

Regulations and other acts

Gouvernement du Québec

O.C. 808-2007, 18 September 2007

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

Pulp and paper mills

Regulation respecting pulp and paper mills and amending various regulatory provisions

WHEREAS subparagraphs *a* to *e*, *f*, *g*, *h* to *j* and *m* of the first paragraph of section 31, paragraphs *a* to *g* and *l* of section 46, subparagraphs 1, 2 and 4 of the first paragraph of section 53.30, paragraphs 1, 2, 5 and 6 of section 70 and sections 109.1 and 124.1 of the Environment Quality Act (R.S.Q., c. Q-2) empower the Government to make regulations on the matters set forth therein;

WHEREAS, in accordance with sections 10 and 11 of the Regulations Act (R.S.Q., c. R-18.1) and with section 124 of the Environment Quality Act, a draft Regulation respecting pulp and paper mills was published in Part 2 of the *Gazette officielle du Québec* of 21 December 2005 with a notice that it could be made by the Government on the expiry of 60 days following that publication;

WHEREAS it is expedient to make the Regulation with amendments following the publication in the *Gazette officielle du Québec* after which comments were received;

IT IS ORDERED, therefore, on the recommendation of the Minister of Sustainable Development, Environment and Parks:

THAT the Regulation respecting pulp and paper mills, attached to this Order in Council, be made.

GÉRARD BIBEAU,
Clerk of the Conseil exécutif

Regulation respecting pulp and paper mills and amending various regulatory provisions

Environment Quality Act
(R.S.Q., c. Q-2, s. 31, pars. *a* to *e*, *f*, *g*, *h* to *j* and *m*, s. 46, pars. *a* to *g* and *l*, s. 53.30, 1st par., subpars. 1, 2 and 4, s. 70, pars. 1, 2, 5 and 6, ss. 109.1 and 124.1)

CHAPTER I INTERPRETATION AND GENERAL

1. In this Regulation,

“acute lethality level” means the level where effluent toxicity causes the death of more than 50% of rainbow trout exposed for 96 hours to an undiluted effluent; in such a case, toxicity is greater than 1 toxic unit; (*niveau de létalité aiguë*)

“AOX” means adsorbable organic halogens; (*COHA*)

“BOD₅” means a 5-day biochemical oxygen demand; (*DBO₅*)

“complex” means a group of at least two mills that do not have the same owner, where the process water from the mills is wholly or partially mixed and is treated by the same person; (*complexe*)

“composite sample” means a sample consisting of all the samples taken at a sampling station in one day; (*échantillon composite*)

“daily bleached pulp production” means the quantity of pulp produced by a mill in one day and bleached with a chlorinated bleaching agent, expressed in tonnes and evaluated after the final stage of bleaching at a water content of 10%; (*production quotidienne de pâte blanchie*)

“daily dissolving grade sulphite pulp production” means the quantity of dissolving grade sulphite pulp produced by a mill in one production day, expressed in tonnes and evaluated after the final stage of bleaching at a water content of 10%; (*production quotidienne de pâte au bisulfite à dissoudre*)

“daily loss” means the measurement of TSS, BOD₅ or AOX discharge expressed in kilograms per day, corresponding

(1) for the final effluent discharged into the environment or into a storm sewer, to the concentration of the contaminant in that effluent multiplied by the daily flow of that effluent;

(2) for the final effluent discharged into a sewer system, to the result obtained using the following formula: $A \times B \times C$, where A is the concentration of the contaminant in that effluent, B is the daily flow of that effluent and C is the portion of those contaminants not eliminated by municipal treatment, being 15% for TSS and BOD₅ and 50% for AOX; (*perte quotidienne*)

“daily production of finished product” means the quantity of finished product manufactured each day and intended for sale and, in the case of a complex, the quantity of finished product manufactured each day and intended for sale outside the complex; that quantity is expressed in tonnes and determined by weight; if the water content of the finished product is greater than 10%, the quantity weighed is corrected to bring the water content back to 10%; (*production quotidienne de produits finis*)

“day” means a 24-hour interval commencing at a fixed time and corresponding to both the period during which the necessary sampling is performed to collect the composite samples in Chapter IV and the period during which daily production of finished product is calculated; (*jour*)

“dissolving grade sulphite pulp” means purified pulp produced by the sulphite process, with a cooking yield of less than 46% at all times; the cooking yield corresponds to the number of kilograms of oven-dry pulp produced from 100 kilograms of oven-dry wood; (*pâte au bisulfite à dissoudre*)

“effluent” means process water that is no longer treated before being discharged into the environment, into a storm sewer or into a sewer system; (*effluent*)

“final effluent” means the effluent discharged into the environment, into a storm sewer or into a sewer system; (*effluent final*)

“finished product” means the paper product or pulp; (*produit fini*)

“leachate” means liquid or filtrate that has percolated through a layer of residual materials; (*eaux de filtration*)

“maximum lethality level” means the level where effluent toxicity causes the death of 50% of rainbow trout exposed for 96 hours to an effluent diluted in a ratio of 1:3 by volume; in such a case, toxicity is equal to 3 toxic units; (*niveau maximum de létalité*)

“mill” means any plant designed or used to manufacture a paper product or pulp intended for sale; (*fabrique*)

“mill residual materials” means bark, wood residue, pulp, paper and paperboard discards, ash from a combustion facility, sludge from process water treatment, de-inking sludge, lime sludge, green liquor dregs, residues from lime slaking and any other residue from the pulp or paper product manufacturing process and that is not a hazardous material within the meaning of section 1 of the Environment Quality Act (R.S.Q., c. Q-2); (*matières résiduelles de fabrication*)

“mixed sludge” means a mixture of sludge from process water treatment or a mixture of sludge from process water treatment and de-inking sludge; (*boues mixtes*)

“monthly loss” means the sum of the total daily losses for a final effluent measured over one month, divided by the number of days in the month on which sampling and analysis were conducted, the result of which is multiplied by the number of days in the month on which there was a discharge; for AOX, the result is multiplied by the number of days in the month in which bleached pulp was produced on which there was discharge into the environment; (*perte mensuelle*)

“paper product” means a product directly derived from pulp, such as paper, paperboard and any absorbent product or construction material manufactured on a paper or board machine; (*produit de papier*)

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

“ppm” means parts per million by volume; (*ppm*)

“process water” means wastewater from the operation of a mill, such as water from the treatment of feed water, water from the various stages of production, wash water or washing solutions that may be treated by the mill, boiler blow-down water, cooling water and seal water; (*eaux de procédé*)

“pulp” means treated cellulose fibres that are derived from wood, another vegetable material or recycled paper products; (*pâte*)

“reference conditions” means a temperature of 25°C and a barometric pressure of 101.3 kilopascals; (*conditions de référence*);

“RPR_B” means the reference production rate for bleached pulp with a chlorinated bleaching agent and, where applicable, the interim reference production rate for bleached pulp with a chlorinated bleaching agent; in the case of a complex, the reference production rate excludes the production of bleached pulp from a mill whose construction was completed after 21 October 1992; (*RPR_B*)

“RPR_D” means the reference production rate for dissolving grade sulphite pulp and, where applicable, the interim reference production rate for dissolving grade sulphite pulp; (*RPR_D*)

“RPR_F” means the reference production rate for all finished product other than dissolving grade sulphite pulp and, where applicable, the interim reference production rate for finished product other than dissolving grade sulphite pulp; in the case of a complex, the reference production rate excludes the production of finished product intended for sale or use within the complex and from a mill whose construction was completed after 21 October 1992; (*RPR_F*)

“RPR_{NB}” means the reference production rate for pulp bleached with a chlorinated bleaching agent from a mill whose construction was completed after 21 October 1992 and that is part of an existing complex and, where applicable, the interim reference production rate for pulp bleached with a chlorinated bleaching agent from a mill whose construction was completed after 21 October 1992 and that is part of an existing complex; (*RPR_{NB}*)

“RPR_{NF}” means the reference production rate for finished product from a mill whose construction was completed after 20 October 1992 and that is part of an existing complex and, where applicable, the interim reference production rate for finished product from a mill whose construction was completed after 21 October 1992 and that is part of an existing complex; (*RPR_{NF}*)

“sanitary wastewater” means wastewater from a mill’s sanitary facilities; (*eaux domestiques*)

“sewer system” means a municipal system of separate or combined sewers, excluding storm sewers; (*réseau d’égouts*)

“total reduced sulphur compounds” means hydrogen sulphide (H₂S), methyl mercaptan (CH₃SH), dimethyl sulphide ((CH₃)₂S) and dimethyl disulphide ((CH₃)₂S₂); (*composés de soufre réduit totaux*)

“total daily loss” means the sum of the daily losses for each of the final effluents; (*perte quotidienne totale*)

“total monthly loss” means the sum of the monthly losses for each of the final effluents; (*perte mensuelle totale*)

“TSS” means total suspended solids; (*MES*)

“100-year flood line” means the line that corresponds to the limit line of a flood likely to occur once every 100 years; (*ligne d’inondation de récurrence de 100 ans*)

An operator includes the person who has custody of a mill or a complex, a process water purification plant that is not a municipal plant, or a facility for the storage, final deposit by landfilling or treatment by combustion of mill residual materials.

2. The operator of a mill or a process water purification plant that is not a municipal plant must send a prevention and intervention program for accidental discharge containing the elements listed in Schedule I to the Minister of Sustainable Development, Environment and Parks within 30 days following the date on which operations begin.

The operator must update that program annually and send it to the Minister not later than 31 January of each year.

3. The operator of a mill or a process water purification plant must notify the Minister in writing of the time fixed for the beginning of a day. If that time is changed, the operator must notify the Minister in writing at least 40 days before the change.

4. This Regulation applies to a reserved area or an agricultural zone established under the Act respecting the preservation of agricultural land and agricultural activities (R.S.Q., c. P-41.1).

CHAPTER II WASTEWATER MANAGEMENT

DIVISION I SCOPE

5. This Chapter applies to the operator of a mill, to the operator of a complex and to the operator of a process water purification plant that is not a municipal plant.

Despite the foregoing, Division II applies only to the operator whose final effluent is discharged into the environment, into a storm sewer or into the environment and a sewer system.

DIVISION II**REFERENCE PRODUCTION RATE**

6. The reference production rate for finished product other than bisulphite pulp, for dissolving grade sulphite pulp or for bleached pulp with a chlorinated bleaching agent for any year corresponds respectively to the highest value of the 90th percentiles of the daily production for any of the previous three years.

The 90th percentile is the statistically derived value corresponding respectively to the production that was exceeded on 10% of the days that the mill operated in the year.

7. Where less than three years of the data referred to in section 6 are available on which to calculate the reference production rate, the operator is authorized to use a reference production rate calculated on the basis of available data, or an interim reference production rate.

An interim reference production rate corresponds to an estimation of the 90th percentile of the daily production of finished product less dissolving grade sulphite pulp, of dissolving grade sulphite pulp or of bleached pulp. The operator must send the estimation to the Minister, along with supporting documents.

8. If the 90th percentile of the daily production of finished product other than dissolving grade sulphite pulp, of dissolving grade sulphite pulp or of bleached pulp has increased or is expected to increase by more than 25%, in respect of any period of 100 consecutive days, from the reference production rate of the mill, the operator is authorized to use an interim reference production rate if the operator complies with the conditions in section 7.

9. If the 90th percentile of the daily production of finished product other than dissolving grade sulphite pulp, of dissolving grade sulphite pulp or of bleached pulp has decreased or is expected to decrease by more than 25%, in respect of any period of 100 consecutive days, from the reference production rate of the mill, the operator must use an interim reference production rate not later than 31 days after the decrease occurs or after becoming aware of the expected decrease and must comply with the conditions in section 7.

DIVISION III**STANDARDS FOR EFFLUENTS***§1. General*

10. Final effluent discharged into the environment must be discharged by an outfall that is submerged at all times; the same applies to the outfall of a storm sewer into which final effluent is discharged.

11. No foam is to be visible on the surface of the watercourse receiving the discharge at the point where final effluent discharged into the environment leaves the outfall or at the point where final effluent is discharged into the outfall of a storm sewer.

12. Final effluent discharged into the environment or into a storm sewer must have a pH between 6.0 and 9.5.

Despite the foregoing, the pH of the cooling water final effluent may be equal to that of the feed water.

13. Final effluent discharged into the environment or into a storm sewer must have a temperature lower than 65°C.

14. No effluent may contain a concentration of petroleum hydrocarbons C10-C50 in excess of 2 milligrams per litre.

The first paragraph does not apply to effluents discharged into sewer systems.

15. No effluent may contain a total concentration of chlorinated dioxins and chlorinated furans in excess of 15 picograms per litre expressed as 2, 3, 7, 8-tetrachlorodibenzodioxin toxic equivalents.

The congeners to be quantified individually and the toxic equivalency factors are those listed in Schedule II.

16. No effluent may contain a total concentration of polychlorinated biphenyls in excess of 3 micrograms per litre expressed per homologous group.

The homologous groups to be analyzed are those in Schedule III.

17. The discharge into the environment or into a storm sewer of final effluent whose toxicity has reached the acute lethality level is prohibited.

18. Dilution of an effluent is prohibited.

19. Despite section 18, two effluents may be combined if each of them complies with the standards prescribed in sections 14 to 16.

The toxicity of each of the effluents must be lower than the acute lethality level.

20. Despite sections 18 and 19, an effluent having undergone biological treatment and having reached the acute lethality level may be combined with another effluent provided that

(1) the average removal rate, measured in BOD₅ reduction from biological treatment, is at least 90% for the month preceding toxicity control sampling;

(2) the toxicity of the effluent having undergone biological treatment is lower than the maximum lethality level; and

(3) the mill has reduced its annual water consumption by at least 50% since 1985, calculated in cubic metres per tonne of production, except if the water consumption is lower than 40 cubic metres per tonne or the mill was built after 31 December 1971.

21. The solids accumulated in any process water treatment equipment may not be emptied with the effluents.

22. The operator may treat municipal wastewater if the average annual flow of such water accounts for no more than 10% of the flow for which the treatment plant was designed.

The operator may also treat industrial wastewater and septic tank sludge. An authorization for such treatment must be obtained under the Environment Quality Act.

Despite the treatment of wastewater and sludge, the operator must comply with the standards prescribed in this Division.

23. Gas scrubbing water from the process equipment referred to in Chapter III must be treated with the process water or discharged into a sewer system.

24. During the first day following the day on which a total production stoppage occurs and the day preceding the end of the stoppage, the total daily TSS or BOD₅ loss may not exceed the daily limit calculated under sections 29 and 31 or sections 37 and 39, as the case may be.

25. During the second day following the day on which a total production stoppage occurs and until the second last day of the stoppage, the total daily TSS or BOD₅ loss may not exceed 25% of the limit calculated as provided in section 24.

§2. Standards applicable to the final effluent from a complex and a mill whose construction was completed before 22 October 1992 and to the final effluent from a complex having a mill whose construction was completed after 21 October 1992

26. This Subdivision applies to final effluent from a complex or a mill whose construction was completed before 22 October 1992 and to final effluent from a

complex having a mill whose construction was completed after 21 October 1992, if the final effluent is discharged into the environment or into a storm sewer.

It also applies to

(1) final effluent from such a complex or mill that is discharged into a sewer system if the complex also discharges final effluent into the environment or into a storm sewer; and

(2) final effluent from a purification plant for process water from a mill or a complex referred to in the first paragraph or in subparagraph 1 of this paragraph.

27. The monthly loss of TSS, BOD₅ or AOX in the final effluents may not exceed the monthly limit established in sections 28, 30 and 32.

The total daily loss of TSS, BOD₅ or AOX in the final effluents may not exceed the daily limit established in sections 24, 25, 29, 31 and 33.

28. The monthly TSS discharge limit is the product of the RPR_F multiplied by a discharge standard of 7.1 kilograms per tonne and by the number of days in the month concerned.

For a dissolving grade sulphite pulp mill, the monthly TSS discharge limit is the limit calculated under the first paragraph, to which is added the product of the RPR_D multiplied by a discharge standard of 12 kilograms per tonne and by the number of days in the month concerned.

For a complex having a mill whose construction was completed after 21 October 1992, the monthly TSS discharge limit is the limit calculated under the first or second paragraph, to which is added the product of the RPR_{NP} multiplied by a discharge standard of 2.7 kilograms per tonne and by the number of days in the month concerned.

29. The daily TSS discharge limit is the product of a mill's RPR_F multiplied by a discharge standard of 14.2 kilograms per tonne.

For a dissolving grade sulphite pulp mill, the daily TSS discharge limit is the limit calculated under the first paragraph, to which is added the product of the RPR_D multiplied by a discharge standard of 24 kilograms per tonne.

For a complex having a mill whose construction was completed after 21 October 1992, the daily TSS discharge limit is the limit calculated under the first or

second paragraph, to which is added the product of the RPR_{NP} multiplied by a discharge standard of 5.3 kilograms per tonne.

30. The monthly BOD_5 discharge limit is the product of the RPR_F multiplied by a discharge standard of 4.5 kilograms per tonne and by the number of days in the month concerned.

For a mill or complex that, during the 12 months preceding 1 November 2007, measured for at least 30 consecutive days the BOD_5 upstream from the biological treatment and whose average load exceeded 25 kilograms per tonne, the monthly limit is the product of the RPR_F multiplied by a discharge standard of 6 kilograms per tonne and by the number of days in the month concerned.

For a dissolving grade sulphite pulp mill, the monthly BOD_5 discharge limit is the limit calculated under the first or second paragraph, to which is added the product of the RPR_D multiplied by a discharge standard of 18 kilograms per tonne and by the number of days in the month concerned.

For a complex having a mill whose construction was completed after 21 October 1992, the monthly BOD_5 discharge limit is the limit calculated under the preceding paragraphs, to which is added the product of the RPR_{NP} multiplied by a discharge standard of 2.2 kilograms per tonne and by the number of days in the month concerned.

The limit referred to in the second paragraph ceases to apply on 1 November 2009.

31. The daily BOD_5 discharge limit is the product of the RPR_F multiplied by a discharge standard of 7.1 kilograms per tonne.

If the monthly BOD_5 discharge limit is calculated under the second paragraph of section 30, the daily BOD_5 discharge limit is the product of the RPR_F multiplied by a discharge standard of 12 kilograms per tonne.

For a dissolving grade sulphite pulp mill, the daily BOD_5 discharge limit is the limit calculated under the first or second paragraph, to which is added the product of the RPR_D multiplied by a discharge standard of 31 kilograms per tonne.

For a complex having a mill whose construction was completed after 21 October 1992, the daily BOD_5 discharge limit is the limit calculated under the preceding paragraphs, to which is added the product of the RPR_{NP} multiplied by a discharge standard of 3.6 kilograms per tonne.

The limit referred to in the second paragraph ceases to apply on 1 November 2009.

32. The monthly AOX discharge limit is the product of the RPR_B multiplied by a discharge standard of 0.7 kilograms per tonne and by the number of days in the month on which bleached pulp was produced.

For a complex having a mill whose construction was completed after 21 October 1992, the monthly AOX discharge limit is the limit calculated under the first paragraph, to which is added the product of the RPR_{NB} multiplied by a discharge standard of 0.2 kilograms per tonne and by the number of days in the month on which bleached pulp was produced.

33. The daily AOX discharge limit is the product of the RPR_B multiplied by a discharge standard of 0.85 kilograms per tonne.

For a complex having a mill whose construction was completed after 21 October 1992, the daily AOX discharge limit is the limit calculated under the first paragraph, to which is added the product of the RPR_{NB} multiplied by a discharge standard of 0.25 kilograms per tonne.

§3. Standards applicable to the final effluent from a complex or a mill whose construction was completed after 21 October 1992

34. This Subdivision applies to final effluent from a complex or a mill whose construction was completed after 21 October 1992 if the final effluent is discharged into the environment or into a storm sewer.

It also applies to

(1) final effluent from such a complex or mill that is discharged into a sewer system if the complex also discharges final effluent into the environment or into a storm sewer; and

(2) final effluent from a purification plant for process water from a mill or a complex referred to in the first paragraph or in subparagraph 1 of this paragraph.

35. The total monthly loss of TSS, BOD_5 or AOX in the final effluents may not exceed the monthly limit established in sections 36, 38 and 40.

The total daily loss of TSS, BOD_5 or AOX in the final effluents may not exceed the daily limit established in sections 24, 25, 37, 39 and 41.

36. The monthly TSS discharge limit is the product of the RPR_F multiplied by a discharge standard of 2.7 kilograms per tonne and by the number of days in the month concerned.

37. The daily TSS discharge limit is the product of the RPR_F multiplied by a discharge standard of 5.3 kilograms per tonne.

38. The monthly BOD_5 discharge limit is the product of the RPR_F multiplied by a discharge standard of 2.2 kilograms per tonne and by the number of days in the month concerned.

39. The daily BOD_5 discharge limit is the product of the RPR_F multiplied by a discharge standard of 3.6 kilograms per tonne.

40. The monthly AOX discharge limit is the product of the RPR_B multiplied by a discharge standard of 0.2 kilograms per tonne and by the number of days in the month on which bleached pulp was produced.

41. The daily AOX discharge limit is the product of the RPR_B multiplied by a discharge standard of 0.25 kilograms per tonne.

42. Cooling water must be separated from other process water.

DIVISION IV SANITARY WASTEWATER STANDARDS

43. Sanitary wastewater must undergo biological treatment before being discharged into the environment or into a storm sewer.

44. Sanitary wastewater treated separately from process water must be discharged into the environment or into a storm sewer by a separate outfall or be combined with an effluent.

45. Sanitary wastewater treated separately from process water must not contain, before its point of discharge into the environment or before it is combined with an effluent, a concentration of TSS or BOD_5 in excess of 30 milligrams per litre.

DIVISION V MONITORING EQUIPMENT

46. The operator must install and maintain in working order a sampling station and a flow measurement system upstream from the discharge point for each final effluent.

47. If effluents are combined, the operator must install and maintain in working order a sampling station for each of those effluents upstream from the point where they are combined.

If the flow of each of the effluents cannot be measured or calculated otherwise, the operator must install and maintain in working order a flow measurement system for each of those effluents.

48. Where an effluent is combined in accordance with section 20, the operator must install and maintain in working order a sampling station at the biological treatment entry and outflow to evaluate the removal rate measured in BOD_5 reduction.

49. If treated sanitary wastewater is discharged into the environment or into a storm sewer or combined with an effluent, the operator must install and maintain in working order a sampling station and a flow measurement system for sanitary wastewater upstream from the discharge point or the point where they are combined, as the case may be.

50. The sampling stations and flow measurement systems referred to in sections 46 to 49 must have a manhole enabling them to be monitored.

DIVISION VI DESIGN STANDARDS FOR STORAGE AREAS AND EMERGENCY BASINS

51. An operator who, after 1 November 2007 establishes or alters an outdoor storage area for pulpwood or materials consisting of cellulose fibres used in the manufacturing process must comply with the following siting standards:

(1) the area must be situated at least 60 metres horizontally from the natural high-water mark of the sea, a watercourse or a lake within the meaning of the Protection Policy for Lakeshores, Riverbanks, Littoral Zones and Floodplains adopted by Order in Council 468-2005 dated 18 May 2005;

(2) the area must be situated at least 300 metres horizontally from a well or water intake supplying drinking water; and

(3) the area must be situated at least 60 metres horizontally from a pond, marsh, swamp or bog.

52. A drainage system for runoff water other than runoff water from the storage area must be installed and maintained to prevent the runoff from coming into contact with materials stored or with runoff from those materials.

53. An outdoor storage area must be watertight. Water from the storage area must be collected and not contain a concentration of BOD₅ or TSS in excess of 30 milligrams per litre before it is discharged into the environment or into a storm sewer unless it is treated with process water or discharged into a sewer system.

If the stored materials consist of treatment sludge, de-inking sludge or bark, the water from the materials must comply with the provisions of section 104 before it is discharged into the environment or into a storm sewer unless it is treated with process water or discharged into a sewer system.

54. Sections 52 and 53, other than for watertightness, apply to storage areas established before 1 November 2007 that do not comply with the siting standards prescribed in section 51. Section 53 applies to any storage area on which primary sludge is deposited.

55. An operator must install an emergency basin and maintain it in a state of readiness.

CHAPTER III ATMOSPHERIC EMISSION STANDARDS

56. This Chapter applies to the operator of a mill.

57. A sulphate pulp mill must not emit concentrations of particles or of total reduced sulphur compounds into the atmosphere in excess of the limits in Schedule IV.

58. A sulphite, bisulphite or dissolving grade sulphite pulp plant must not emit a quantity of sulphur dioxide into the atmosphere in excess of 6 kilograms per tonne of pulp produced, assuming that the pulp has a water content not exceeding 10%.

The standard fixed in the first paragraph does not include an emission from a spent cooking liquor incinerator. Such an incinerator must not emit a concentration of sulphur dioxide into the atmosphere in excess of 400 ppm.

59. A spent cooking liquor incinerator must not emit a concentration of particles into the atmosphere in excess of 200 milligrams per cubic metre.

For a furnace that commenced operating after 21 October 1992, the standard in the first paragraph is 100 milligrams per cubic metre.

60. The concentration of contaminants measured to verify compliance with the standards prescribed in sections 58 and 59 is expressed on a dry basis, under the reference conditions and corrected to 8% oxygen using the formula

$$E = E_a \times \frac{12.9}{20.9 - A} \quad \text{where}$$

“E” is the corrected concentration;

“E_a” is the concentration on a dry basis without correction;

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

CHAPTER IV MONITORING AND ANALYSIS OF EFFLUENT AND WASTEWATER

61. This Chapter applies to the operator of a mill, to the operator of a complex and to the operator of a process water purification plant that is not a municipal plant.

62. The operator must install and maintain in working order a continuous system for measuring and recording the pH and temperature upstream from the discharge point for each final effluent.

If the second paragraph of section 12 applies, the operator must install and maintain in working order a continuous system for measuring and recording the pH at the feed water intake point.

The accuracy of the system must be tested once a week.

The operator must keep a log of the testing, adjustments and repairs made and retain it for a minimum of two years after the date of testing.

63. The operator must test on an annual basis the accuracy of the primary element in each flow measurement system referred to in sections 46 and 47, using a flow measurement method in Book 7 of the Guide d'échantillonnage à des fins d'analyses environnementales, published by the Centre d'expertise en analyse environnementale du Québec of the Ministère du Développement durable, de l'Environnement et des Parcs.

The difference between the measurement of the primary element and the flow measurement obtained using the above-mentioned method must not exceed 10%.

64. The operator must inspect on a monthly basis the primary element and on a weekly basis the secondary element of each flow measurement system. The operator must keep a log of the inspections and repairs performed and retain it for a minimum of two years after the date of the inspection.

65. Within 30 days after the day on which the testing required by section 63 was performed, the operator must provide the Minister with a report in writing containing the following information:

- (1) the flow measurement method used for the testing;
- (2) the difference in percentage between the measurement of the primary element and the flow measurement obtained during the testing; and
- (3) the results and the steps enabling the flow value to be obtained on testing.

66. The operator must correct any malfunction or inaccuracy in the primary element.

67. Each sampling station must have an automatic sampling device designed to perform one of the following sampling procedures:

- (1) the taking of at least 6 equal and representative samples each hour containing at least 50 millilitres each, at a fixed frequency; or
- (2) the taking of at least 144 equal and representative samples each day containing at least 50 millilitres each, at a frequency proportionate to the flow.

The components of the sampler that are in contact with the sample must be of materials compatible with the nature of the contaminants taken, and the sampler strainer must be situated at a place enabling a sample representative of the effluent to be taken.

68. The operator must measure or calculate the flow of each effluent each day on which the effluent is sampled and must measure the flow of each final effluent each day on which there is a discharge.

69. The operator must continuously measure and record the flow of the final effluents at the stations referred to in section 46 and, where applicable, the flow of effluents at the stations referred to in section 47. The operator must take a reading of the flow at the beginning and at the end of each day.

70. The operator must measure the following at the sampling stations referred to in section 46:

(1) TSS and BOD₅:

(a) on each production day if an effluent is discharged into the environment, into a storm sewer or into a sewer system if, in the latter case, an effluent is also discharged into the environment or into a storm sewer;

(b) three times a week, on non-consecutive production days, if effluents are discharged into a sewer system;

(c) on each day or three times a week, as the case may be, for the first 10 days following a total production stoppage and throughout the duration of equipment maintenance work performed during the total production stoppage if such work continues for more than 10 days; and

(d) once a week for the remainder of the stoppage if wastewater from a storage area, leachate, municipal or industrial wastewater or septic tank sludge is discharged into the process water collection or treatment system or if cooking liquor or chemicals are stored in tanks of more than 1,000 litres;

(2) toxicity: once a month at an interval of at least 21 days, except in the case of an effluent discharged into a sewer system;

(3) chemical oxygen demand, copper, lead, zinc, nickel and aluminum: once a month at an interval of at least 21 days;

(4) petroleum hydrocarbons C10-C50: once a week for an effluent discharged into the environment or into a storm sewer and once a month, at an interval of at least 21 days, for an effluent discharged into a sewer system, except if they are already measured at the sampling stations referred to in section 47;

(5) AOX: once a week on a day on which bleached pulp is produced, if a chlorinated product is used as a pulp bleaching agent, for an effluent discharged into the environment or into a storm sewer and once a month at an interval of at least 21 days, for an effluent discharged into a sewer system;

(6) chlorinated dioxins and furans: once every quarter, in January, April, July and October, on a day on which bleached pulp is produced if a chlorinated product is used as a bleaching agent, if section 47 does not apply; the congeners of dioxins and furans to be analyzed are those listed in Schedule II; and

(7) polychlorinated biphenyls: once every quarter, in January, April, July and October, if the quantity of recycled paper or paperboard exceeds 1,000 tonnes per month, if section 47 does not apply; the homologous groups of polychlorinated biphenyls to be analyzed are those listed in Schedule III.

In the case of a total production stoppage, the requirements of subparagraphs 2, 3 and 4 of the first paragraph no longer apply from the 60th day that follows the day on which the stoppage occurs if all the standards are complied with. The requirements continue to apply in the cases referred to in subparagraph *d* of subparagraph 1 of the first paragraph.

71. The operator must measure the following at the sampling stations referred to in section 47:

(1) toxicity: once a month at an interval of at least 21 days, in the case of an effluent discharged into the environment or into a storm sewer;

(2) petroleum hydrocarbons C10-C50: once a week for an effluent discharged into the environment or into a storm sewer and once a month, at an interval of at least 21 days, for an effluent discharged into a sewer system;

(3) chlorinated dioxins and furans: once every quarter, in January, April, July and October, if a chlorinated product is used as a pulp bleaching agent; the congeners of dioxins and furans to be analyzed are those listed in Schedule II; and

(4) polychlorinated biphenyls: once every quarter, in January, April, July and October, if the quantity of recycled paper or paperboard exceeds 1,000 tonnes per month; the homologous groups of polychlorinated biphenyls to be analyzed are those listed in Schedule III.

Subparagraphs 3 and 4 of the first paragraph do not apply in respect of effluent that has not undergone treatment.

In the case of a total production stoppage, the requirements of the first paragraph no longer apply from the 60th day that follows the day on which the stoppage occurs if all the standards are complied with. The requirements continue to apply in the cases referred to in subparagraph *d* of the subparagraph 1 of the first paragraph of section 70.

72. If an effluent is combined in accordance with section 20, the operator must measure the BOD₅ each day at the sampling stations referred to in section 48.

73. An operator who discharges treated sanitary wastewater into the environment or into a storm sewer or discharges treated sanitary wastewater combined with an effluent must measure TSS and BOD₅ once a month at the sampling station referred to in section 49 at an interval of at least 21 days.

74. The operator must continuously measure and record the pH and temperature at the points referred to in the first paragraph of section 62, on each day on which there is a discharge. The operator must also continuously measure and record the pH at the point referred to in the second paragraph of section 62 if the operator wishes to take advantage of the provisions in the second paragraph of section 12.

75. An operator who discharges water from storage areas into the environment or into a storm sewer must measure TSS and BOD₅ once a month in a grab sample taken upstream from the discharge point.

76. Subject to section 77, the analyses necessitated by the measurements referred to in sections 70 to 73 must be performed on a portion of a composite sample.

77. In respect of toxicity, the analyses necessitated by the measurements referred to in sections 70 and 71 must be performed on a grab sample.

78. The operator must keep samples at room temperature not exceeding 4°C until they have been analyzed.

In the case of a sample taken to verify the toxicity, the sample may be transported as such or, if transportation lasts more than two days, be kept in a dark place at a temperature of from 1 to 8°C.

79. The analyses subsequent to the measurements required by sections 70 to 73 and 75 must be performed by a laboratory accredited by the Minister under section 118.6 of the Environment Quality Act.

Despite the foregoing, if effluents are combined in accordance with section 20, the analyses subsequent to the toxicity measurements under section 71 must be performed in accordance with Division 6 of Reference Method EPS 1/RM/13 published by Environment Canada.

80. The operator must send to the Minister, within 30 days following the last day of each month, the results of the measurements under sections 68 to 75, including the result of any additional analysis performed in accordance with section 79, and include reasons for excess or missing data and the daily production data of finished

product and, where applicable, of bleached pulp and dissolving grade sulphite pulp. For the results of the chlorinated dioxin and furan and polychlorinated biphenyl measurements, the time limit is 60 days.

The results and data must be sent using media-based information technology conforming to the standard format provided by the Minister that contains the information required by Schedules II, III, V to X and XII.

The operator must also keep a log of the results and data referred to in the first paragraph and retain it for a minimum of two years after the date on which the data is sent to the Minister.

CHAPTER V MEASUREMENT OF EMISSIONS

81. The operator of a sulphate pulp mill must install, calibrate and maintain in working order

(1) a sampling system to continuously measure and record the concentrations of total reduced sulphur compounds emitted into the atmosphere by the recovery furnace; the measurement scale of that sampling system must have a reading interval of not more than 20 ppm where the standard is 5 ppm and not more than 100 ppm where the standard is 20 ppm; the concentrations measured and recorded by the sampling system must correspond to those obtained by the total reduced sulphur compound measurement method used in the annual sampling;

(2) a sampling system to continuously measure and record the percentage of oxygen by volume in the gases from the recovery furnace and the lime kiln; the measurement scale of that sampling system must have a reading interval of not more than 25% oxygen;

(3) for the recovery furnace,

(a) a sampling system to continuously measure and record the concentration of particles in the gases emitted into the atmosphere; the concentrations measured and recorded by the system must correspond to those obtained by the particle measurement method used in the annual sampling; or

(b) a system to continuously measure and record the opacity according to the method described in Book 4 of the Guide d'échantillonnage à des fins d'analyses environnementales, published by the Centre d'expertise en analyse environnementale du Québec of the Ministère du Développement durable, de l'Environnement et des Parcs; the measurement scale of that sampling system must have a reading interval of not more than 70% opacity;

(4) if the total reduced sulphur compounds are incinerated, a device to continuously measure and record the combustion temperature at the incineration point of the total reduced sulphur compounds; the device must be accurate within 1% of the temperature measured in degrees Celsius; and

(5) for each wet scrubber that treats emissions from the lime kiln, the dissolving tank or the recovery furnace,

(a) a device to continuously measure and record the load loss of gases through the scrubber using a differential pressure gauge accurate within 0,5 kilopascals; and

(b) a device to continuously measure and record the pressure of the scrubbing liquid, installed on the liquid inlet pipe so as not to obstruct the flow; the device must be accurate within 10% of the nominal pressure in the inlet pipe.

82. The operator of a sulphate pulp mill must, at least once a year, measure the following contaminants emitted into the atmosphere:

(1) particles emitted by the recovery furnace, lime kiln and dissolving tank;

(2) total reduced sulphur compounds emitted by the recovery furnace, lime kiln, dissolving tank whose operation began after 21 October 1992, the cooking system, evaporation system, condensate stripper system and the brown pulp washing system; the brown pulp washing system may include the following sources: first stage of washing vent, knotter vent, foam tank and seal tank; and

(3) polycyclic aromatic hydrocarbons and sulphur dioxide from the lime kiln and the recovery furnace.

83. The operator of a sulphite, bisulphite or dissolving grade sulphite pulp mill whose cooking yield is less than 75% must, at least once a year, measure the sulphur dioxide emitted into the atmosphere by the pulp manufacturing process.

84. The operator of a mill must, at least once a year, measure the particles and the sulphur dioxide emitted into the atmosphere by a spent cooking liquor incinerator.

85. The contaminants referred to in sections 82 to 84 must be sampled and analyzed in accordance with the following prescriptions. The polycyclic aromatic hydrocarbons are those listed in Schedule XIII.

The sampling must be performed in accordance with Book 4 of the Guide d'échantillonnage à des fins d'analyses environnementales, published by the Centre d'expertise en analyse environnementale du Québec of the Ministère du Développement durable, de l'Environnement et des Parcs.

Except for analyses performed using a continuous sample and analysis method described in the above-mentioned guide, the samples must be analyzed by a laboratory accredited by the Minister under section 118.6 of the Environment Quality Act.

The operator must send to the Minister, within four months following the date of the measurements, a report on the results containing at least the following:

- (1) the results of the analysis and the other data collected during the sampling;
- (2) the operating conditions of the process equipment at the time of the sampling and a reference to the operating conditions; and
- (3) a statement of the problems encountered in taking the measurements that have modified the results.

The operator must also send to the Minister, within four months following the date of the measurements, the data on the atmospheric emissions using media-based information technology conforming to the standard format provided by the Minister that contains the information required by Schedule XIV.

86. The operator must also retain the measurements referred to in this Chapter for a minimum of two years after the date on which the measurement was taken.

CHAPTER VI PULP AND PAPER MILL RESIDUAL MATERIALS MANAGEMENT

DIVISION I GENERAL

87. The operator of a mill, the operator of a facility that treats mill residual materials by combustion and the operator of a process water purification plant that is not a municipal plant must send the data on mill residual materials management to the Minister within 30 days following the last day of each month.

The data, and the reasons for excess or missing data, must be sent using media-based information technology conforming to the standard format provided by the Minister that contains the information required by Schedule XV.

88. The mill residual materials must be stored, treated or landfilled in accordance with the provisions of this Chapter or the provisions of Division 2 of Chapter II or Chapter III of the Regulation respecting the landfilling and incineration of residual materials, made by Order in Council 451-2005 dated 11 May 2005 or, to the extent that that Regulation maintains their application, Division IV, V or VII of the Regulation respecting solid waste (R.R.Q., 1981, c. Q-2, r.14), or be reclaimed in accordance with the Environment Quality Act.

89. The dilution of leachate, gas scrubbing water or ash cooling water and storage area water before it is discharged into the environment or into a storm sewer is prohibited.

DIVISION II COMBUSTION

90. This Division applies to the operator of a facility that treats mill residual materials by combustion.

91. The combustion chamber must have a continuously recording pyrometer.

92. The operator must retain the results recorded by the pyrometer for a minimum of two years after the date on which they are recorded.

93. The ash produced by the combustion of residual materials must be stored or landfilled in accordance with Division III of this Chapter or in an engineered landfill compliant with Division 2 of Chapter II of the Regulation respecting the landfilling and incineration of residual materials or, to the extent that the Regulation so permits, in a solid waste sanitary landfill site compliant with Division IV of the Regulation respecting solid waste, or be reclaimed in accordance with the Environment Quality Act.

94. The standards prescribed in Division IV and in subparagraph *a* of the first paragraph of section 67 of the Regulation respecting the quality of the atmosphere (R.R.Q., 1981, c. Q-2, r.20), as they read on 21 May 1992, continue to apply to the operator of a facility that treats mill residual materials by combustion, if the residual materials do not consist entirely of wood residue or bark.

The standards in Divisions IV and XIV of the Regulation respecting the quality of the atmosphere continue to apply to the operator if the residual materials do not consist entirely of wood residue or bark.

95. Sections 104 and 105 apply to water used to cool ash and to gas scrubbing water if it is not treated with the mill's process water or discharged into a sewer system.

96. The operator may accept only mill residual materials, sawmill residual materials consisting exclusively of wood residue and bark, fossil fuels, and used oils and other residual materials whose elimination is authorized under the Environment Quality Act.

DIVISION III LANDFILLING

97. This Division applies to the operator of a mill, the operator of a facility that treats mill residual materials by combustion, the operator of a process water purification plant that is not a municipal plant and the operator of a mill residual materials landfill facility.

Despite the foregoing, Subdivision 2, the third paragraph of section 122 and subparagraph 3 of the first paragraph of section 123 do not apply to the operator of a mill residual materials landfill facility permanently closed after 21 October 1992 but before 1 November 2007.

98. The operator of a mill, the operator of a facility that treats mill residual materials by combustion and the operator of a process water purification plant that is not a municipal plant must, at least once a week, measure the dryness of each type of mill residual materials, except bark, wood residue, paper and paperboard discards, recycled fibre pulping residues and dry ash handled before directing the residual materials to a landfill site referred to in Subdivision 1 or an engineered landfill compliant with Division 2 of Chapter II of the Regulation respecting the landfilling and incineration of residual materials or, to the extent that the Regulation so permits, to a solid waste sanitary landfill site subject to the provisions of Division IV of the Regulation respecting solid waste.

Where the second paragraph of section 106 applies, the operator must, each month, provide a measurement of the percentage of biological sludge on a dry weight basis contained in the mixed sludge.

The results of the measurements must be retained by the operator for a minimum of two years after the date of the measurement.

§1. Landfill site

99. No mill residual materials landfill facility may be established or enlarged

(1) in the flood zone of a watercourse or body of water, if the zone is within the 100-year flood line;

(2) in an area zoned for residential, commercial or residential and commercial purposes or within 150 metres from such an area;

(3) within 50 metres of any public thoroughfare;

(4) within 150 metres of any municipal park, golf course, downhill ski trail, outdoor recreation area, public beach, ecological reserve established under the Natural Heritage Conservation Act (R.S.Q., c. C-61.01), any park within the meaning of the Parks Act (R.S.Q., c. P-9) or any park within the meaning of the National Parks Act (S.C. 2000, c. 32);

(5) within 200 metres of any dwelling, educational establishment, house of worship, food processing plant, vacation camp, institution within the meaning of the Act respecting health services and social services (R.S.Q., c. S-4.2) or the Act respecting health services and social services for Cree Native persons (R.S.Q., c. S-5) or any tourist accommodation establishment holding a permit issued under the Act respecting tourist accommodation establishments (R.S.Q., c. E-14.2);

(6) within 300 metres of any lake; or

(7) within 60 metres of any sea, watercourse, pond, swamp or tidal flat.

100. Landfilling of mill residual materials must be done at a site where the hydrogeological conditions are such that the leachate flows on the surface or infiltrates the soil and has a migration time of more than five years to travel 300 metres or to reach any well or spring supplying drinking water situated within 300 metres, unless the leachate has already resurfaced. In the latter case, the leachate must have circulated in the soil for more than two years at an average speed of less than 150 metres per year.

101. Despite section 100, landfilling of mill residual materials is permitted if measures are taken to prevent the leachate from infiltrating the soil.

Despite the foregoing, no mill residual materials landfill facility may be established if infiltration is likely to affect the quality of a water table supplying drinking water.

102. If the hydrogeological conditions are such that the water from a landfill site flows on the surface or resurfaces before two years, a collection system must be installed and maintained. The water must be treated so as to comply with the standards prescribed in section 104, unless it is treated with the mill's process water or discharged into a sewer system.

103. Depositing mill residual materials into the water is prohibited.

104. Leachate discharged into the environment or into a storm sewer must not contain contaminants in excess of the following concentrations:

Parameters	Average concentration
BOD ₅	50 mg/l
TSS	50 mg/l
Aluminum	10 mg/l
Chromium	1 mg/l
Iron	10 mg/l
Mercury	0.05 mg/l
Lead	0.3 mg/l
Zinc	1 mg/l
Total sulphides (expressed in S ²⁻)	1 mg/l
Phenolic compounds	50 µg/l
Resinic and fatty acids	300 µg/l

Compliance is verified by comparing the standard with the arithmetic average of the concentrations measured in the last four samples.

Resinic and fatty acids as well as phenolic compounds are the sum of the compounds appearing in Schedule XI.

Despite the foregoing, in the case of other wastewater referred to in sections 53, 95 and 128 to which the provisions of this section apply, the standards are expressed as maximum concentrations; for TSS and for BOD₅, the standard is 30 milligrams per litre.

105. Leachate must be sampled once a month before its point of discharge into the environment or into a storm sewer. The sample must be a grab sample. The samples must be kept in accordance with section 78. The parameters to be analyzed are those listed in section 104.

The operator must install and maintain in working order a continuous system for measuring and recording the flow at the leachate specific treatment system entry or outflow. The operator must continuously measure and record the flow of the leachate and provide the Minister with the information on the volume discharged during the month on the form provided by the Minister. The operator must inspect the measurement system on a

monthly basis and test its accuracy on an annual basis in the manner provided in section 63. Sections 65 and 66 apply to the measurement system.

The analyses referred to in this section must be performed by a laboratory accredited by the Minister under section 118.6 of the Environment Quality Act.

The operator must send the results of the measurements referred to in this section, including the result of any additional analysis performed in accordance with the third paragraph, to the Minister within 30 days following the last day of each month during which the measurements are taken.

The results, and the reasons for excess or missing data, must be sent to the Minister using media-based information technology conforming to the standard format provided by the Minister that contains the information required by Schedule X.

The results must be retained by the operator for a period of at least two years after the date of the measurement.

106. Subject to section 107, before being directed to a landfill site, the residual materials referred to in section 117 must have an average dryness value of at least 25%.

Despite the foregoing, sludge from biological treatment and mixed sludge from biological treatment containing at least 50% sludge on a dry weight basis may be directed to a landfill site if

- (1) the sludge has an average dryness value of at least 15%; and
- (2) the landfill site is impermeable and the leachate is collected and treated in accordance with the provisions of section 102.

The average dryness value is the arithmetic average of the dryness measurements taken during a month for each type of residual materials directed to a landfill site.

107. Before being directed to a landfill site, lime sludge and lime slaking residues must have a dryness value of at least 55%.

108. A drainage system must be installed for runoff water other than the runoff water from the landfill area, and the runoff water must not come into contact with the deposited residual materials or with the water from them.

109. On the landfill area, residual materials may not be elevated to more than 10 metres above the surrounding land. That limit includes the final cover.

110. The operator of a landfill site must prohibit public access to the site.

111. A landfill site must have at least five water table observation wells.

Each well must be drilled to at least 1 metre into the bedrock or into an impermeable layer of unconsolidated deposits, have a minimum diameter of 5 centimetres and have a strainer over the entire width of the most permeable water-saturated layer.

At least one reference well must be situated upstream from the landfill site in relation to the direction of flow of the water table. The other observation wells must be located so as to intercept the potential diffusion and contamination zone; one of the wells must be situated at a distance of 300 metres from the site, unless the landfill site is impermeable.

112. In June and October each year, the operator must analyze the physicochemical characteristics of the water in the observation wells. The analyses must pertain to the pH, conductivity, chlorides, sodium, ammoniacal nitrogen, nitrites and nitrates, chemical oxygen demand, dissolved matter and phenolic compounds listed in Schedule XI. Sampling is performed according to Book 3 of the Guide d'échantillonnage à des fins d'analyses environnementales, published by the Centre d'expertise en analyse environnementale du Québec of the Ministère du Développement durable, de l'Environnement et des Parcs, and the samples must be kept in accordance with section 78.

The analyses must be performed by a laboratory accredited by the Minister under section 118.6 of the Environment Quality Act.

The results of the analyses must be retained by the operator for a minimum of two years after the date of analysis.

113. The operator must send to the Minister not later than 1 March of each year a report on the results of the previous year's characterization studies and an explanation of any differences in groundwater quality in comparison with the reference well.

The operator must also send to the Minister, within 30 days following the last day on which the measurements were taken, using media-based information technology, the results of the water characterization in the

observation wells of a landfill site, conforming to the standard format provided by the Minister that contains the information required by Schedule XVI.

114. At the end of each operating week, the residual materials deposited must be mechanically graded to a slope not exceeding 30%.

In addition, heterogeneous residual materials must be covered with homogeneous materials, including sludge, bark or ash, except ash from dry scrubbing combustion gas equipment, until the heterogeneous residual materials are no longer visible.

115. Landfill operations must be carried out by land section and allow for progressive redevelopment of the land.

As soon as the level prescribed in the longitudinal and transversal sections required by paragraph 4 of section 133 has been reached in a section of land, or where a section of land is left unused for at least one year, an operator must then apply the final cover in the manner provided in section 116.

116. The final cover at least 30 centimetres thick must be made up of earth, clay or soil consisting of various materials that reduce water infiltration. The nature of the material of the cover must be conducive to the regrowth of vegetation. An impermeable synthetic membrane or a membrane consisting of other materials having similar characteristics may also be used to reduce water infiltration. Once covered, the landfill must have a slope of not less than 2% and not more than 30%.

A vegetation cover must be established and maintained; shrub or tree cover may also be added to the vegetation cover however, without damaging the final cover. Holes, subsidence and fissures must be filled in or repaired until the soil has been fully stabilized.

117. The operator must not accept materials other than

(1) mill residual materials and construction and demolition waste from the mill;

(2) residual materials consisting entirely of wood residue, bark or ash from a sawmill; and

(3) residual materials consisting entirely of wood residue or bark from a wood processing plant producing only wood chips.

118. The residual materials referred to in section 117, except construction and demolition waste, may be stored only in an area of the landfill site intended for that purpose. Stored residual materials that have not been used after two years must be landfilled.

§2. Closure

119. Every landfill site must be permanently closed when it has reached its maximum capacity or landfilling operations are permanently terminated.

The operator of the site must immediately notify the Minister in writing of the date of closure.

120. Within six months following the date on which the landfill site is closed, the operator must obtain from an independent expert and send to the Minister a closure report attesting to

(1) the working order, effectiveness and reliability of the system of water table observation wells and, if applicable, the leachate collection and treatment system, the drainage system for runoff water, the continuous system for measuring and recording the flow of leachate and the biogas collection and treatment system;

(2) compliance with the limit values that apply to discharges of leachate, if applicable;

(3) the quality of water from observation wells in comparison with the reference well; and

(4) compliance of the landfill site with the provisions related to the final cover of landfilled residual materials and to the height of the residual materials relative to the surrounding land.

The closing statement must specify any instances of non-compliance with the provisions of sections 104, 109, 111 and 116 and indicate the remedial measures to be taken. It must also indicate any remedial measures to be taken if there is a problem with the systems referred to in subparagraph 1 of the first paragraph.

§3. Post-closure management

121. The operator must comply with the requirements of sections 102, 104, 105, 108, 110 to 113 and 116 that apply to a permanently closed landfill site, for as long as the landfill is likely to be a source of contamination.

The operator must also ensure the monitoring and maintenance of the system of water table observation wells and, if applicable, the leachate collection and treat-

ment system, the drainage system for runoff water, the continuous system for measuring and recording the flow of leachate and the biogas collection and treatment system.

122. Leachate sampling pursuant to section 105 may be reduced to a frequency of three samples per year, in spring, summer and fall if, after a monitoring period of a minimum duration of three consecutive years after the landfill site closure date, none of the parameters analyzed in the leachate samplings taken before treatment has exceeded the limit values set out in section 104. The monitoring frequency of all the parameters must be increased to once a month if there is non-compliance for a parameter.

In the case of leachate discharged into a sewer system or treated with the mill's process water or that undergo treatment before being discharged into the environment or into a storm sewer, the operator must, after the permanent closure of the landfill site, measure leachate twice a year, in June and October. The parameters to be analyzed are those in section 104.

During the 12-month period following the permanent closure of the landfill site, the operator must install biogas measurement stations in the landfilled residual materials if no such stations have been installed. They must be laid out evenly over the entire landfill area. The operator must measure twice a year, in June and October, in each measurement station, the methane concentration contained in the biogas produced by landfilled residual materials. Measurement of the methane concentration is taken on site using a device designed for that purpose.

The operator must send the results of the measurements prescribed in this section to the Minister, including the result of any additional measurement taken in accordance with section 105, within 30 days following the last day of each month in which measurements were taken.

The results, and the reasons for excess or missing data, must be sent to the Minister using media-based information technology conforming to the standard format provided by the Minister that contains the information required by Schedules X and XVII.

123. The operator of a permanently closed landfill site may apply to the Minister to be totally or partially released from the environmental monitoring or maintenance obligations under this subdivision if, during a post-closure monitoring period of a minimum duration of five years, the conditions set out below are met. The operator may be partially released from monitoring

leachate and underground water and, as the case may be, from monitoring biogas and from maintenance obligations if the following conditions are met:

(1) none of the parameters analyzed in the samples of leachate referred to below has exceeded the limit values set out in section 104:

(a) leachate discharged before any treatment into a sewer system or treated with mill process water;

(b) leachate discharged before any treatment into the environment or into a storm sewer;

(2) the results of the parameters analyzed in the samples of the water in observation wells situated at a maximum distance of 300 metres from the landfill site show no degradation relative to the reference well water as a result of the migration of leachate into the soil where the landfill site is situated; if the landfill site is impermeable, the results of the parameters analyzed in the samples of the water in the observation wells bordering the landfill site show no degradation relative to the reference well water as a result of the migration of leachate into the soil where the landfill is situated; and

(3) biogas measurements taken under section 122 indicate a methane concentration below 25% of its lower explosive limit, or 1.25% per volume.

The operator's total or partial release application must be supported by a status report from an independent expert on the state of the landfill and, where applicable, its environmental impacts. The status report must be sent to the Minister together with the results of the measurements performed pursuant to this section.

124. The operator is totally or partially released from the environmental monitoring and maintenance requirements as of the date on which the operator receives the Minister's notice.

DIVISION IV STORAGE

125. This Division applies to the operator of an outdoor storage area for mill residual materials located at the site of a mill or a process water purification plant that is not a municipal plant.

126. Sections 51 and 52 apply to the storage area.

127. The volume of stored residual materials must not exceed the volume produced by the mill in the last twelve months.

If that volume has been reached, the excess must be treated by combustion in accordance with Division II, be landfilled in accordance with Division III, or be reclaimed in accordance with the Environment Quality Act.

128. The storage area must be watertight and the water from the area must be collected and comply with the provisions of sections 104 and 105 before it is discharged into the environment or into a storm sewer, if it is not treated with the mill's process water or discharged into a sewer system.

129. The operator must not accept materials other than

(1) mill residual materials;

(2) residual materials consisting entirely of wood residue, bark or ash from a sawmill; and

(3) residual materials consisting entirely of wood residue or bark from a wood processing plant producing only wood chips.

DIVISION V CERTIFICATE OF AUTHORIZATION

130. An applicant for a certificate of authorization to establish or alter a mill residual materials storage, landfill or combustion treatment facility must

(1) file an application in writing with the Minister;

(2) provide, in addition to the information required under other provisions of the Environment Quality Act or its regulations, the information and documents required by section 131; and

(3) pay the fees under section 135 by money order or certified cheque payable to the Minister of Finance.

131. An application for a certificate must contain

(1) in the case of a natural person, the person's name, address and telephone number;

(2) in the case of a legal person or partnership, the name, address of the head office, the capacity of the signatory and a certified copy of a document emanating from the board of directors or the partners authorizing the submission of the application;

(3) in the case of a partnership, the name, domicile and address of the partners or the name of a legal person associated with the partnership and the head office of the legal person;

(4) in the case of a legal person, the name and address of the directors and the officers;

(5) in the case of a municipality, a certified copy of a resolution by the municipality authorizing the submission of the application;

(6) a certified copy of the document conferring upon the applicant a right of ownership or use in respect of the property to be used in the proposed operations;

(7) an overall plan consisting of an up-to-date geographic map or aerial photograph showing

(a) the limits of the lots covered by the application for a certificate, the number of those lots and their official cadastral designation and range;

(b) the current use and zoning of the neighbouring land within a radius of 2 kilometres from the location of the proposed storage, treatment or final deposit site;

(c) the layout of the public thoroughfares, access roads, watercourses, lakes, swamps and flood plains, as well as the location of wooded sectors, dwellings and any other construction within the radius indicated in subparagraph *b*; and

(d) the current drainage configuration and the topography of the land within the radius indicated in subparagraph *b*;

(8) in the case of a final deposit, a hydrogeological study containing the information and documents required by section 132;

(9) the plans and specifications for the project prepared by an engineer who is a member of the Ordre des ingénieurs du Québec and containing the information and documents required by section 133 or 134, according to the type of certificate applied for; and

(10) a brief outline of the proposed facility, including a description of the operation of the site covered by the application and of the type and quantity of residual materials to be stored, treated or disposed of.

132. The hydrogeological study must contain the following documents:

(1) a map at a scale of 1:20 000 showing the location of all the wells or sources of drinking water, as well as any natural reservoirs of drinking water within a radius of 2 kilometres;

(2) a geological map illustrating the rock outcrops and the units of unconsolidated deposits within a radius of 1 kilometre;

(3) a description of the local hydrography, geology and hydrogeology;

(4) a map of the zone studied showing the location of stratigraphic drill holes at a scale between 1:2 000 and 1:5 000;

(5) geological sections of the drill holes;

(6) the results and conclusions of *in situ* and laboratory tests and the calculation methods used;

(7) a piezometric map of the sector concerned at a scale between 1:2 000 and 1:5 000;

(8) the results of water analysis and a siting proposal for the reference well and the observation wells; and

(9) a hydrogeological report establishing that the land complies with the hydrogeological standards set out in sections 100 to 102, the quality and extent of the current and potential use of groundwater and the vulnerability of groundwater to pollution.

133. The plans and specifications for a landfill facility must contain the following documents:

(1) a topographic survey of the land establishing the contour lines at a maximum interval of 1 metre;

(2) a list of the servitudes encumbering the land and of the surface and underground facilities located on the land;

(3) a site planning map at a scale between 1:1 000 and 1:1 500 indicating natural screens, embankments and other concealment screens, deforested areas, vehicle circulation areas, cover materials storage areas and location of observation wells;

(4) longitudinal and transversal sections of the land showing its initial and final profiles and the stages in the redevelopment of closed sites;

(5) the plans and profiles of the outside runoff drainage system; and

(6) if such facilities are planned, the plans and specifications for the facilities and works intended to collect and treat leachate and to measure its flow, and the plans and specifications for biogas collection systems.

134. The plans and specifications for a mill residual materials storage, landfill or combustion treatment facility must contain the following documents:

(1) a map showing the location of the storage and treatment site;

(2) the plans and specifications for fixed facilities that will be used to treat the residual materials, including any device or works to control, contain or prevent the deposit, issuance, emission or discharge of contaminants into the environment; and

(3) the plans and profiles of the runoff drainage systems other than those in the storage areas.

135. The fees payable for the issue of a certificate of authorization are \$1,312.

The fees are adjusted on 1 January of each year based on the percentage change in the Consumer Price Indexes for Canada, as published by Statistics Canada; the change is calculated by determining the difference between the average of the monthly indexes for the 12-month period ending on 30 September of the preceding year and the average of the monthly indexes for the same period of the second preceding year.

The Minister of Sustainable Development, Environment and Parks is to publish the results of the adjustment in the *Gazette officielle du Québec*, before 1 January of each year and, if the Minister considers it appropriate, give notice by any other means.

136. The certificate of authorization for a facility for the storage, treatment or final deposit of mill residual materials must indicate that it is issued in accordance with section 22 of the Environment Quality Act.

The certificate must mention its issue date and the name of its holder, and describe the nature of the proposed activity, the property to be used for the activity and the location of the property.

137. The certificate or permit holder must notify the Minister in writing within 30 days following any change in the information or documents provided for the issue of a certificate of authorization.

CHAPTER VII PENALTIES

138. An offence against any of the provisions of sections 12 to 20, 24 or 25, the second paragraph of section 27, section 29, 31 or 33, the second paragraph of section 35, section 37, 39, 41 or 57 to 59 renders the offender liable

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

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

In the case of a second or subsequent offence, the fines referred to in the first paragraph are doubled.

139. An offence against any of the provisions of the first paragraph of section 27, section 28, 30 or 32, the first paragraph of section 35, section 36, 38 or 40 renders the offender liable

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

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

In the case of a second or subsequent offence, the fines are

(1) \$25,000 to \$50,000 in the case of a natural person; and

(2) \$250,000 to \$1,200,000 in the case of a legal person.

140. An offence against any of the provisions of sections 10, 21, 23, 42 to 55, 62, 67, 88, 89, 93 to 96, 99, 102 to 104, 106 to 111, 114 to 122 and 126 to 129 renders the offender liable

(1) to a fine of \$7,000 to \$18,000 in the case of a natural person; and

(2) to a fine of \$18,000 to \$350,000 in the case of a legal person.

In the case of a second or subsequent offence, the fines referred to in the first paragraph are doubled.

141. An offence against any of the provisions of sections 2, 3, 7 to 9, 11, 22, 63 to 66, 68 to 87, 91, 92, 105, 112 and 113 renders the offender liable

- (1) to a fine of \$5,000 to \$12,500 in the case of a natural person; and
- (2) to a fine of \$12,500 to \$250,000 in the case of a legal person.

In the case of a second or subsequent offence, the fines referred to in the first paragraph are doubled.

CHAPTER VIII TRANSITIONAL AND FINAL

142. A mill or process water purification plant that is not a municipal plant and that discharges final effluent into a storm sewer during the six-month period that follows the date of coming into force of this Regulation is exempt from the application of the provisions of sections 10 and 11.

143. The Regulation respecting environmental impact assessment and review (R.R.Q., 1981, c. Q-2, r.9) is amended by replacing “Order in Council 1353-92 dated 16 September 1992” in the first paragraph of subparagraph *n.1* of the first paragraph of section 2 by “Order in Council 808-2007 dated 18 September 2007”.

144. The Regulation respecting hazardous materials, made by Order in Council 1310-97 dated 8 October 1997, is amended by replacing paragraph 6 of section 2 by the following:

“(6) mill residual materials within the meaning of section 1 of the Regulation respecting pulp and paper mills made by Order in Council 808-2007 dated 18 September 2007, as well as other residual materials referred to in section 117 of that Regulation;”.

145. The Regulation respecting the landfilling and incineration of residual materials, made by Order in Council 451-2005 dated 11 May 2005 is amended

(1) by replacing “mill waste within the meaning of section 93 of the Regulation respecting pulp and paper mills made by Order in Council 1353-92 dated 16 September 1992” in paragraph 11 of section 4 by “mill residual materials within the meaning of section 1 of the Regulation respecting pulp and paper mills made by Order in Council 808-2007 dated 18 September 2007”;

(2) by replacing “Division VI of the Regulation respecting pulp and paper mills, mill waste within the meaning of section 93” in paragraph 3 of section 8 by “Chapter VI of the Regulation respecting pulp and paper mills, mill residual materials within the meaning of section 1”;

(3) by replacing “mill waste within the meaning of section 93” in subparagraph 1 of the second paragraph of section 12 by “mill residual materials within the meaning of section 1”.

146. Order 602-93 dated 28 April 1993 respecting a class of industrial establishments to which subdivision 1 of Division IV.2 of Chapter I of the Environment Quality Act applies is amended by replacing “Order in Council 1353-92 dated 16 September 1992” in the first paragraph of its operative part by “Order in Council 808-2007 dated 18 September 2007”.

147. This Regulation replaces the Regulation respecting pulp and paper mills made by Order in Council 1353-92 dated 16 September 1992.

148. This Regulation comes into force on 1 November 2007.

SCHEDULE I

(s. 2)

CONTENT OF THE PREVENTION AND INTERVENTION PROGRAM FOR ACCIDENTAL DISCHARGE INTO THE ENVIRONMENT

The prevention and intervention program for accidental discharge into the environment must include

A. current and future prevention and intervention measures, together with an implementation schedule, designed to protect against spills in the case of tanks where pulp, process liquor, chemicals and petroleum products are stored in a volume of more than 1,000 litres or groups of tanks totalling more than 1,000 litres, except in the case of dyes, where those measures are to be applied for any volume stored; those measures must include the following information:

1. for each tank or item of process equipment entailing a risk of spills, such as a digester, bleaching tower or evaporator, the type of material from which the tank or the process equipment is manufactured, its capacity and its location in the plant indicated on a plan, as well as the product contained, its commercial name, its type, its composition, its concentration, its use, the quantity used monthly (except for pulp) and the place where it is used in the manufacturing process;

2. the protection measures designed to contain spills at unloading facilities, tanks and process equipment, such as

(1) a dike, with an indication of its volume, the construction material and the presence or absence of a drain; for natural or artificial materials, an indication of the permeability of the dike and of the earth inside the dike; permeability must be determined by particle-size analyses;

(2) a lubrication oil recovery system on the paper machines;

(3) an overflow leading to another tank;

3. leak detection measures and systems:

(1) identification of the detection instruments with or without an alarm, such as level indicators, pH-meters and conductivity meters, and their location;

(2) the frequency of visual inspection of the pipes, pumps, tanks and process equipment;

4. the following interventions relating to a spill:

(1) the method for limiting the spill and recovering the product;

(2) the method for treating and eliminating the spilled product;

(3) the method for restoring the affected site, including the potential effects on primary and biological treatments and on effluents;

5. an inventory, arranged by sections within the mill, of the storage tanks for pulp having a consistency of more than 3% and the stock chests, with an indication of the volume of each tank and the protection and intervention measures against spills for the section concerned;

B. the approximate number of stored tanks, by volume of at least 200 litres and no more than 1,000 litres, the products they contain and the protection measures designed for the tanks;

C. identification of places where there is a high risk of accidental spills, including

1. places where spills occur most often based on the mill operator's experience;

2. places where an eventual spill would have an impact on the environment;

D. practices concerning the management of solvents and cleaning solutions, with an indication of the method for eliminating and treating the contaminated product, such as recovery, neutralization or recycling;

E. the intervention procedure in the event of an accidental discharge, including

1. definition of the alert sequence, indicating

(1) a description of the incident;

(2) communication between the members of the emergency team;

(3) the general procedure;

(4) the procedure for notifying the mill operator and the representatives of the Ministère de la Sécurité publique, of the municipality in which the mill is located and of the Service d'urgence environnement of the Ministère du Développement durable, de l'Environnement et des Parcs;

(5) a report on the incident;

2. the composition of the staff forming the emergency team;

3. definition of the role of each emergency team member and of the persons in charge of the various departments of the mill;

4. a list of the persons referred to in subparagraph 4 of paragraph 1 of this Division and their respective telephone numbers;

F. the intervention procedure in the event of an emergency stoppage or a malfunction in the treatment systems or process equipment, including

1. a description and a diagram of the treatment systems, such as settling tanks, aeration tanks, gas scrubbers and associated equipment, such as filter presses, belt presses, drum filters;

2. internal and external measures designed to ensure compliance with standards in the event of a stoppage or a malfunction in the treatment systems or process equipment, such as

(1) an emergency basin;

(2) a recovery system;

- (3) a production cut-back;
 - (4) a production stoppage in certain sections or throughout the mill;
- G. the planned maintenance and cleaning procedure for treatment equipment, including
1. a production stoppage, if necessary;
 2. the method for emptying the equipment;
 3. the physical means for accumulating, treating and eliminating the matter emptied from the equipment, such as wastewater, sludge and ash;
 4. the temporary means for treating effluents, sludge or emissions, as the case may be;
- H. a list of the auxiliary equipment available at the mill, including
1. emergency equipment, such as
 - (1) portable detection systems (gas detectors, conductivity meters);
 - (2) heavy machinery (bulldozers, crane trucks, loaders);
 - (3) miscellaneous equipment (portable pumps, specialized absorbents, sand bags);
 2. supplementary treatment and storage equipment (emergency basins, back-up tanks, portable tanks);
 3. the names of the companies with which the mill would deal in the event of an emergency, indicating the specialty of each company and the type of product it is able to recover;
- I. an overall map consisting of an up-to-date geographic map or aerial photograph, indicating:
1. the boundaries of the mill property;
 2. the current use of the territory bordering the mill within a radius of two kilometres;
 3. the layout of public thoroughfares, access roads, watercourses, lakes, swamps and flood plains, as well as the location of wooded sectors, dwellings and any other construction located within a radius of two kilometres;
 4. the current drainage configuration and the general topography of the land within a radius of two kilometres;
- J. the general floor plan of the mill, indicating
1. the storm sewer system and the process water sewer system with the location of the detection device for a loss of pulp, process liquor, chemicals and petroleum products;
 2. the process equipment entailing a risk of spills and the tanks for pulp, process liquor, chemicals and petroleum products;
 3. the places and facilities for unloading chemicals and petroleum products and process liquor;
 4. the atmospheric emission points regulated under this Regulation or under other regulations.
- K. an emergency plan prepared either in-house or jointly with the Minister of Public Security, defining the procedure to follow in the event of explosion, fire, emission of a dangerous gas, electrical power failure, natural disaster or any other event of a similar nature.

SCHEDULE II

(s. 15, 2nd par., s. 70, 1st par., subpar. 6, s. 71, 1st par., subpar. 3 and s. 80, 2nd par.)

MONTHLY REPORT ON COMPOSITION OF CHLORINATED DIOXINS AND FURANS IN EFFLUENTS

NAME OF OPERATOR: _____

LOCATION OF MILL: _____

DATE OF SAMPLING: _____

NAME OF LABORATORY: _____

IDENTIFICATION OF EFFLUENT: _____

Chlorinated dioxins and furans	Concentration	Concentration in toxicity equivalent (1)	Detection limit
CONGENERS	(pg/l)	(pg _{eq} /l)	(pg/l)
2378-tetrachlorodibenzodioxin			
12378-pentachlorodibenzodioxin			
123478-hexachlorodibenzodioxin			
123678-hexachlorodibenzodioxin			
123789-hexachlorodibenzodioxin			
1234678-heptachlorodibenzodioxin			
Octachlorodibenzodioxin			
2378-tetrachlorodibenzofuran			
12378-pentachlorodibenzofuran			
23478-pentachlorodibenzofuran			
123478-hexachlorodibenzofuran			
123678-hexachlorodibenzofuran			
234678-hexachlorodibenzofuran			
123789-hexachlorodibenzofuran			
1234678-heptachlorodibenzofuran			
1234789-heptachlorodibenzofuran			
Octachlorodibenzofuran			
TOTAL			

(1) This concentration corresponds to the concentration of the congener multiplied by its toxicity equivalency factor (WHO, 1998).

Do not write in this space.

International toxicity equivalency factors (WHO, 1998)

CONGENERS	TOXIC EQUIVALENCY FACTOR
2378-tetrachlorodibenzodioxin	1.0
12378-pentachlorodibenzodioxin	1.0
123478-hexachlorodibenzodioxin	0.1
123678-hexachlorodibenzodioxin	
123789-hexachlorodibenzodioxin	
1234678-heptachlorodibenzodioxin	0.01
Octachlorodibenzodioxin	0.0001
2378-tetrachlorodibenzofuran	0.1
23478-pentachlorodibenzofuran	0.5
12378-pentachlorodibenzofuran	0.05
123478-hexachlorodibenzofuran	0.1
123678-hexachlorodibenzofuran	
234678-hexachlorodibenzofuran	
123789-hexachlorodibenzofuran	
1234678-heptachlorodibenzofuran	0.01
1234789-heptachlorodibenzofuran	
Octachlorodibenzofuran	0.0001

SCHEDULE III

(s. 16, 2nd par., s. 70, 1st par., subpar. 7, s. 71, 1st par., subpar. 4 and s. 80, 2nd par.)

MONTHLY REPORT ON COMPOSITION OF POLYCHLORINATED BIPHENYLS IN EFFLUENTS

NAME OF OPERATOR: _____

LOCATION OF MILL: _____

DATE OF SAMPLING: _____

NAME OF LABORATORY: _____

IDENTIFICATION OF EFFLUENT: _____

Homologous groups	Concentration (ug/l)	Detection limit (ug/l)
Trichloro-biphenyls		
Tetrachloro-biphenyls		
Pentachloro-biphenyls		
Hexachloro-biphenyls		
Heptachloro-biphenyls		
Octachloro-biphenyls		
Nonachloro-biphenyls		
Decachloro-biphenyls		
TOTAL		

 Do not write in this space.

SCHEDULE IV

(s. 57)

SULPHATE PULP MILL EMISSION STANDARDS

Process equipment	Standards applicable where operation of process equipment started before 22 October 1992		Standards applicable where operation of process equipment started after 21 October 1992	
	Particles	Total reduced sulphur compounds	Particles	Total reduced sulphur compounds
Recovery furnace	200 mg/m ³	20 ppm, except for furnace of a mill built after 12 September 1979, for which the standard is 5 ppm	100 mg/m ³	5 ppm
Lime kiln	340 mg/m ³	10 ppm	150 mg/m ³	10 ppm
Dissolving tank	165 g/t dry solids in the liquor		100 g/t dry solids in the liquor	16 g/t dry solids in the liquor
Cooking system, evaporation system, condensate stripper system and brown pulp washing system		10 ppm		10 ppm

Notes:

— The emission standards apply individually to all the emission points of process equipment;

— the brown pulp washing system may include the following sources:

- first stage of washing vent;
- knotter vent;
- foam tank;
- seal tank;

— the recovery furnace includes, where applicable, the direct contact evaporator;

— the concentrations of contaminants measured to verify compliance with emission standards expressed in mg/m³ are corrected to reference conditions, on a dry basis, and to 8% oxygen by volume;

— the concentrations of contaminants measured to verify compliance with the dissolving tank standards are expressed in grams per tonne of dry solids contained in the black liquor incinerated in the recovery furnace;

— the concentrations of contaminants measured to verify compliance with emission standards expressed in ppm are calculated on a dry basis and corrected, in the case of a lime kiln, recovery furnace or any other system for treating total reduced sulphur compounds in fuel burning equipment (Regulation respecting the quality of the atmosphere (R.R.Q., 1981, c. Q-2, r.20)) or in an incinerator, to 8% oxygen by volume according to the following formula. In the case of an incinerator of the “regenerative” type, the correction is made to 18% oxygen by replacing the value 12.9 in the formula by 2.9;

$$E = E_a \times \frac{12.9}{20.9 - A} \text{ where}$$

“E” is the corrected concentration;

“E_a” is the concentration on a dry basis without correction;

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

DAY	TSS		BOD ₅		AOX		FLOW (m ³ /d)	pH		Temp. MAX. (°C)	
	Concentration (mg/l)	Daily loss (1) (kg/d)	Concentration (mg/l)	Daily loss (1) (kg/d)	Concentration (mg/l)	Daily loss (1) (kg/d)		Feed water MIN.	Final effluent		
									MIN		MAX.
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											

The daily loss corresponds

(a) for a final effluent discharged into the environment or into a storm sewer, to the concentration of the contaminant in that final effluent multiplied by the daily flow of that final effluent;

(b) for a final effluent discharged into the environment or into a sewer system, to the result obtained using the following formula: $A \times B \times C$, where A is the concentration of the contaminant in that final effluent, B is the daily flow of that final effluent and C is the portion of those contaminants not eliminated by municipal treatment, 15% for TSS and BOD₅ and 50% for AOX.

Reasons for not sending: _____

SCHEDULE VI

(s. 70, 1st par., subpar. 2 to 4, 6 and 7, ss. 71 and 80, 2nd par.)

MONTHLY REPORT ON EFFLUENT CHARACTERISTICS

NAME OF OPERATOR: _____

LOCATION OF MILL: _____

IDENTIFICATION OF EFFLUENT: _____

MONTH: _____ YEAR: _____

Parameters	Date of sampling or date of flow measurement	(A)	(B)	(C)
		Treated effluent (2)(4)	Untreated effluent (3)(4)	Final effluent (5)
Flow (1)(m ³ /day)				
Chemical oxygen demand (mg/l)				
Aluminum (mg/l)				
Copper (mg/l)				
Nickel (mg/l)				
Lead (mg/l)				
Zinc (mg/l)				
Petroleum hydrocarbons C10-C50 (mg/l)				

Parameters	Date of sampling or date of flow measurement	(A)	(B)	(C)
		Treated effluent (2)(4)	Untreated effluent (3)(4)	Final effluent (5)
Toxicity (T.U.a) (rainbow trout)				
Polychlorinated biphenyls ($\mu\text{g/l}$)				
Chlorinated dioxins and furans ($\text{pg}_{\text{eq}}/\text{l}$)				

Do not write in this space.

- (1) For each day on which an effluent is sampled, there must be a corresponding flow measurement for that effluent on that date.
- (2) This may refer to an effluent treated by primary treatment only, by biological treatment or by treatment of another type.
- (3) This refers to untreated effluent that is added to treated effluent.
- (4) If there is only one effluent, the data prescribed for columns A and B must be entered in Column C.
- (5) This refers to effluent discharged into the environment, into a storm sewer or into a sewer system.

Reasons for not sending: _____

SCHEDULE VII

(s. 72 and s. 80, 2nd par.)

MONTHLY REPORT ON THE EVALUATION OF THE BIOLOGICAL TREATMENT PERFORMANCE IN BOD₅

NAME OF OPERATOR: _____

LOCATION OF MILL: _____

MONTH: _____ YEAR: _____

DAY	Concentration in BOD ₅		Removal rate (%)
	Entry into biological treatment (1) (mg/l)	Outflow from biological treatment (1) (mg/l)	
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

DAY	Concentration in BOD ₅		Removal rate (%)
	Entry into biological treatment (1) (mg/l)	Outflow from biological treatment (1) (mg/l)	
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
AVERAGE			

Do not write in this space.

The data is required where effluents are combined in accordance with section 20.

Reasons for not sending: _____

Day	Daily production Finished product (tonnes)	Total daily flow (m ³ /d)	BOD ₅		TSS		AOX		pH (1)		Max. temp. < 65°C (2)
			Total daily loss (kg/d)	Excess (kg/d)	Total daily loss (kg/d)	Excess (kg/d)	Total daily loss (kg/d)	Excess (kg/d)	Time in excess (HH:MM)		
									< 6.0	> 9.5	
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
Average											
Number of days in excess											

Month	BOD ₅		TSS		AOX	
	Total monthly loss (3) (kg)	Excess (kg)	Total monthly loss (3) (kg)	Excess (kg)	Total monthly loss (3) (kg)	Excess (kg)

Do not write in this space.

- (1) The pH of the cooling water final effluent may be equal to that of the feed water.
- (2) Indicate the maximum temperature on the days not in compliance.
- (3) The total monthly loss is the sum of the monthly losses for each of the final effluents.

Reasons for excess or for not sending: _____

Remedial measures implemented or planned: _____

SCHEDULE IX

(s. 80, 2nd par.)

MONTHLY REPORT ON COMPLIANCE OF EFFLUENTS

NAME OF OPERATOR: _____

LOCATION OF MILL: _____

IDENTIFICATION OF EFFLUENT: _____

MONTH: _____ YEAR: _____

Parameters	Effluent treated biologically	Untreated effluent	Final effluent	Effluent treated other than biologically	Standards
Toxicity (rainbow trout)					<= 1 T.U.a ou < 3 T.U.a
					<= 1 T.U.a
Petroleum hydrocarbons C10-C50					2 mg/l
Polychlorinated biphenyls					3 µg/l
Chlorinated dioxins and furans					15 pg _{eq} /l

 Do not write in this space.

Reasons for excess or for not sending: _____

Remedial measures implemented or planned: _____

SCHEDULE X

(s. 80, 2nd par. and s. 105, 5th par.)

MONTHLY REPORT ON COMPLIANCE OF OTHER WASTEWATER

NAME OF OPERATOR: _____

LOCATION OF MILL OR LANDFILL SITE: _____

IDENTIFICATION OF WASTEWATER: _____

MONTH: _____ YEAR: _____

Parameters	Standards	Date of sampling	Sanitary wastewater (1)	Storage area water	Leachate (2)	Storage area water	Gas scrubbing water	Ash cooling water
Flow (m ³ /month) (3)								
BOD ₅	50 mg/l for leachate 30 mg/l for other water							
TSS	50 mg/l for leachate 30 mg/l for other water							
Aluminum	10 mg/l							
Chromium	1 mg/l							
Iron	10 mg/l							
Mercury	0.05 mg/l							
Lead	0.3 mg/l							
Zinc	1 mg/l							

Parameters	Standards	Date of sampling	Sanitary wastewater (1)	Storage area water	Leachate (2)	Storage area water	Gas scrubbing water	Ash cooling water
Phenolic compounds	50 µg/l							
Total sulphides	1 mg/l							
Resinic and fatty acids	300 µg/l							

Do not write in this space.

(1) The standards of all parameters apply where treatment sludge, de-inking sludge or bark is stored.

(2) Compliance is verified by comparing the standard with the arithmetic average of concentrations measured in the last four samples. Despite the foregoing, for other wastewater, the standards are expressed as maximum concentrations.

(3) The flow is required only in the case of a landfill site having a leachate specific treatment system. Measurement of the flow may be taken at the treatment system entry or outflow.

Reasons for excess or for not sending: _____

Remedial measures implemented or planned: _____

SCHEDULE XI

(s. 104, 3rd par. and s. 112, 1st par.)

LIST OF PHENOLIC COMPOUNDS AND RESINIC AND FATTY ACIDS

PHENOLIC COMPOUNDS

Phenol
o-cresol
m-cresol
p-cresol
2,4-dimethylphenol
Guaiacol
2,4-dichlorophenol + 2,5-dichlorophenol
Catechol
2-nitrophenol
2,4,6-trichlorophenol
4-nitrophenol
Eugenol
4,5-dichloroguaiacol
Isoeugenol
2,3,4,6-tetrachlorophenol
6-chlorovanillin
4,5-dichlorocatechol
3,4,5-trichloroguaiacol
4,5,6-trichloroguaiacol
5,6-dichlorovanillin
Pentachlorophenol
3,4,5-trichlorocatechol
Tetrachloroguaiacol
3,4,5-trichlorosyringol
Tetrachlorocatechol

RESINIC AND FATTY ACIDS

Linoleic acid
Linolenic acid
Oleic acid
Stearic acid
9,10 – dichlorostearic acid
Primaric acid
Sandaracopimaric acid
Isopimaric acid
Palustric acid
Levopimaric acid
Dehydroabietic acid
Abietic acid
Neobietic acid
14 – chlorodehydroabietic acid
+
12 – chlorodehydroabietic acid
12,14 – dichlorodehydroabietic acid

SCHEDULE XII

(s. 80, 2nd par.)

MONTHLY REPORT ON DAILY PRODUCTION

NAME OF OPERATOR: _____

LOCATION OF MILL: _____

MONTH: _____ YEAR: _____ BEGINNING OF DAY: _____ O'CLOCK

DAY	Daily production (tonnes)				
	Finished product	Pulp bleached with chlorinated product	Dissolving grade sulphite pulp (1)	New plant in the complex (2)	
				Finished product	Pulp bleached with chlorinated product
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

DAY	Daily production (tonnes)				
	Finished product	Pulp bleached with chlorinated product	Dissolving grade sulphite pulp (1)	New plant in the complex (2)	
				Finished product	Pulp bleached with chlorinated product
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

- (1) The monthly average of the cooking yield of the dissolving grade sulphite pulp process is ____ %.
- (2) Applies in the case of a mill in a complex built after 21 October 1992.

SCHEDULE XIII

(s. 85, 1st par.)

LIST OF POLYCYCLIC AROMATIC HYDROCARBONS

Anthracene

Benzo (a) anthracene

Benzo (b) fluoranthene

Benzo (j) fluoranthene

Benzo (k) fluoranthene

Benzo (g,h,i) perylene

Benzo (e) pyrene

Benzo (a) pyrene

Chrysene

Dibenzo (a,h) anthracene

Dibenzo (a,i) pyrene

Indéno (1,2,3-cd) pyrene

Pyrene

SCHEDULE XIV

(s. 85, 5th par.)

COMPLIANCE REPORT OF ATMOSPHERIC EMISSIONS

NAME OF OPERATOR: _____

LOCATION OF MILL: _____

YEAR : _____

Process equipment	Identification	Parameter	Unit	Sampling date	Concentrations	Standard
Recovery furnace		Particles	mg/m ³			
		Total reduced sulphur compounds	ppm			
		Polycyclic aromatic hydrocarbons	µg/m ³			
		Sulphur dioxide	mg/m ³			
Lime kiln		Particles	mg/m ³			
		Total reduced sulphur compounds	ppm			
		Polycyclic aromatic hydrocarbons	µg/m ³			
		Sulphur dioxide	mg/m ³			
Dissolving tank		Particles	g/t dry solids in the liquor			
		Total reduced sulphur compounds	g/t dry solids in the liquor			
Cooking system		Total reduced sulphur compounds	ppm			
Blow tank		Total reduced sulphur compounds	ppm			
Evaporation system		Total reduced sulphur compounds	ppm			
Condensate stripper system		Total reduced sulphur compounds	ppm			
Brown pulp washing system		Total reduced sulphur compounds	ppm			
First stage of washing vent		Total reduced sulphur compounds	ppm			
Knotter vent		Total reduced sulphur compounds	ppm			
Foam tank		Total reduced sulphur compounds	ppm			

Process equipment	Identification	Parameter	Unit	Sampling date	Concentrations	Standard
Seal tank		Total reduced sulphur compounds	ppm			
Contaminated water tank		Total reduced sulphur compounds	ppm			
Incinerator of non-condensable gases (1)		Total reduced sulphur compounds	ppm			
Biomass combustion system (1)		Total reduced sulphur compounds	ppm			
Oil combustion system (1)		Total reduced sulphur compounds	ppm			
Sulphite, bisulphite or dissolving grade sulphite pulp plant		Sulphur dioxide	kg/t of produced pulp			
Incinerator		Sulphur dioxide	ppm			
		Particles	mg/m ³			

Do not write in this space.

(1) This equipment may be used to burn total reduced sulphur compounds.

Reasons for excess or for not sending, or comments: _____

Remedial measures implemented or planned: _____

SCHEDULE XV

(s. 87, 2nd par.)

MONTHLY REPORT ON MILL RESIDUAL MATERIALS MANAGEMENT

NAME OF OPERATOR: _____

LOCATION OF MILL: _____

MONTH: _____ YEAR: _____

Code	Management method	Identification of site
#1	Landfilling in a site reserved for mill residual materials	
#2	Landfilling in residual materials landfill site or in a solid waste landfill site	
#3	Combustion	
#4	Composting	
#5	Recovery for agricultural and silvicultural purposes	
#6	Other management method Specify:	

Type of mill residual materials	Management method (Code)	Real weight (tonnes)	Volume (m ³)	Average dryness (1) (%)
Bark				
Wood residue				
Bark and wood residue				
Paper and paperboard discards				
Dry ash handled				
Recycled fibre pulping residues				
Wet ash handled				
Pulp discards				
Knots				
Lime slaking rejects				
Lime sludge				
Lime slaking rejects and sludge				
Combination of alkaline discharges				
Green liquor dregs				
Primary treatment sludge				

Type of mill residual materials	Management method (Code)	Real weight (tonnes)	Volume (m ³)	Average dryness (1) (%)
Biological treatment sludge				
De-inking sludge				
Primary and biological treatment sludge				
		% biological sludge on a dry weight basis (2):		
Primary treatment and de-inking sludge				
Biological treatment and de-inking sludge				
		% biological sludge on a dry weight basis (2):		
Primary, biological treatment and de-inking sludge				
		% biological sludge on a dry weight basis(2):		
Other mill residual materials				

Do not write in this space.

(1): The average dryness value corresponds to the arithmetic average of the dryness measurements taken during a month for each type of residual materials directed to a landfill site. Average dryness is calculated only for mill residual materials whose management code is #1 or #2. Despite the foregoing, the dryness standard applies only where the management code is #1.

(2): The average percentage of biological sludge in dry weight of all the mixture of buried sludge is required only where the management code is #1 and the mill is to use a dryness standard of 15% in accordance with the conditions of section 106.

“Other mill residual materials” means any residue from the pulp or paper product manufacturing process that is not a hazardous material.

Do not enter in the “Other mill residual materials” space: residual materials that are not mill residual materials such as: discarded pieces of equipment, construction or demolition waste, used oils, solid residual materials similar to household refuse and sawmill residual materials.

Reasons for excess or for not sending, or comments: _____

Remedial measures implemented or planned: _____

