found.

Handling areas and pits must be tight and equipped with systems that can collect the liquids and drain them towards a treatment or discharge site; they must also be equipped with a fire extinguishing system.

Handling areas must be cleaned at the end of each day of operation.

No untreated residual material or incinerator ash may be stored outside the incineration facility buildings; no truck containing residual materials or ash may be parked more than one hour on the premises of the facility.

127. Any urban residual material incineration facility that receives biomedical residual materials referred to in paragraphs 1 to 3 of section 1 of the Regulation respecting biomedical waste, or carcasses or parts of animals, must be laid out so that the residual materials be dumped in an area distinct from that where the other

types of residual materials are deposited, and be conveyed to incinerators by means of a feed system fit for them.

The obligations prescribed by the first paragraph do not apply in the case of carcasses of pets that do not come from establishments that breed or sell those animals or take care of or provide care or protection to them.

128. In any urban residual material incineration facility that receives biomedical residual materials, gas from the combustion of residual materials must be brought, when they are in the last combustion chamber, to a temperature higher than 1000 °C for at least one second. In addition, the facility must be equipped with auxiliary gas or oil fired burners.

Finally, such a facility must be equipped with an emergency device that stops the feeding of residual materials where the operating parameters are not followed.

129. The first paragraph of section 128 also applies to urban residual material incineration facilities that have an incineration rated capacity less than one tonne per hour; in addition, it is prohibited to place residual materials or start the flameless combustion of residual materials in the primary chamber as long as the temperature of the last combustion chamber has not been maintained at 1000 °C for at least 15 minutes.

130. The last combustion chamber of any urban residual material incineration facility must be equipped, at its outlet, with a system that continuously measures and records the concentration of carbon monoxide, carbon dioxide and oxygen in combustion gas, as well as the temperature of the gas.

In addition, a facility that has an incineration rated capacity of one tonne or more per hour must be equipped, at the outlet of its treatment system, with a system that continuously measures and records the concentration of hydrogen chloride in the emissions into the atmosphere, as well as with a system that continuously measures and records the opacity of gas or the concentration of particles emitted into the atmosphere.

Such data must be kept by the operator for at least two years.

131. Section 30, paragraph 1 of section 36 and section 44 shall apply, *mutatis mutandis*, to the layout and operation of any urban residual material incineration facility.

DIVISION 3 GAS EMISSIONS

132. The opacity of emissions of any urban residual material incineration facility must not exceed 20 %, except in the following cases and conditions:

(1) on start-up of incinerators, the opacity of emissions may exceed 20 %, without however reaching 60 %, for a maximum period of four minutes;

(2) while the incinerators are in operation, the opacity of emissions may exceed 20 %, without however reaching 40 %, for a maximum period of four minutes per hour.

133. Urban residual material incineration facilities may not emit combustion gas containing the following into the atmosphere

(1) more than 20 mg/Rm³ particles where they have an incineration rated capacity equal to or greater than one tonne per hour, or more than 50 mg/Rm³ particles where their capacity is lower and where they do not receive biomedical residual materials. "Particle" means any substance in a liquid or solid form that is finely divided and suspended in a gaseous medium, excluding water that is not chemically bonded, as measured according to the reference methods;

(2) more than 50 mg/Rm³ hydrogen chloride. That limit may be exceeded, without however exceeding 100 mg/Rm³, in the case of a facility having an incineration rated capacity lower than one tonne per hour and not receiving biomedical residual materials;

(3) according to the arithmetic averaging, more than 57 mg/Rm³ carbon monoxide, for any measure taken during a period of four consecutive hours, or more than 114 mg/Rm³ carbon monoxide per hour if the facility also receives biomedical residual materials;

(4) more than 0.1 ng/Rm³ polychlorinated dibenzo-*p*-dioxins and polychlorinated dibenzofurans, in the case of a facility whose incineration rated capacity is equal to or greater than two tonnes per hour. The concentration is obtained by the summation of chlorodibenzodioxins and chlorodibenzofurans expressed as 2,3,7,8-TCDD toxic equivalent (NATO Scale, 1988) referred to in Schedule II and calculated according to the Toxicity Equivalency Factors International Method established in that Schedule;

(5) more than 20 ng/Rm³ mercury where they have a capacity of more than one tonne per hour;

(6) more than 70 ng/Rm³ mercury for an incinerator of sludge from municipal waste water treatment plants.

134. Limits in section 133 are expressed after deduction of water vapour under standardized temperature (25 °C) and pressure (101.325 kPa) conditions. In addition, the limits shall be corrected at 11 % oxygen according to the following formula:

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

“E” stands for the corrected concentration;

“E_a” stands for the concentration after deduction of non-corrected water vapour;

“A” stands for the percentage of oxygen, on a dry basis, in combustion gas at the sampling point.

DIVISION 4 MEASURES TO MONITOR GAS EMISSIONS

135. At least once a year, the operator of any urban residual material incineration facility that has an incineration rated capacity equal to or greater than one tonne per hour, or that receives biomedical residual materials, must take a sample of gas emitted into the atmosphere to measure the parameters referred to in section 133.

The operator of an incinerator with a rated capacity lower than one tonne per hour must, at least once every three years, take a sample of gas emitted into the atmosphere to measure the parameters referred to in section 133.

Sections 58, 59 and 62 shall apply, *mutatis mutandis*, to the taking and analysis of the samples of gas prescribed in this section.

DIVISION 5 PROCESS WATER AND OTHER LIQUID

136. Sections 26, 45, 47, 54, 58, 59 and 62 shall apply, *mutatis mutandis*, to process water used in an urban residual material incineration facility to cool incineration residues or to reduce the discharge of contaminants into the atmosphere, as well as to liquid from the residual material handling area and residual material pit.

CHAPTER IV RESIDUAL MATERIAL TRANSFER STATIONS

137. This Chapter applies to residual material transfer stations. However, it does not apply to construction and demolition waste transfer stations, within the meaning of section 104.

“Transfer station” means any facility where residual materials are dumped in order to have them prepared for further transport with a view to eliminating them in a different place.

138. The only residual materials that may be received in a transfer station are those whose dumping or incineration in a facility referred to in Chapter II or Chapter III is authorized by this Regulation, with the exception of carcasses or parts of animals and sludge whose dryness is lower than 25 % and that contain free liquid following the test referred to in paragraph 6 of section 3.

139. In a transfer station, the operations related to the unloading and loading of residual materials must be carried out inside a building.

At the end of each day of operation, or when the residual material transfer activities are stopped for a period longer than 12 hours, all residual materials received must be sent to their destination so that no residual materials be left on the premises, inside the building and on the land surrounding the transfer station.

140. Paragraph 1 of section 36 and the second and third paragraphs of section 126 shall apply, *mutatis mutandis*, to any residual material transfer station.

Moreover, sections 26, 45, 47, 54, 58, 59 and 62 shall apply *mutatis mutandis* to liquids from the residual material handling area.

CHAPTER V GUARANTEE

141. The operation of a residual material elimination facility referred to in sections 2, 3 and 5 of Chapter II, as well as in Chapters III and IV is subject to the setting up, by the operator or by a third party on the operator's behalf, of a guarantee intended to ensure, during the operation and on closure, the discharge of the obligations that the operator must meet under the Environment Quality Act, regulations, order or authorization. Thus, should the operator fail to do so, that guarantee must be used for the payment of expenses incurred by the Minister of the Environment under sections 113, 114, 115 and 115.1 of the aforementioned Act.

The minimum amount of the guarantee shall be established as follows:

GUARANTEE	
Elimination facilities	Minimum amount of the guarantee
Technical landfills:	
– receiving less than 20 000 t/year	\$100 000
– receiving between 20 000 and 100 000 t/year	\$300 000
– receiving more than 100 000 t/year without exceeding 300 000 t/year	\$500 000
– receiving more than 300 000 t/year	\$1 000 000
In-trench landfills	\$100 000
Construction and demolition waste landfills:	
– receiving less than 100 000 t/year	\$100 000
– receiving between 100 000 and 300 000 t/year	\$300 000
– receiving more than 300 000 t/year	\$500 000
Urban residual material incineration facilities	1 % of the capital cost minimum \$100 000 maximum \$2 000 000
Transfer stations	\$100 000

142. The guarantee shall be provided

(1) in cash, by bank money order or by certified cheque made out to the Minister of Finance;

(2) by bearer warrants issued or guaranteed by Québec, Canada or another Canadian province, the United States of America or one of the member States, the International Bank for Reconstruction and Development, a municipality or a school board in Canada or a fabrique in Québec;

(3) by a security or a guarantee policy, with stipulation of a deed and a waiver of the benefits of discussion and division, subscribed to a legal person authorized to stand security under the Bank Act (S.C., 1991, c. 46), the Savings and Credit Unions Act (R.S.Q., c. C-4.1), the Act respecting trust companies and savings companies (R.S.Q., c. S-29.01) or the Act respecting insurance (R.S.Q., c. A-32);

(4) by an irrevocable letter of credit issued by a banking institution or by a savings and credit union.

143. The amounts of money, orders, cheques or warrants provided as guarantee are deposited with the Minister of Finance, for the duration of the operation and until the expiry of the 12-month period following the closure of the facility, that is the revocation or the transfer of the certificate of authorization, according to the first possibility.

144. A guarantee provided in the form of security, a guarantee policy or a letter of credit shall have a term of not less than 12 months. Not less than 30 days before the expiry of the guarantee, its holder shall send his renewed guarantee to the Minister of the Environment, or any other guarantee meeting the requirements prescribed by sections 141 and 142.

The guarantee shall also contain a clause setting at not less than 12 months after its expiry, or as the case may be after its revocation, rescission or cancellation, the time period for filing a claim based on the operator's failure to perform his actions.

Finally, any clause of revocation, rescission or cancellation of a guarantee may take effect only in return for a notice sent by registered or certified mail to the Minister at least 30 days prior to the expiry of the guarantee.

CHAPTER VI CERTIFICATE OF AUTHORIZATION

145. No one may establish or alter a residual material elimination facility referred to in Divisions 2 to 5 of Chapter II, without holding the titles of ownership of the land where the site and the systems necessary to operate the facility are located.

146. Section 55 of the Environment Quality Act, replaced by section 14 of Chapter 75 of the Statutes of 1999, related to the obligation to obtain the authorization provided for in section 22 of the aforementioned Act do not apply to isolated territory landfills referred to in Division 6 of Chapter II of this Regulation.

147. Any application made to obtain the authorization provided for in section 22 of the Environment Quality Act relating to the establishment and expansion of a residual material elimination facility set out below must be accompanied by the following information and documents, as well as those required under section 22 and the Regulation respecting the application of the Environment Quality Act made by Order in Council 1529-93 dated 3 November 1993:

(1) in the case of an in-trench landfill:

(a) a copy of the titles of ownership of the applicant for the lots covered by the application, as well as a location certificate;

(b) the general characteristics of the facility, including the data related to the area of the region that will be served, to the population of the region and to the nature and quantity of residual materials that are intended to be buried;

(c) a general plan of the facility consisting of a geographic map or aerial photograph indicating

– the location and dimensions of the facility, in particular, the geographic coordinates or, if any, the number of the lots covered by the application;

– the current use and the zoning of the territory included within a radius of one kilometre;

– the layout of public thoroughfares, access roads, watercourses or bodies of water, flood plains and the 100-year flood zones where they are identified on a map, or the flood zones designated by municipalities, as well as the location of wooded sectors, dwellings and any other construction located within a radius of one kilometre;

– the present drainage pattern and general topography of the land within the same radius;

(d) a siting map of any ground or surface water intake and of natural reservoirs of surface water used for human consumption and located within a radius of one kilometre;

(e) a geological map illustrating the principal rock outcrops and unconsolidated deposit areas within a radius of one kilometre;

(f) a piezometric map covering the whole site and a calculation, for each hydrostratigraphic unit met, of the migration time of ground water into the soil. That information is established on the basis of the following elements:

– a geological survey made from a minimum of four core drills for the first five hectares of land and an additional core drill for every additional five hectares or part of five hectares of land. The drills shall be made down to the rock or to the layer of impermeable unconsolidated deposit and shall include the sampling of soils, their description and the result of particle size analyses of each lithology met, in particular in the saturated zone

where the *in-situ* permeability tests will be carried out. Finally, the core drills must be transformed into monitoring wells to determine the piezometry and the characteristics of the different hydrostratigraphic units, and to allow water samples to be taken;

– a levelling of monitoring wells and other water intakes (resurgences, streams, outcrops of the free ground water) within a radius of 500 metres from the site;

(g) a technical report respecting the risks of contamination of surface water and ground water within a radius of one kilometre;

(h) a topographical survey of the land showing contour lines at intervals of no more than one metre;

(i) a record of the servitudes that encumber the land, as well as a record of surface and ground equipment found there;

(j) longitudinal and transversal sections of the land showing its initial and final contours;

(k) a layout and profile of the drainage systems;

(l) plans and specifications of all the stationary equipment that will be used for the operation of the facility, including any equipment or work intended to reduce, monitor, contain or prevent the deposit, release, emission or discharge of contaminants into the environment;

(m) insurance and quality monitoring programs intended to ensure the application of the provisions of sections 77 to 81;

(n) monitoring and supervision programs pertaining to the quality of surface water and ground water intended to ensure the application of the provisions of sections 54 to 59 and 62, indicating, in particular, the location of monitoring wells and the terms and conditions of their installation;

(o) a statement describing the method of administration and operation of the facility;

(2) in the case of a disposal site in the North:

(a) the documents and information referred to in clauses *a* to *d*, *h*, *i*, *j*, *k*, *l* and *o* of subparagraph 1 of the first paragraph;

(b) the description of the soil at the place where the site will be laid out down to a minimum depth of 30 centimetres below the planned level of residual materials;

(3) in the case of a residual material transfer station:

– the documents and information referred to in clauses *a*, *b*, *c*, *l* and *o* of subparagraph 1 of the first paragraph.

The plans and specifications required under this section must be approved by an engineer who is a member of the Ordre des ingénieurs du Québec.

148. Where the information or documents required under section 147 were given to the Minister of the Environment under a preceding application, they do not need to be sent again if the applicant attests to their accuracy.

149. The applications for authorization referred to in section 55 of the Environment Quality Act must be accompanied by the payment, in cash or by certified cheque made out to the Minister of Finance, of the duties payable for their process, which shall be fixed as follows:

TARIFF FOR OBTAINING AN AUTHORIZATION

Type of site	Implementation or expansion	Alteration without expansion
Technical landfill	\$1200	\$600
In-trench landfill	\$600	\$300
Disposal site in the North	\$600	\$300
Construction and demolition waste landfill	\$1200	\$600
Urban residual material incineration facility	\$1200	\$600
Transfer station	\$600	\$300

The duties shall be adjusted on 1 January of each year on the basis of the rate of increase in the Consumer Price Index for Canada established by Statistics Canada; the rate shall be calculated by establishing the difference between the average of the monthly indexes for a 12-month period ending on 30 September of the last year and the average of the monthly indexes for the period equivalent to the second preceding year. The Minister of the Environment shall publish the result of the indexing in the *Gazette officielle du Québec* before 1 January of each year.

CHAPTER VII PENAL

150. Every contravention of the provisions of sections 9, 10, 26, 30, 36 to 40, 44, the first paragraph of section 63, sections 73 to 75, 82 to 85, the second paragraph of section 92, sections 94, 98, 100, 101, subparagraph 2 of the second paragraph of section 107 and sections 118 to 122 makes the operator of the facility liable to a fine

- (1) of \$500 to \$5000 in the case of a natural person;
- (2) of \$1000 to \$20 000 in the case of a legal person.

Every contravention of the provisions of the first paragraph of section 92 respecting the application of sections 26, 30, paragraphs 1 and 2 of section 36, sections 37, 39, 40 and 44, of section 95 respecting the application of sections 82 to 85, of the first paragraph of section 107 respecting the application of sections 26, 30, paragraphs 1 and 2 of section 36, sections 37, 39, 40, 44, the first paragraph of section 63, sections 73 to 75, of section 112 respecting the application of sections 82 to 85, of section 131 respecting the application of section 30, paragraph 1 of section 36 and section 44, of section 136 respecting the application of section 26, of section 140 respecting the application of section 26 and paragraph 1 of section 36 makes the operator liable to the fine provided for in the first paragraph.

151. Every contravention of the provisions of sections 4, 7, 8, 16, 24, 28, 29, 31 to 35, 41 to 43, 47, 48, 54 to 62, 77 to 81, 86, 87, the second and third paragraphs of section 91, sections 93, 97, 99, 102, the second paragraph of section 106, subparagraph 1 of the second paragraph of section 107, sections 108, 111, 113 to 117, 126 to 130, 132, 135, 139, 141 to 144, 165, 166 and 167 makes the operator of the facility liable to a fine

- (1) of \$2000 to \$15 000 in the case of a natural person;
- (2) of \$5000 to \$100 000 in the case of a legal person.

Every contravention of the provisions of the first paragraph of section 91 respecting the application of sections 16, 28 and 77 to 81, of the first paragraph of section 92 respecting the application of sections 34, 47, 54 to 59 and 62, of section 95 respecting the application of sections 86 and 87, of the first paragraph of section 106 respecting the application of sections 28 and 77 to 81, of the first paragraph of section 107 respecting the application of sections 32, 34, 47 and 54 to 62, of section 112 respecting the application of sections 86 and 87, of section 136 respecting the application of sections 47, 54, 58, 59, 62, of section 140 respecting the

application of sections 47, 54, 58, 59, 62 and the second and third paragraphs of section 126 makes the operator liable to the fine provided for in the first paragraph.

152. Every contravention of the provisions of sections 3, 6, 15, 18 to 23, 25, 27, 45, 46, 49 to 53, 88, 89, 96, 105, 109, 110, 125, 133, 138 and 164 makes the operator liable to a fine:

(1) of \$10 000 to \$25 000 in the case of a natural person;

(2) of \$25 000 to \$500 000 in the case of a legal person.

Every contravention of the provisions of the first paragraph of section 92 respecting the application of sections 45, 46 and 49 to 52, of the first paragraph of section 107 respecting the application of sections 45, 46 and 49 to 53, of section 136 respecting the application of section 45, of section 140 respecting the application of section 45 makes the operator liable to the fine provided for in the first paragraph.

153. A person who introduces in an elimination facility or transfer station residual materials that, within the meaning of this Regulation, may not be received therein is also liable to the penalties provided for in section 152.

154. Where, under sections 86 and 87, the provisions of this Regulation are made applicable to a residual material elimination facility after the date of its closure, every contravention of those provisions committed after that date makes the owner of the facility liable to the penalties provided for in sections 150 to 153, as the case may be.

155. In the case of a subsequent offence, the fines prescribed by sections 150 to 154 shall be doubled.

CHAPTER VIII

MISCELLANEOUS, AMENDING AND TRANSITIONAL PROVISIONS

156. In addition to those set out in section 146 of this Regulation, the following facilities shall not be subject to the provisions of sections 54 to 61, 65 and 66 of the Environment Quality Act (R.S.Q., c. Q-2; 1999, c. 75, ss. 14 to 26):

(1) facilities that are used only for the disposal of compost from biological systems referred to in Division XIII of the Regulation respecting waste water disposal systems for isolated dwellings (R.R.Q., 1981, c. Q-2, r. 8);

(2) facilities that are used only for the disposal of meat unfit for human consumption and that are authorized to do so within the meaning of the Regulation respecting food (R.R.Q., 1981, c. P-29, r. 1).

157. Sections 64.2 to 64.12 of the Environment Quality Act shall apply only to technical landfills governed by Division 2 of Chapter II of this Regulation.

158. This Regulation replaces the Regulation respecting solid waste (R.R.Q., 1981, c. Q-2, r. 14), except to the extent that the latter continues to apply, as provided for in the following sections, to the existing landfills.

159. The following shall continue to be governed by the Regulation respecting solid waste:

(1) residual material disposal sites that were definitely closed before (*enter the date of coming into force of this Regulation*);

(2) residual material deposit sites that, on the landfills in operation on (*enter the date of coming into force of this Regulation*), were subject, on that date, to a final cover.

This continuance of the regulatory provisions shall apply only to the extent that the sites remain closed.

160. In disposal and storage sites in operation on (*enter the date of coming into force of this Regulation*), the zones that, in accordance with authorizations granted before that date, receive residual materials after that same date shall be, under the conditions and within the periods set out hereafter, governed by the provisions of this Regulation:

(1) in the case of zones located in sanitary landfills, the provisions of sections 6, 7, 9, 11 to 16, 18 to 27, 29, 32, 34, 35, 42, 43, 45 to 76, 86 and 87 shall apply only as of (*enter the date corresponding to the third anniversary of the coming into force of this Regulation*);

(2) in the case of zones located in in-trench deposits, the provisions of sections 11 to 14, 16, 26, 34, 45 to 47, 49 to 52, 54 to 59, 62 and 86 to 89 shall apply only as of (*enter the date corresponding to the third anniversary of the coming into force of this Regulation*);

(3) in the case of zones located in dry material disposal sites, the provisions of sections 11 to 14, 26, 34, 45 to 47, 49 to 53, 54 to 76, 86, 87, 105, the second paragraph of section 106, the first and second paragraphs of section 108, sections 109 and 111 shall apply only as of (*enter the date corresponding to the third anniversary of the coming into force of this Regulation*).

However, and only to the extent that it is necessary to avoid any legislative gap, the provisions of the Regulation respecting solid waste shall continue to govern the residual material deposit sites referred to in subparagraphs 1 to 3 of the first paragraph until the provisions of this Regulation respecting the same materials become applicable to those sites; thus, as for the receivability of residual materials in the zones referred to in subparagraph 1 or 2, the former regulatory provisions prescribing what residual materials may be received in those zones shall continue to apply until the zones comply with all the provisions of this Regulation, that is, no later than (*enter the date corresponding to the third anniversary of the coming into force of this Regulation*) for the zones referred to in subparagraphs 1, 2 and 3.

161. Sections 129, 130 and 133 to 136 shall apply to urban residual material incineration facilities in operation on (*enter the date of coming into force of this Regulation*) only as of (*enter the date corresponding to the third anniversary of the coming into force of this Regulation*).

However, and only to the extent that it is necessary to avoid any legislative gap, the provisions of the Regulation respecting solid waste and of the Regulation respecting the quality of the atmosphere shall continue to govern those facilities until the provisions of this Regulation respecting the same materials apply to them.

162. A disposal site that complies with the provisions for which a time period is prescribed by sections 160 and 161 within a shorter period shall be governed by all the provisions of this Regulation.

163. Existing disposal sites that are not governed by the provisions of the Regulation respecting solid waste shall be exempt from the application of the provisions of this Regulation where they were definitely closed before (*enter the date of coming into force of this Regulation*) as long as they remain closed.

Where those disposal sites are in operation on (*enter the date of coming into force of this Regulation*), the zones that receive residual materials after that date shall be governed by the provisions of this Regulation on (*enter the date corresponding to the third anniversary of the coming into force of this Regulation*).

164. Notwithstanding sections 159 to 163, the limits in section 45 of this Regulation shall apply to any water from existing disposal sites as soon as it is channelled, for treatment, in a facility where water from residual material deposit sites governed by this Regulation is also treated.

165. The operator of any disposal site or residual material transfer station in operation on (*enter the date of coming into force of this Regulation*) shall benefit from a 6-month period, from that date, to provide a guarantee complying with the second paragraph of section 141.

166. In sanitary landfills in operation, the residual material deposit sites whose tightness does not comply with the standards prescribed by section 18, 19, 20 or 21 and that, before (*enter the date of coming into force of this Regulation*), were subject to a final cover, may in no case receive other residual materials after that date.

As for the zones the tightness of which complies with the standards prescribed by section 18, 19, 20 or 21 but that do not comply with the standards prescribed by Division 2 of Chapter II, as well as the sites the tightness of which does not comply with the aforementioned standards without being subject to a final cover before (*enter the date of coming into force of this Regulation*), the raising of the layers of residual materials may not exceed the following limits above the profile of the surrounding land:

(1) where layers of residual materials deposited in a deposit site exceed the natural ground surface at the limits of the site, the height of peripheral embankments made up of layers of residual materials above the ground may not exceed four metres, that height being measured from the natural ground surface at the limits of the site and excluding the final cover.

The deposit site must in addition be levelled so that the final profile of the layers of residual materials, excluding the final cover, has the following maximum slopes:

(a) the foot of the peripheral embankments referred to in the first paragraph must not exceed 30 %;

(b) the slope of the part of the deposit site located above the aforementioned embankments must not exceed

– 5 %, where the slope of the natural ground at the limits of the deposit site is equal to or less than that percentage; or

– the percentage of the slope of the natural ground at the limits of the deposit site, where the slope is greater than 5 %;

(2) where the layers of residual materials deposited in the deposit site do not exceed the natural ground surface at the limits of the site, the latter must be levelled so that its final profile, including the final cover, has a minimum slope of 2 % without exceeding 30 %.

Finally, residual material deposit sites that comply with all the provisions prescribed by Division 2 of Chapter II within time periods shorter than those prescribed by section 160 shall be, with respect to the raising of the layers of residual materials, exempt from the limits set out in the second paragraph and shall be governed by the integration to the surroundings rule as provided for in section 15.

167. The final cover of a sanitary landfill in operation on (*enter the date of coming into force of this Regulation*) may be carried out with materials different from those prescribed by the Regulation respecting solid waste provided that it complies with the requirements in section 42 of this Regulation.

168. The provisions of this Regulation also apply to the immovables included in a reserved area or in an agricultural zone established in accordance with the Act respecting the preservation of agricultural land and agricultural activities (R.S.Q., c. P-41.1).

169. Section 3 of the Regulation respecting the enforcement of certain legislative and regulatory provisions respecting the protection of the environment by wildlife conservation officers made by Order in Council 79-91 dated 23 January 1991 is amended

(1) by substituting the words “residual materials” for the word “waste” in paragraph 1;

(2) by substituting the following for paragraph 2:

“(2) Division 6 of Chapter II of the Regulation respecting the elimination of residual materials, made by Order in Council (*enter the number and the date of the Order in Council*).”.

170. Section 2.05 of the Decree respecting the cartage industry in the Montréal region (R.R.Q., 1981, c. D-2, r. 6) is amended by substituting the following for paragraph f:

“(f) the employee assigned to the removal of residual materials covered by the Regulation respecting the elimination of residual materials made by Order in Council (*enter the number and date of the Order in Council*).”.

171. Section 1 of the Regulation respecting standards of forest management for forests in the public domain made by Order in Council 498-96 dated 24 April 1996 is amended

(1) by striking out the definition of “sanitary landfill and in-trench disposal site” in the first paragraph;

(2) by striking out the words “a sanitary landfill and in-trench disposal site” in the second paragraph.

172. Section 47 of the same Regulation is amended by substituting the following for paragraph 1:

“(1) 30 metres wide around a technical landfill or an in-trench landfill governed by the Regulation respecting the elimination of residual materials made by Order in Council (*enter the number and date of the Order in Council*).”.

173. Section 7.1.2.1 of the Regulation respecting food (R.R.Q., 1981, c. P-29, r. 1) is amended by substituting the word “technical” and the words “the Regulation respecting the elimination of residual materials made by Order in Council (*enter the number and date of the Order in Council*)” for the word “sanitary” and the words “Divisions IV and V, respectively, of the Regulation respecting solid waste (R.R.Q., 1981, c. Q-2, r. 14)”.

174. Section 7.3.1 of the same Regulation is amended in the third paragraph

(1) by substituting the words “technical landfill” for the words “sanitary elimination site”;

(2) by substituting the words “Regulation respecting the elimination of residual materials” for the words “third paragraph of section 131 of the Regulation respecting solid waste”.

175. Section 10.3.1.18 of the same Regulation is amended by substituting the word “technical” for the word “sanitary” in subparagraph 2 of the first paragraph.

176. Section 13 of the Regulation respecting the application of the Environment Quality Act made by Order in Council 1529-93 dated 3 November 1993 is revoked.

177. Section 47 of the Regulation respecting pits and quarries (R.R.Q., 1981, c. Q-2, r. 2) is amended

(1) by substituting the words “residual materials” for the word “waste” in the heading of the section;

(2) in the first paragraph

(a) by substituting the words “residual materials” for the word “waste”;

(b) by substituting the number “55” for the number “54”;

(3) by striking out the word “sanitary” in the second paragraph.

178. Section 48 of the same Regulation is amended by substituting the words “residual materials” for the word “waste”.

179. The following is substituted for section 7 of the Regulation respecting sanitary conditions in industrial or other camps (R.R.Q., 1981, c. Q-2, r. 3):

“7. Residual materials: Residual materials produced by an industrial camp must be eliminated in accordance with the Regulation respecting the elimination of residual materials made by Order in Council (*enter the number and date of the Order in Council*).”.

180. Section 15 of the same Regulation is amended by substituting the words “residual materials” for the word “waste-pits” in paragraph *k*.

181. Section 16 of the same Regulation is amended by substituting the words “residual materials” for the word “waste-pits” in paragraph *c*.

182. Section 36 of the Regulation respecting biomedical waste is amended by substituting the words “Regulation respecting the elimination of residual materials made by Order in Council (*enter the number and date of the Order in Council*)” for the words “Regulation respecting solid waste (R.R.Q., 1981, c. Q-2, r. 14)” in paragraph 2.

183. Section 56 of the same Regulation is amended by substituting the words “Chapter V of the Regulation respecting the elimination of residual materials” for the words “section 17 of the Regulation respecting solid waste” in the third paragraph.

184. Section 72 of the Regulation respecting waste water disposal systems for isolated dwellings (R.R.Q., 1981, c. Q-2, r. 8) is amended by substituting the words “an elimination facility complying with the Regulation respecting the elimination of residual materials made by Order in Council (*enter the number and date of the Order in Council*)” for the words “a disposal site in conformity with sections 23 to 100 of the third paragraph of section 127 and of paragraph *b* or *e* of section 133 of the Regulation respecting solid waste (R.R.Q., 1981, c. Q-2, r. 14)”.

185. Section 2 of the Regulation respecting environmental impact assessment and review (R.R.Q., 1981, c. Q-2, r. 9) is amended by substituting the words “an urban residual materials” for the words “a city waste” in subparagraph *r* of the first paragraph.

186. Section 95 of the Regulation respecting pulp and paper mills, made by Order in Council 1353-92 dated 16 September 1992, is amended by substituting the words “the Regulation respecting the elimination of residual materials made by Order in Council (*enter the number and date of the Order in Council*)” for the words “the provisions of Divisions IV, V or VII of the Regulation respecting solid waste (R.R.Q., 1981, c. Q-2, r. 14), as amended,”.

187. Section 101 of the same Regulation is amended by substituting the words “technical landfill complying with the Regulation respecting the elimination of residual materials” for the words “solid waste sanitary landfill complying with Division IV of the Regulation respecting solid waste, as amended,”.

188. Section 107 of the same Regulation is amended by substituting the words “technical landfill complying with the Regulation respecting the elimination of residual materials” for the words “solid waste sanitary landfill site complying with the provisions of Division IV of the Regulation respecting solid waste, as amended,”.

189. Schedule X of the same Regulation is amended by substituting the words “municipal residual materials” for the words “municipal waste” in the table and by substituting the words “residual materials” for the words “solid waste”, “wastes” and “waste”, except in the expression “waste packages” and by substituting the word “residual materials” for the word “residues” in the note at the end of the table.

190. Section 2 of the Regulation respecting hazardous materials made by Order in Council 1310-97 dated 8 October 1997 is amended

(1) by substituting the word “technical” for the word “sanitary” in paragraph 13;

(2) by adding the following paragraph at the end:

“(21) ash and other residues from an incineration facility of urban residual materials, municipal sludge and biomedical residual materials.”.

191. Section 22 of the Regulation respecting the quality of the atmosphere (R.R.Q., 1981, c. Q-2, r. 20) is amended

(1) by substituting the words “residual materials” for the word “waste” in the heading of the section and in the first paragraph;

(2) in the third paragraph:

(a) by substituting the following for the first sentence: “This section does not apply to elimination facilities referred to in Divisions 3, 4 and 6 of Chapter II of the Regulation respecting the elimination of residual materials made by Order in Council (*enter the number and date of the Order in Council*).”;

(b) by substituting the words “such a facility” for the words “such a solid waste disposal site”.

192. The following is substituted for section 66.1 of the same Regulation:

“**66.1. Residual and biomedical materials incinerators:** The operator of a residual material incinerator within the meaning of the Regulation respecting the elimination of residual materials who incinerates residual materials referred to in section 1 of the Regulation respecting biomedical waste, made by Order in Council 583-92 dated 15 April 1992, must comply with sections 67 to 67.3, 67.5, 67.7 and 67.8 of this Regulation.”.

193. Section 67 of the same Regulation is revoked.

194. Section 5 of the Regulation respecting prevention programmes, approved by Order in Council 1282-82 dated 26 May 1982 is amended by adding the following clause at the end in subparagraph 4 of the first paragraph:

“(e) Regulation respecting the elimination of residual materials made by Order in Council (*enter the number and date of the Order in Council*);”.

195. Section 9 of the same Regulation is amended by adding the following clause at the end in subparagraph 4 of the first paragraph:

“(e) Regulation respecting the elimination of residual materials made by Order in Council (*enter the number and date of the Order in Council*);”.

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

SCHEDULE I

(ss. 3, 33, 42, 92, 93, 107 and 108)

SUBSTANCES	LIMITS mg/kg of dry matter (ppm)	
	B	C
I- METALS (and metalloids)		
Silver (Ag)	20	40
Arsenic (As)	30	50
Barium (Ba)	500	2000
Cadmium (Cd)	5	20
Cobalt (Co)	50	300
Total chromium (Cr)	250	800
Copper (Cu)	100	500
Tin (Sn)	50	300
Manganese (Mn)	1000	2200
Mercury (Hg)	2	10
Molybdenum (Mo)	10	40
Nickel (Ni)	100	500
Lead (Pb)	500	1000
Selenium (Se)	3	10
Zinc (Zn)	500	1500
II- OTHER INORGANIC COMPOUNDS		
Available bromide (Br)	50	300
Available cyanide (CN)	10	100
Total cyanide (CN)	50	500
Available fluoride (F)	400	2000
Total sulphur (S)	1000	2000
III- VOLATILE ORGANIC COMPOUNDS		
Monocyclic aromatic hydrocarbons		
Benzene	0.5	5
Chlorobenzene (mono)	1	10

SUBSTANCES	LIMITS mg/kg of dry matter (ppm)	
	B	C
1,2-Dichlorobenzene	1	10
1,3-Dichlorobenzene	1	10
1,4-Dichlorobenzene	1	10
Ethylbenzene	5	50
Styrene	5	50
Toluene	3	30
Xylenes	5	50
Chlorinated aliphatic hydrocarbons		
Chloroform	5	50
Vinyl chloride	0.4	0.4
1,1-Dichloroethane	5	50
1,2-Dichloroethane	5	50
1,1-Dichloroethene	5	50
1,2-Dichloroethene (cis and trans)	5	50
Dichloromethane	5	50
1,2-Dichloropropane	5	50
1,3-Dichloropropene (cis and trans)	5	50
1,1,2,2-Tetrachloroethane	5	50
Tetrachloroethene	5	50
Carbon tetrachloride	5	50
1,1,1-Trichloroethane	5	50
1,1,2-Trichloroethane	5	50
Trichloroethene	5	50
IV- PHENOLIC COMPOUNDS		
Non-chlorinated		
Cresol (ortho, meta, para)	1	10
2,4-Dimethylphenol	1	10
2-Nitrophenol	1	10
4-Nitrophenol	1	10

SUBSTANCES	LIMITS mg/kg of dry matter (ppm)	
	B	C
Phenol	1	10
Chlorinated		
(-2, -3 or -4) Chlorophenol	0.5	5
2,3-Dichlorophenol	0.5	5
2,4-Dichlorophenol	0.5	5
2,5-Dichlorophenol	0.5	5
2,6-Dichlorophenol	0.5	5
3,4-Dichlorophenol	0.5	5
3,5-Dichlorophenol	0.5	5
Pentachlorophenol (PCP)	0.5	5
2,3,4,5-Tetrachlorophenol	0.5	5
2,3,4,6-Tetrachlorophenol	0.5	5
2,3,5,6-Tetrachlorophenol	0.5	5
2,3,4-Trichlorophenol	0.5	5
2,3,5-Trichlorophenol	0.5	5
2,3,6-Trichlorophenol	0.5	5
2,4,5-Trichlorophenol	0.5	5
2,4,6-Trichlorophenol	0.5	5
3,4,5-Trichlorophenol	0.5	5
V- POLYCYCLIC AROMATIC HYDROCARBONS		
Acenaphthene	10	100
Acenaphthylene	10	100
Anthracene	10	100
Benzo (a) anthracene	1	10
Benzo (a) pyrene	1	10
Benzo (b + j + k) fluoranthene	1	10
Benzo (c) phenanthrene	1	10
Benzo (g,h,i) perylene	1	10
Chrysene	1	10

SUBSTANCES	LIMITS mg/kg of dry matter (ppm)	
	B	C
Dibenzo (a,h) anthracene	1	10
Dibenzo (a,i) pyrene	1	10
Dibenzo (a,h) pyrene	1	10
Dibenzo (a,l) pyrene	1	10
7,12-Dimethylbenzo (a) anthracene	1	10
Fluoranthene	10	100
Fluorene	10	100
Indeno (1,2,3-cd) pyrene	1	10
3-Methylcholanthrene	1	10
Naphtalene	5	50
Phenanthrene	5	50
Pyrene	10	100
1-Methylnaphtalene	1	10
2-Methylnaphtalene	1	10
1,3-Dimethylnaphtalene	1	10
2,3,5-Trimethylnaphtalene	1	10
VI- NON-CHLORINATED BENZENE COMPOUNDS		
Trinitrotoluene (TNT)	0.04	1.7
VII- CHLOROBENZENES		
Hexachlorobenzene	2	10
Pentachlorobenzene	2	10
1,2,3,4-Tetrachlorobenzene	2	10
1,2,4,5-Tetrachlorobenzene	2	10
1,2,3,5-Tetrachlorobenzene	2	10
1,2,3-Trichlorobenzene	2	10
1,2,4-Trichlorobenzene	2	10
1,3,5-Trichlorobenzene	2	10
VIII- POLYCHLORINATED BIPHENYLS (PCB)		
Summation of the congeners	1	10

SUBSTANCES	LIMITS mg/kg of dry matter (ppm)	
	B	C
IX- PESTICIDES		
Tebuthiuron	50	3600
X- OTHER ORGANIC SUBSTANCES		
Acrylonitrile	1	5
Bis(2-chloroethyl)ether	0.01	0.01
Ethylene glycol	97	411
Formaldehyde	100	125
Phtalates (each)	-	60
Dibutyl phtalate	6	7 X 10 ⁴
XI- INTEGRATING PARAMETERS		
Petroleum hydrocarbons C ₁₀ to C ₅₀	700	3500
XII- DIOXINS AND FURANS		
Summation of chlorodibenzodioxins and chlorodibenzofurans expressed as 2,3,7,8-TCDD toxic equivalent (NATO Scale, 1988)	15	750
SCHEDULE II (S. 133)		
INTERNATIONAL TOXICITY EQUIVALENCY FACTORS FOR SPECIFIC PCDD (POLYCHLORODIBENZO-P-DIOXINS) AND PCDF (POLYCHLORODIBENZOFURANS) CONGENERS (NATO, 1998)		
CONGENERS	TOXICITY EQUIVALENCY FACTORS	
2,3,7,8-T,CDD	1	
1,2,3,7,8-P,CDD	0.5	
1,2,3,4,7,8-H ₆ CDD	0.1	
1,2,3,6,7,8-H ₆ CDD	0.1	
1,2,3,7,8,9-H ₆ CDD	0.1	
1,2,3,4,6,7,8-H ₇ CDD	0.01	
OCDD	0.001	

INTERNATIONAL TOXICITY EQUIVALENCY
FACTORS FOR SPECIFIC
PCDD (POLYCHLORODIBENZO-P-DIOXINS) AND
PCDF (POLYCHLORODIBENZOFURANS) CONGENERS
(NATO, 1998)

CONGENERS	TOXICITY EQUIVALENCY FACTORS
2,3,7,8-T ₄ CDF	0.1
2,3,4,7,8-P ₅ CDF	0.5
1,2,3,7,8-P ₅ CDF	0.05
1,2,3,4,7,8-H ₆ CDF	0.1
1,2,3,7,8,9-H ₆ CDF	0.1
1,2,3,6,7,8-H ₆ CDF	0.1
2,3,4,6,7,8-H ₆ CDF	0.1
1,2,3,4,6,7,8-H ₇ CDF 1,2,3,4,7,8,9-H ₇ CDF	0.01 0.01
OCDF	0.001

3899

Draft Regulation

An Act respecting income support, employment assistance and social solidarity
(R.S.Q., c. S-32.001)

Income support — Amendments

Notice is hereby given, in accordance with sections 10 and 12 of the Regulations Act (R.S.Q., c. R-18.1), that the Regulation to amend the Regulation respecting income support, the text of which appears below, may be made by the Government upon the expiry of 30 days following this publication.

The purpose of the draft Regulation is to increase the amounts of the special benefits granted to pregnant or breast-feeding women, as well as those related to school expenses.

Under section 12 of that Act, the draft Regulation may be made at the expiry of a period shorter than the 45-day period applicable under section 11 of the same Act by reason of the urgency due to the following circumstances:

— since the proposed amendments will improve the Employment-Assistance Program, the recipients involved should benefit from them as soon as possible.

Further information on the draft Regulation may be obtained by contacting Gérard Lescot, Acting Director, Direction des politiques de sécurité du revenu, 425, rue Saint-Amable, 4^e étage, Québec (Québec) G1R 4Z1 (tel: (418) 646-7221, fax: (418) 643-0019).

Any interested person having comments to make on the draft Regulation is asked to send them in writing, before the expiry of the 30-day period, to the Minister of Social Solidarity, 425, rue Saint-Amable, 4^e étage, Québec (Québec) G1R 4Z1.

ANDRÉ BOISCLAIR,
Minister of Social Solidarity

Regulation to amend the Regulation respecting income support*

An Act respecting income support, employment assistance and social solidarity
(R.S.Q., c. S-32.001, s. 156, par. 13, and s. 160)

1. Section 55 of the Regulation respecting income support is amended by substituting the amount “\$55” for the amount “\$40” in paragraph 1.

2. The amount “\$55” is substituted for the amount “\$50” in section 56.

3. Section 68 is amended

(1) by substituting the amount “\$76” for the amount “\$46” in paragraph 1; and

(2) by substituting the amount “\$123” for the amount “\$93” in paragraph 2.

4. This Regulation comes into force on 1 January 2001.

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* The Regulation respecting income support, made by Order in Council 1011-99 dated 1 September 1999 (1999, *G.O.* 2, 2881), was last amended by the Regulations made by Orders in Council 339-2000 dated 22 March 2000 (2000, *G.O.* 2, 1840), 546-2000 dated 3 May 2000 (2000, *G.O.* 2, 2206), 637-2000 dated 24 May 2000 (2000, *G.O.* 2, 2535), 707-2000 dated 7 June 2000 (2000, *G.O.* 2, 2661) and 896-2000 dated 13 July 2000 (2000, *G.O.* 2, 3616). For previous amendments, refer to the *Tableau des modifications et Index sommaire*, Éditeur officiel du Québec, 2000, updated to 1 February 2000.