

## Regulation to amend the Regulation respecting lay-out standards for establishments\*

An Act respecting liquor permits  
(R.S.Q., c. P-9.1, s. 114, pars. 6 and 16)

1. Section 4 of the Regulation respecting lay-out standards for establishments is amended by inserting the words “with the exception of sections 8 and 9,” after the word “Regulation,”.
2. Section 8 is amended by substituting “or area reserved for spectators or participants” for “or other spectator areas” in the first paragraph.
3. Section 9 is amended by substituting “or area reserved for spectators or participants” for “or other spectator areas”.
4. This Regulation comes into force on the date of its publication in the *Gazette officielle du Québec*.

4408

Gouvernement du Québec

### O.C. 843-2001, 27 June 2001

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

#### Burial of contaminated soils

Regulation respecting the burial of contaminated soils

WHEREAS, under paragraphs *a, c, d, e, g, h, h.1, h.2, j, m* and *n* of section 31, paragraphs *d, e* and *f* of section 31.52, amended by section 10 of chapter 75 of the Statutes of 1999, paragraphs 1, 2, 5, 6 and 7 of section 70, replaced by section 29 of chapter 75 of the Statutes of 1999, and sections 86, 109.1 and 124.1 of the Environment Quality Act (R.S.Q., c. Q-2), the Government may make regulations on the matters set forth therein;

WHEREAS, under section 12 of the Regulations Act (R.S.Q., c. R-18.1), a proposed regulation may be made without having been published as provided for in section 8 of that Act where the authority making it is of the opinion that the urgency of the situation requires it;

WHEREAS, under section 18 of the same Act, a regulation may come into force on the date of its publication in the *Gazette officielle du Québec* where the authority that has made it is of the opinion that urgency of the situation requires it;

WHEREAS, under sections 13 and 18 of the same Act, the reason justifying the absence of prior publication and such coming into force shall be published with the regulation;

WHEREAS the Government is of the opinion that the urgency due to the following reasons justifies the absence of prior publication and an immediate coming into force of the Regulation respecting the burial of contaminated soils:

— considering the considerable increase in the volumes of highly contaminated soils buried, it is necessary to limit the burial of contaminated soils of any origin and to put into force the new rules respecting the burial of soils as soon as possible;

IT IS ORDERED, therefore, upon the recommendation of the Minister of the Environment:

THAT the Regulation respecting the burial of contaminated soils, attached to this Order in Council, be made.

*Le greffier du Conseil exécutif,*  
JEAN ST-GELAIS

#### Regulation respecting the burial of contaminated soils

Environment Quality Act  
(R.S.Q., c. Q-2, s. 31, pars. *a, c, d, e, g, h, h.1, h.2, j, m* and *n*, s. 31.52, pars. *d, e* and *f*, s. 70, pars. 1, 2, 5, 6 and 7, s. 86, s. 109.1 and s. 124.1; 1999, c. 75, ss. 10 and 29)

#### CHAPTER I SCOPE

1. This Regulation determines the conditions or prohibitions applicable to the layout and operation of contaminated soil burial sites referred to in section 2, as well as the conditions applicable to their closure and their post-closure follow-up.

\* The Regulation respecting lay-out standards for establishments, approved by Order in Council 1989-82 dated 2 September 1982 (1982, *G.O.* 2, 3159), was last amended by the Regulation approved by Order in Council 1050-2000 dated 24 August 2000 (2000, *G.O.* 2, 4492). For previous amendments, refer to the *Tableau des modifications et Index sommaire*, Éditeur officiel du Québec, 2000, updated to 1 November 2000.

2. This Regulation governs the establishment or extension of a site used, in whole or in part, for the final disposal of soils that contain one or several substances with a concentration lower than the limits in Schedule I and the final disposal of such soils in disposal sites already established and for which no certificate of authorization was issued allowing the disposal. For the purposes of this paragraph, the extension of a site used for the final disposal of the above-mentioned soils includes any alteration that increases the disposal capacity of that site.

The establishment or extension on the land of a site used exclusively for the final disposal of contaminated soils extracted from such land under rehabilitation work authorized under the Environment Quality Act (R.S.Q., c. Q-2) are exempt from the application of sections 10, 15, 16, 19, 21, 23, 40, 42, 48 to 55 and 64 to 66.

For the purposes of this Regulation, sediments extracted from a watercourse or body of water constitute soils.

## CHAPTER II CONTAMINATED SOIL BURIAL SITES

### DIVISION I GENERAL

3. Storage of contaminated soils with a view to their final disposal is allowed only on the land of origin, under rehabilitation work, or in an authorized burial site under the Act.

4. The following may not be disposed of in contaminated soil burial sites:

(1) soils that contain one or several substances with concentrations equal to or greater than the limits in Schedule I except

(a) if they are discharged in a site referred to in the second paragraph of section 2;

(b) the soils from which at least 90% of the substances initially present in the soils were removed by means of a treatment authorized under the Act and, in the case of removed metals and metalloids, only if they were stabilized, fixed or solidified by an authorized treatment;

(c) where a detailed report proves that a substance present in the soils may not be removed in a proportion of 90% following an authorized optimal treatment and there is no available technique for that purpose.

(2) soils having more than 50 mg of PCB per kilogram of soil;

(3) soils that, after segregation, contain more than 25% of residual materials;

(4) soils containing explosive or radioactive materials within the meaning of section 3 of the Regulation respecting hazardous materials made by Order in Council 1310-97 dated 8 October 1997, or materials incompatible, physically or chemically, with the materials making up the burial site; and

(5) contaminated soils containing a free liquid, according to a standard test carried out by a laboratory accredited by the Minister under section 118.6 of the Act.

### DIVISION II LAYOUT

#### §1. *General layout conditions*

5. A contaminated soil burial site must be located at less than one kilometre upstream from any water intake used to supply a municipal waterworks or a waterworks system operated by the holder of a permit issued under section 32.1 of the Act.

The distance prescribed by the first paragraph shall be measured from the inside limit of the buffer zone that must surround any contaminated soil burial site under section 10.

6. It is prohibited to lay out a contaminated soil burial site in the flood zone of a watercourse or body of water, where such 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.

7. It is prohibited to lay out a contaminated soil burial site where ground movement is likely to occur.

8. Laying out a contaminated soil burial site on a land within the supply area of a ground water collection system intended for the supply of a municipal waterworks or a waterworks system operated by the holder of a permit issued under section 32.1 of the Act or 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) is also prohibited.

It is also prohibited to lay out a contaminated soil burial site on land underneath which there is free ground water having a high aquifer potential. 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.

9. The maximum height of the final cover of the contaminated soil burial site shall be limited by a maximum slope of 30% and the obligation to maintain the periphery of the burial site at the same level as that of the surrounding soil. Moreover, the contaminated soil burial site must fit into the surrounding landscape.

10. A contaminated soil burial site shall include, on its periphery, a buffer zone at least 50 metres wide intended to safeguard the isolation of the site, to mitigate the nuisances thereof and to allow the carrying out of corrective work. There shall be no watercourse or body of water in that zone.

## §2. Tightness

11. In order to prevent soil and ground water from being contaminated, contaminated soil burial sites may only be laid out on lands where the unconsolidated deposits on which the contaminated soils will be deposited are composed on their beds and walls of a natural homogenous layer having on a permanent basis a hydraulic conductivity equal to or less than  $1 \times 10^{-6}$  cm/s at least three metres thick.

The zone on which the contaminated soils will be deposited shall be equipped, on their beds and walls, with an impermeabilization system with a double liner made up as follows:

(1) a bottom protection level made up of an impermeable synthetic membrane of a high-density polyethylene type or having equivalent characteristics at least 1.5 millimetres thick, installed on the layer of unconsolidated deposits;

(2) a top protection level made up of an impermeable synthetic membrane of a high-density polyethylene type or having equivalent characteristics at least 1.5 millimetres thick.

The natural layer and the above-mentioned impermeable membranes 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.

## §3. Collection and treatment of leachates

12. Contaminated soils burial sites must be equipped with a system that collects all the leachates and drains them towards a treatment unit or a tight reservoir sheltered from precipitation water in order to establish their quality before discharging them.

“Leachate” means any liquid or filtrate that has percolated through the contaminated soils.

For the purposes of the first paragraph, a leachate collection system must be installed on the bed of the burial site over the impermeable membrane. The system must be designed so that the maximum height of the liquid likely to accumulate on the bed of the burial site may not be greater than 30 centimetres.

Another system to collect and discharge leachates, intended to detect leakage, must be laid out between the two impermeable membranes. The layout of the collection system must allow for monitoring separate from the other collection systems.

## §4. Collection of gas

13. Contaminated soil burial sites must be equipped with a system that collects and samples all gas present in the soils.

## §5. Collection of surface water

14. Contaminated soil burial sites must be equipped with a surface water collection system that prevents the water from being in contact with the soils deposited there or from penetrating into the zone where the soils are deposited.

## DIVISION III OPERATION

### §1. General operating conditions

15. The operator of a contaminated soil burial site is required to check if the soils that enter the site may be received. For that purpose, the operator must, for any load of soils, ask and record in an annual operation register

(1) the name and address of the owner of the soils and the name of the carrier;

(2) the nature of substances present in the soils and their concentration value;

- (3) the origin of the soils;
- (4) the quantity of soils, expressed in weight (metric tonne);
- (5) the date on which they were received.

The operator must, before receiving contaminated soils, confirm the nature and the concentration values of substances present in the soils, among those in Schedule I, by means of an analysis report including a number of representative samples that allows to check if they may be received. The report shall be certified by a laboratory accredited by the Minister under section 118.6 of the Act and be attached to the operation register.

Moreover, the operator must, when receiving soils, have a certain number of samples analyzed to validate the aforementioned reports. The data will be attached to the register. To that end, a sampling and analysis program including the collection method and the number of samples required per unit of measurement of volume shall accompany the application for a certificate of authorization.

The operation registers and their schedules shall be kept on the site during its operation; after the site is closed, they shall be kept by the operator for a minimum of five years following the date the site is closed.

**16.** Contaminated soils must be spread and compacted. Removed, stabilized, fixed and solidified metals and metalloids, referred to in subparagraph *b* of paragraph 1 of section 4, must be set aside in the burial zone.

**17.** Contaminated soils must be deposited so as to prevent precipitation water in contact with the soils from contaminating uncontaminated water. Areas that were operated are successively filled up and the final cover prescribed in section 38 may be carried out.

**18.** Leachate collection and treatment systems, systems for the collection of surface water, systems for the collection of gas and the ground water monitoring facilities referred to in section 33 must at all times be kept in working order; for that purpose, they shall be subject to tests and maintenance or cleaning work depending on the frequency agreed upon when the certificate of authorization was issued. The components of the leachate treatment system must be tight.

**19.** Any contaminated soil burial site must be equipped with the following at the entrance:

(1) a conspicuous sign that indicates that the site is a contaminated soil burial site, the name and address of the operator and 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 an authorized person.

**20.** The operator of a contaminated soil burial site must take the necessary measures to prevent the scattering of dust on the site and the surrounding area.

**21.** The operator of a contaminated soil burial site shall prepare, for each year of operation, a report containing

(1) a compilation of data collected pursuant to subparagraphs 2, 3 and 4 of the first paragraph of section 15 relating to the nature of contamination, coordinates of the site of origin of the soils and quantity of buried contaminated soils;

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

(3) a summary of the data collected following sampling, analysis and measure plans and a summary of work carried out pursuant to sections 28, 30 to 33, 35 and 36, where applicable.

The report must be provided to the Minister in January of each year.

## **§2. Leachates**

**22.** Leachates and water collected by any collection system with which a contaminated soil burial site is equipped may be discharged in the environment only if they comply with the values established when the certificate of authorization was issued.

Any discharge in the hydrographic surface network or in a storm sewer network must be carried out without batch shockload on the receiving body of water.

**23.** In order to restrict access thereto, leachate treatment facilities must be located inside a building or be surrounded by a fence

**24.** Any dilution of leachates is prohibited with the exception of that caused by direct atmospheric precipitation.

### §3. Ground water

25. The quality of the ground water on the land must be determined before the implementation of the contaminated soil burial site for the substances referred to in section 29. The values obtained this way will be used as an action level for the purposes of section 36.

26. A monitoring network must be laid out near the burial sites and at the limits of the land to monitor the quality of ground water upstream and downstream from the facilities of the contaminated soil burial site. The location of the wells over the land and their depth will take into account the hydrogeological conditions.

### §4. Gas

27. Gas collected by the collection system with which a contaminated soil burial site is equipped may be discharged in the environment only if they comply with the values established at the time the certificate of authorization was issued.

### §5. Monitoring and supervision measures

28. The concentration and flow of gas must be measured at the outlet of the gas collection system of a contaminated soil burial site. Gas that may be present in soils shall be identified at the time the certificate of authorization is issued and the frequency at which it is measured shall also be indicated.

29. Parameters to be measured and substances to be analysed in ground water, leachates and surface water pursuant to sections 25 and 30 are those identified in Schedule II except for the establishments and extensions on the land of a site used exclusively for the final deposit of contaminated soils extracted from that land within the context of rehabilitation work authorized under the Act, in which case, the parameters to be measured and the substances to be analysed are those established in the beginning according to the contaminants likely to be present in the soils.

30. At least once a year, in the spring or fall, the operator of a contaminated soil burial site must take a grab sample of the leachates present in the collection system installed on the bed of the burial site and in the collection system laid out between the two impermeable membranes. The samples must be analysed for the parameters and substances referred to in section 29.

The quantity of leachates present in the collection system between the two impermeable membranes shall be measured twice a year, in the spring and fall.

31. The operator of a contaminated soil burial site must take a sample of water at the outlet of the treatment system or reservoir referred to in section 12, before each discharge in the environment and have them analysed for the parameters and substances referred to in section 30.

32. At least twice a year, in the spring and fall, the operator of a contaminated soil burial site must take grab samples of the surface water collection system. The samples must be analysed for the parameters and substances referred to in section 30.

33. At least three times a year, in the spring, summer and fall, the operator of a contaminated soil burial site must take a ground water sample in each of the monitoring wells located in the surroundings of the facilities to quantify each of the substances detected in the leachates collected in the preceding sampling plans. Where contaminants are detected, the operator must take a ground water sample in each of the monitoring wells located at the limits of the land and have them analysed for the same contaminants.

During sampling, the piezometric level of ground water shall also be measured.

34. Leachate, surface water and ground water samples taken pursuant to sections 25 and 30 to 33 must be analysed by a laboratory accredited by the Minister under section 118.6 of the Act. The operator must keep the analysis report produced by the laboratory for at least five years after the closure of the site.

35. At least once a year, the operator of a contaminated soil burial site must check the effectiveness and tightness of the collection systems and the leachate treatment system provided for in this subdivision. The report on the analyses related to the effectiveness of the treatment must be kept by the operator for at least five years from the date on which it was produced.

36. Where the values established according to section 25 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 remedy the situation.

## DIVISION IV ENSURING AND MONITORING QUALITY

37. A certified and independent professional must supervise the carrying out of development and final cover work of contaminated soil burial sites. He must, in particular, check the compliance of the material and

equipment used. The professional must provide the Minister, as soon as the site is completely laid out, with a report on his activities, attesting, if applicable, to the compliance of the facility with the standards applicable or indicating the elements that do not comply with the standards and the corrective measures to be taken.

## DIVISION V

### FINAL COVER AND CLOSURE

**38.** The final cover of a contaminated soil burial site consists of superposed layers and must comprise, from the bottom up,

(1) an impermeable layer consisting of

(a) the superposition of a layer of clay and an impermeable synthetic membrane of a high density polyethylene type or having equivalent characteristics at least 1.5 millimetres thick. Clay must have, on a permanent basis, a minimum hydraulic conductivity equal to or less than  $1 \times 10^{-7}$  cm/s at least 60 centimetres thick after compaction; or

(b) the superposition of two impermeable synthetic membranes of a high density polyethylene type or having equivalent characteristics at least 1.5 millimetres thick separated by an adequate protection layer.

If there is a physical or chemical size inconsistency between the contaminated soils and the impermeable layer, a transition zone consisting of a layer of soil at least 15 centimetres thick, a geotextile or the equivalent must be laid out;

(2) a drainage layer at least 60 centimetres thick after compaction having a hydraulic conductivity equal to or greater than  $1 \times 10^{-3}$  cm/s or the equivalent;

(3) a protective layer consisting of soil having the characteristics and thickness that can protect the impermeable layer against frost and biointrusions. The layer may comprise the drainage layer and the layer of soil suitable for vegetation;

(4) a layer of soil suitable for vegetation, at least 15 centimetres thick, must be sown in such way that revegetation takes place within one year. Notwithstanding the foregoing, the vegetation must not be made by means of species liable to damage the impermeable layer.

The final cover must have a slope of at least 2% and no more than 30% to enable the flow by gravity of runoff outward the deposit sites, while limiting soil erosion.

**39.** Holes, faults and subsidence must be filled until the soil disposal sites are completely stabilized so as to prevent water from accumulating on the different cover layers or from percolating through the site.

**40.** The operator must, 60 days before the end of the soil burial operations, forward the Minister a notice confirming the date on which the contaminated soil burial site will close; that date must not exceed one year following the end of burial operations.

**41.** Within six months following the date on which the contaminated soil burial site has been closed, the operator shall forward 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 equipment and systems with which the contaminated soil burial site is equipped;

(2) the compliance of the contaminated soil burial site with the provisions of this subdivision and with the provisions of the certificate of authorization respecting the final cover of buried contaminated soils and the integration of the site to the surroundings.

Moreover, the closing statement must include

(1) the evaluation of all the follow-up data gathered during the operation and a summary of the data taking into account all the contaminants present in the buried soils;

(2) a post-closure follow-up and monitoring program comprising the location of sampling and measuring points, the frequency of sampling and measuring, the parameters to be measured and the substances to be analysed for five years following the closure.

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

**42.** The following must be found at the entrance of a closed contaminated soil burial site:

(1) a conspicuous sign that indicates that the site is closed and that the disposal of contaminated soils is henceforth prohibited;

(2) a gate or any other device that prevents access to the site by the public.

## DIVISION VI POST-CLOSURE PERIOD

43. The obligations prescribed by the provisions of the preceding subdivisions of Chapter II of this Regulation shall continue to apply, *mutatis mutandis* and except for the following provisions, to any contaminated soil burial site referred to in section 2 that is closed for at least 30 years.

After the site is closed, the owner is responsible, particularly,

(1) for the maintenance of the integrity of the final cover of contaminated soils;

(2) for the monitoring and maintenance of leachate collection and treatment equipment, follow-up and monitoring equipment for surface and ground water and gas collection system;

(3) for the carrying out of the sampling, analysis and measuring plans, pertaining to leachates, surface water, ground water and gas.

44. At least three months before the end of the fifth year following the date on which the site was closed, a complete evaluation of the follow-up and monitoring data gathered during that period must be recorded in a report and forwarded to the Minister. The report will include a summary of the evaluation and an up-to-date follow-up and monitoring program for the period including the five following years.

45. The re-evaluation of the follow-up and monitoring program must be made and forwarded to the Minister at least three months before the end of the tenth year and then, on the basis of the data gathered, at a frequency that may be no more than five years.

The list of substances to be analysed may be revised and modified after each five-year period from the results obtained during that period.

46. The follow-up and monitoring program will include the analysis of all the substances in Schedule II at least every five years from the fifth year, except for the sites referred to in the second paragraph of section 2, in which case the parameters to be measured and the substances to be analyzed shall be those established first depending on the contaminants likely to be present in the soil.

47. No later than the third trimester of the 29th post-closure year, the owner of the contaminated soil burial site must have a certified and independent professional

prepare an assessment of the burial site and where applicable, its impact on the environment and have it forwarded to the Minister.

The owner of the contaminated soil burial site shall be released from the obligations imposed upon him under paragraph 3 of section 43 where the assessment proves that the burial 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 43 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 second paragraph.

## CHAPTER III SECURITY

48. The operation of a contaminated soil burial site is subject to the setting up, by the operator or by a third party on the operator's behalf, of a security intended to ensure, during the operation and on closure, the discharge of the obligations that the operator must meet under the Environment Quality Act and this Regulation.

The Minister may use the security referred to in the first paragraph where the operator fails to discharge the obligations that he must meet. The security may also be used where the operator becomes bankrupt or, if the operator is a legal person, in case of winding-up of the legal person.

The amount of the security shall correspond to two dollars per metric tonne according to the authorized maximum contaminated soil burial capacity.

49. An amount equal to 10% of the amount of the security must be provided to the Minister before the beginning of the operation. Moreover, a proportional amount established according to the volumes of buried soils in comparison with the authorized volume of soils equivalent to two dollars per metric tonne will be provided to the Minister in January of each year according to the data gathered pursuant to section 21.

50. The proportional amount referred to in section 49 will be decreased in a manner proportional to the work already done pursuant to sections 37 and 38.

51. The security shall be provided

(1) in cash, by bank draft 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 surety or bond, 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 Act respecting trust companies and savings companies (R.S.Q., c. S-29.01), the Act respecting insurance (R.S.Q., c. A-32) or the Act respecting financial services cooperatives (2000, c. 29); or

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

52. The amounts of money, drafts, cheques or warrants provided as security are deposited with the Minister of Finance, pursuant to the Deposit Act (R.S.Q., c. D-5) for the duration of the operation and until the expiry of the period specified in section 55 or following the revocation or the transfer of the certificate of authorization, according to the first possibility.

53. A security provided in the form of surety, a bond or a letter of credit shall have a term of not less than 12 months. Not less than 60 days before the expiry of the guarantee, its holder shall forward his renewed security to the Minister of the Environment, or any other security meeting the requirements prescribed by sections 48 and 51.

The security 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, according to the first possibility, the time period for filing a claim based on the operator's failure to perform his actions.

Any clause of revocation, rescission or cancellation of a security may take effect only in return for a notice sent by registered or certified mail to the Minister at least 60 days prior to the expiry of the security. At the time of the taking of effect of such a clause, if another security complying with the requirements prescribed in this Regulation has not been forwarded to the Minister, the operator may not pursue his activity until he has settled the question.

54. Before using the security, the Minister must give the operator 60 days advance notice. Upon the expiry of that time limit, the Minister may use the security to carry out the final cover and to rehabilitate the site

according to the requirements of this Regulation unless the operator has, in the meantime, already begun the required work.

Where the operator does not complete the required work, the Minister may give another 60 days advance notice and use the security in accordance with section 48.

55. An amount corresponding to 75% of the security shall be given to the operator at the time the site closes, when the Minister certifies that the operator complies with all the applicable provisions in Chapter II, and the balance shall be given to him after five years according to the same requirements.

#### CHAPTER IV CERTIFICATE OF AUTHORIZATION

56. No one may establish or alter a contaminated soil burial site without holding the titles of ownership of the land where the site and the systems necessary to operate the burial site are located.

57. The applications for the authorization referred to in section 31.1 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 extension	Alteration without extension
Contaminated soil burial site	\$1200	\$600

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 preceding 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 V PENAL

58. Every contravention of the provisions of sections 3, 15, 16, 19, 20, 21, 23, 27, 35, 36 and 39 to 42 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.

59. Every contravention of the provisions of sections 5 to 10, 14, 17, 18, 24, 25, 31 to 34, 37, 44 to 46 and 48 to 53 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.

60. Every contravention of the provisions of sections 4, 11 to 13, 22, 38 and 47 makes the operator of the facility liable to a fine

- (1) of \$10 000 in the case of a natural person ;
- (2) of \$25 000 to \$500 000 in the case of a legal person.

61. A person who introduces in a contaminated soil burial site materials that, within the meaning of this Regulation, may not be received therein is also liable to the penalties provided for in section 60.

62. Where, under section 43, the provisions of this Regulation are made applicable to a contaminated soil burial site 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 58 to 61, as the case may be.

63. In the case of a subsequent offence, the fines prescribed by sections 58 to 62 shall be doubled.

## CHAPTER VI MISCELLANEOUS PROVISIONS

64. Where, in Québec, there is no laboratory accredited for the analysis of a substance referred to in section 15, the analysis report required under that section must be prepared by a laboratory recognized by an authority competent in that field until a laboratory is accredited for the analysis of that substance in Québec. From that moment on, only the analysis reports prepared by a laboratory accredited under section 118.6 of the Act are accepted.

65. In contaminated soil burial sites in operation on 11 July 2001, the zones that, in accordance with authorizations granted before that date, receive contaminated soils after that same date shall be, under the conditions and within the periods set out in section 66, governed by the provisions of this Regulation.

66. The operator of a contaminated soil burial site in operation on 11 July 2001 shall benefit from a six-month period, from that date, to comply with the applicable obligations of this Regulation and to provide a guarantee complying with the third paragraph of section 48.

67. 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).

68. Subparagraph 1 of paragraph *e* of section 1 of the Regulation respecting solid waste (R.R.Q., 1981, c. Q-2, r. 14) is amended by inserting the words “, products resulting from the treatment of contaminated soils by a stabilization, fixation and solidification process” after the word “hydrocarbons”.

69. Section 54 of the same Regulation is amended by striking out “and a maximum of 100m<sup>3</sup> of earth and sand impregnated with less than 5% by weight of hydrocarbons per period of 4 consecutive months”.

70. This Regulation comes into force on the date of its publication in the *Gazette officielle du Québec*.

## SCHEDULE I (ss. 4 and 15)

SUBSTANCES	LIMITS mg/kg of dry matter (ppm)
<b>Inorganic</b>	
<b>Metals/Metalloids</b>	
Silver (Ag)	200
Arsenic (As)	250
Barium (Ba)	10 000
Cadmium (Cd)	100
Chromium (Cr)	4000
Cobalt (Co)	1500
Copper (Cu)	2500
Tin (Sn)	1500
Manganese (Mn)	11 000
Mercury (Hg)	50

SUBSTANCES	LIMITS mg/kg of dry matter (ppm)
Molybdenum (Mo)	200
Nickel (Ni)	2500
Lead (Pb)	5000
Selenium (Se)	50
Zinc (Zn)	7500
<b>Other inorganic compounds</b>	
Available bromide (Br <sup>-</sup> )	1500
Available cyanide (CN <sup>-</sup> )	300
Total cyanide (CN <sup>-</sup> )	5900
Available fluoride (F <sup>-</sup> )	10 000
<b>Organic</b>	
<b>Monocyclic aromatic volatile organic compounds</b>	
Benzene	5
Chlorobenzene	10
Ethylbenzene	50
<i>m</i> -Dichlorobenzene	10
<i>o</i> -Dichlorobenzene	10
<i>p</i> -Dichlorobenzene	10
Styrene	50
Toluene	30
Xylenes	50
<b>Chlorinated aliphatic volatile organic compounds</b>	
Bromodichloromethane	150
2-Chloro-1,3-butadiene	2.8
3-Chloropropylene	300

SUBSTANCES	LIMITS mg/kg of dry matter (ppm)
Chlorodibromomethane	150
Chloroethane	60
Chloroform or trichloromethane	50
Chloromethane or methyl chloride	300
Methylene chloride or dichloromethane	50
Vinyl chloride	60
1,2-Dibromo-3-chloropropane	150
1,1-Dichloroethane	50
1,1-Dichloroethylene	50
1,2-Dichloroethylene (cis and trans)	50
1,2-Dichloroethane	50
1,2-Dichloropropane	50
1,3-Dichloropropylene (cis and trans)	50
Dichlorodifluoromethane	72
Hexachlorobutadiene	56
Hexachloroethane	300
Pentachloroethane	60
1,1,1,2-Tetrachloroethane	60
1,1,2,2-Tetrachloroethane	50
Tetrachloroethylene or perchloroethylene	50
Carbon tetrachloride	50
1,1,1-Trichloroethane	50
1,1,2-Trichloroethane	50
1,2,3-Trichloropropane	300
Trichloroethylene	50
Trichlorofluoromethane	300
<b>Non-chlorinated phenolic compounds</b>	
2,4-Dimethylphenol	140

SUBSTANCES	LIMITS mg/kg of dry matter (ppm)
<i>m</i> -Cresol	56
<i>o</i> -Cresol	56
<i>p</i> -Cresol	56
<i>o</i> -Nitrophenol or 2-Nitrophenol	130
<i>p</i> -Nitrophenol or 4-Nitrophenol	290
Phenol	62
<b>Chlorinated phenolic compounds</b>	
2-Chlorophenol	57
3-Chlorophenol	57
4-Chlorophenol	57
2,3-Dichlorophenol	140
2,4-Dichlorophenol	140
2,5-Dichlorophenol	140
2,6-Dichlorophenol	140
3,4-Dichlorophenol	140
3,5-Dichlorophenol	140
<i>p</i> -Chloro- <i>m</i> -cresol	140
Pentachlorophenol	74
2,3,4,5-Tetrachlorophenol	74
2,3,4,6-Tetrachlorophenol	74
2,3,5,6-Tetrachlorophenol	74
2,3,4-Trichlorophenol	74
2,3,5-Trichlorophenol	74
2,3,6-Trichlorophenol	74
2,4,5-Trichlorophenol	74
2,4,6-Trichlorophenol	74
3,4,5-Trichlorophenol	74

SUBSTANCES	LIMITS mg/kg of dry matter (ppm)
<b>Polycyclic aromatic hydrocarbons</b>	
Acenaphthene	100
Acenaphthylene	100
Anthracene	100
Benzo(b+j+k)fluoranthene	136
Benzo(a)anthracene	34
Benzo(a)pyrene	34
Benzo(c)phenanthrene	56
Benzo(g,h,i)perylene	18
2-Chloronaphthalene	56
Chrysene	34
Dibenzo(a,h)anthracene	82
Dibenzo(a,h)pyrene	34
Dibenzo(a,i)pyrene	34
Dibenzo(a,l)pyrene	34
7,12-Dimethylbenzo(a)anthracene	34
Fluoranthene	100
Fluorene	100
Indeno(1,2,3-cd)pyrene	34
Methylnaphthalenes ( <i>each</i> )	56
3-Methylcholanthrene	150
Naphthalene	56
Phenanthrene	56
Pyrene	100
<b>Non-chlorinated benzene compounds</b>	
2,6-Dinitrotoluene	280
2,4,6-Trinitrotoluene or TNT	280

SUBSTANCES	LIMITS mg/kg of dry matter (ppm)
<b>Chlorobenzenes</b>	
Benzal chloride or dichloromethylbenzene	60
Hexachlorobenzene	100
4,4-Methylene bis(2-chloro-aniline)	300
<i>p</i> -Chloroaniline or chloroaminobenzene	160
Pentachlorobenzene	100
Pentachloronitrobenzene	48
1,2,3,4-Tetrachlorobenzene	140
1,2,3,5-Tetrachlorobenzene	140
1,2,4,5-Tetrachlorobenzene	140
1,2,3-Trichlorobenzene	190
1,2,4-Trichlorobenzene	190
1,3,5-Trichlorobenzene	190
<b>Polychlorinated biphenyls</b>	
PCBs ( <i>summation of the congeners</i> )	50
<b>Chlorinated pesticides</b>	
2,4,5-T	79
2,4-D	100
Aldrin	0.66
alpha-BHC or hexachlorocyclohexane	0.66
beta-BHC or hexachlorocyclohexane	0.66
delta-BHC or hexachlorocyclohexane	0.66
gamma-BHC or lindane, hexachlorocyclohexane	0.66
Barban	14
Chlordane ( <i>alpha and gamma</i> )	2.6
Dieldrin	1.3

SUBSTANCES	LIMITS mg/kg of dry matter (ppm)
Endosulfan I	0.66
Endosulfan II	1.3
Endosulfan sulfate	1.3
Endrin	1.3
Endrin aldehyde	1.3
Heptachlor epoxide	0.66
Heptachlor	0.66
Formetanate hydrochloride	14
Isodrin	0.66
Kepone	1.3
Methoxychlor	1.8
<i>o,p'</i> -DDD	0.87
<i>p,p'</i> -DDD	0.87
<i>o,p'</i> -DDE	0.87
<i>p,p'</i> -DDE	0.87
<i>o,p'</i> -DDT	0.87
<i>p,p'</i> -DDT	0.87
Pronamide	15
Silvex or fenoprop	79
Thiodicarb	14
Toxaphene	26
Triallate	14
<b>Non-chlorinated pesticides</b>	
Aldicarb sulfone ( <i>summation of Aldicarb, Aldicarb sulfone and Aldicarb sulfoxide</i> )	2.8
Bendiocarb	14
Bendiocarb phenol	14
Benomyl	14

SUBSTANCES	LIMITS mg/kg of dry matter (ppm)	SUBSTANCES	LIMITS mg/kg of dry matter (ppm)
Butylate	14	Prosulfocarb	14
Carbaryl	1.4	Tebuthiuron	3600
Carbendazim	14	Thiophanate-methyl	14
Carbofuran	1.4	Tirpate	2.8
Carbofuran phenol	14	Vernolate	14
Carbosulfane	14	A2213 or oxamyl oxime	14
Dimetilan	14		
Dinoseb	25	<b>Other organic substances</b>	
Disulfoton	62	Acrylonitrile	840
Dithiocarbamates ( <i>total</i> )	280	Diethyl phtalate	280
EPTC	14	Dimethyl phtalate	280
Famphur	150	Di-n-butyl phtalate	70 000
Formparanate	14	Di-n-octyl phtalate	280
Isolan	14	Ethylene glycol	411
<i>m</i> -cumenyl methylcarbamate	14	Formaldehyde	125
Methiocarb	14	Hexachlorocyclopentadiene	24
Methomyl	1.4	Hexachloropropylene	300
Metolcarb	14	Phtalates ( <i>each, except other listed phtalates</i> )	60
Mexacarbate	14	1,1,2-Trichloro-1,2,2-trifluoroethane	300
Molinate	14	bis(2-chloroethyl)ether	60
Oxamyl	2.8	bis(2-chloroethoxy)methane	72
Parathion	46	bis(2-chloroisopropyl)ether	72
Methyl parathion	46	Butyl benzyl phtalate	280
Pebulate	14		
Phorate	46	<b>Petroleum products</b>	
Promecarb	14	Petroleum hydrocarbons C <sub>10</sub> to C <sub>50</sub>	10 000
Propham	14		
Propoxur	14	<b>Chlorinated dioxins and furans</b>	
		Summation as toxic equivalents in accordance with the following table	0.005

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 <sub>4</sub> CDD	1
1,2,3,7,8-P <sub>5</sub> CDD	0.5
1,2,3,4,7,8-H <sub>6</sub> CDD	0.1
1,2,3,6,7,8-H <sub>6</sub> CDD	0.1
1,2,3,7,8,9-H <sub>6</sub> CDD	0.1
1,2,3,4,6,7,8-H <sub>7</sub> CDD	0.01
OCDD	0.001
2,3,7,8-T <sub>4</sub> CDF	0.1
2,3,4,7,8-P <sub>5</sub> CDF	0.5
1,2,3,7,8-P <sub>5</sub> CDF	0.05
1,2,3,4,7,8-H <sub>6</sub> CDF	0.1
1,2,3,7,8,9-H <sub>6</sub> CDF	0.1
1,2,3,6,7,8-H <sub>6</sub> CDF	0.1
2,3,4,6,7,8-H <sub>6</sub> CDF	0.1
1,2,3,4,6,7,8-H <sub>7</sub> CDF	0.01
1,2,3,4,7,8,9-H <sub>7</sub> CDF	0.01
OCDF	0.001

**SCHEDULE II**  
(ss. 29 and 46)

SUBSTANCES

METALS (and metalloids)

Aluminium (Al)

Antimony (Sn)

Antimony III (Sn III)

Silver (Ag)

Arsenic (As)

Barium (Ba)

Cadmium (Ca)

Chromium (Cr)

Chromium VI (Cr VI)

Cobalt (Co)

Copper (Cu)

Manganese (Mn)

Mercury (Hg)

Molybdenum (Mo)

Nickel (Ni)

Lead (Pb)

Selenium (Se)

Sodium (Na)

Zinc (Zn)

OTHER INORGANIC COMPOUNDS

Ammonia nitrogen (NH<sub>4</sub><sup>+</sup>)

Chlorides (Cl)

Available cyanides (CN<sup>-</sup>)

Total cyanides (CN<sup>-</sup>)

Total fluorides

Nitrate (N-NO<sub>3</sub><sup>-</sup>)

Nitrite (N-NO<sub>2</sub><sup>-</sup>)

Nitrate + Nitrite

Total phosphor (P-PO<sub>4</sub><sup>-3</sup>)

Sulfides (H<sub>2</sub>S)

VOLATILE ORGANIC COMPOUNDS

**Monocyclic aromatic hydrocarbons**

Benzene

Chlorobenzene

1,2-Dichlorobenzene

1,3-Dichlorobenzene

1,4-Dichlorobenzene

Ethylbenzene

Styrene

Toluene

Xylenes

**Chlorinated aliphatic hydrocarbons**

Chloroform

Vinyl chloride or chloroethene

1,2-Dichloroethane

1,1-Dichloroethene

1,2-Dichloroethene

1,2-Dichloroethene (trans)

Dichloromethane

1,2-Dichloropropane

1,3-Dichloropropane

1,3-Dichloropropene (cis + trans) C

1,1,2,2-Tetrachloroethane

Tetrachloroethene

Carbon tetrachloride

1,1,1-Trichloroethane

1,1,2-Trichloroethane

Trichloroethene

**PHENOLIC COMPOUNDS****Non-chlorinated***o*-Cresol*p*-Cresol

2,4-Dimethylphenol

2,4-Dinitrophenol

2-Methyl-4,6-dinitrophenol

4-Nitrophenol

Phenol

**Chlorinated**

2-Chlorophenol

3-Chlorophenol

4-Chlorophenol

2,3-Dichlorophenol

2,4-Dichlorophenol

2,5-Dichlorophenol

2,6-Dichlorophenol

3,4-Dichlorophenol

3,5-Dichlorophenol

Pentachlorophenol

2,3,4,6-Tetrachlorophenol

2,3,5,6-Tetrachlorophenol

2,4,5-Trichlorophenol

2,4,6-Trichlorophenol

Chlorophenols

**POLYCYCLIC AROMATIC HYDROCARBONS**

Acenaphthene

Anthracene

Benzo(a)anthracene

Benzo(b + j)fluoranthene

Benzo(k)fluoranthene

Benzo(a)pyrene

Chrysene

Dibenzo(a,h)anthracene

Fluoranthene

Fluorene

Indeno(1,2,3-c,d)pyrene

Naphthalene

Phenanthrene

Pyrene

**NON-CHLORINATED BENZENE COMPOUNDS**

2,4-Dinitrotoluene

2,6-Dinitrotoluene

Nitrobenzene

**CHLOROBENZENES**

Hexachlorobenzene

Pentachlorobenzene

1,2,3,4-Tetrachlorobenzene	Paraquat
1,2,4,5-Tetrachlorobenzene	Parathion
1,2,3-Trichlorobenzene	Permethrin
1,2,4-Trichlorobenzene	Phorate
Trichlorobenzenes ( <i>total</i> )	Picloram
PESTICIDES	Simazine
Atrazine and metabolites	Tebuthiuron
Azinphos-methyl	Terbufos
Bentazon	Trifluralin
Bromoxynil	2,4-D
Captan	2,4-DB
Carbaryl	PESTICIDES THAT ARE NO LONGER USED BUT STILL PERSISTING IN THE ENVIRONMENT
Carbofuran	<i>Aldicarb (summation of Aldicarb, Aldicarb sulfone and Aldicarb sulfoxide)</i>
Chlorothalonil	Aldrin
Chlorpyrifos	Chlordane
Cyanazine	Dieldrin
Deltamethrin	<i>p,p'</i> DDT
Diazinon	<i>p,p'</i> DDE
Dicamba	Endrin
Dichlorprop	Heptachlor epoxide
Dimethoate	Fenoprop or Silvex
Diquat	Heptachlor
Diuron	Methoxychlor
Endosulfan (I and II)	Mirex
Glyphosate	2,4,5-T
Lindane	OTHER ORGANIC SUBSTANCES
Malathion	Acrylonitrile
MCPA	Bis(2-chloroethyl)ether
Metolachlor	Ethylene glycol
Metribuzin	Formaldehyde
Myclobutanil	Hexachloroethane
Paraquat (dichloride)	



Pentachloroethane

Dibutyl phtalate

2,4,6-Trinitrotoluene or TNT

INTEGRATING PARAMETERS

Phenol index

Chronic toxicity

Acute toxicity

Petroleum hydrocarbons C<sub>10</sub> to C<sub>50</sub>

4409

Gouvernement du Québec

**O.C. 865-2001**, 4 July 2001

Education Act  
(R.S.Q., c. I-13.3)

**Basic school regulation for preschool, elementary and secondary education**  
— Amendments

Regulation to amend the Basic school regulation for preschool, elementary and secondary education

WHEREAS under section 447 of the Education Act (R.S.Q., c. I-13.3), the Government may make a regulation to be known as the “basic school regulation”;

WHEREAS by Order in Council 651-2000 dated 1 June 2000, the Government made the Basic school regulation for preschool, elementary and secondary education;

WHEREAS it is expedient to amend the Basic school regulation for preschool, elementary and secondary education;

WHEREAS in accordance with section 458 of the Education Act, a draft Regulation attached to this Order in Council was submitted to the Conseil supérieur de l'éducation and an advice was forwarded to the Minister;

WHEREAS in accordance with sections 10 and 11 of the Regulations Act (R.S.Q., c. R-18.1), the draft Regulation was published in Part 2 of the *Gazette officielle du Québec* of 4 April 2001 with a notice that it could be made by the Government upon the expiry of 45 days following that publication;

WHEREAS comments were made following that publication;

WHEREAS it is expedient to make the Regulation with amendments;

IT IS ORDERED, therefore, upon the recommendation of the Minister of Education:

THAT the Regulation to amend the Basic school regulation for preschool, elementary and secondary education, attached to this Order in Council, be made.

JEAN ST-GELAIS,  
*Clerk of the Conseil exécutif*

**Regulation to amend the Basic school regulation for preschool, elementary and secondary education\***

Education Act  
(R.S.Q., c. I-13.3, s. 447)

1. Section 4 of the Basic school regulation for preschool, elementary and secondary education is amended as follows:

(1) the following is substituted for paragraph 2:

“(2) student life services designed to foster students’ autonomy and sense of responsibility, their moral and spiritual dimensions, their interpersonal and community relationships, as well as their feeling of belonging to the school;”;

(2) paragraph 5 is revoked.

2. Section 5 is amended by adding the following paragraph 12:

“(12) services in spiritual care and guidance and community involvement.”.

3. Subparagraph 4 of the second paragraph of section 9 is revoked.

4. The following is substituted for the first paragraph of section 22:

“22. In elementary education, the following subjects are compulsory and the number of hours per week is suggested:

\* The Basic school regulation for preschool, elementary and secondary education was made by Order in Council 651-2000 dated 1 June 2000 (2000, *G.O.* 2, 2593).