

participants immediately, psychologists must explain the reasons for the procedure as soon as possible after completion of the experiment.

CHAPTER VII ADVERTISING

72. Psychologists must refrain from participating as psychologists in advertising that recommends that the public buy or use a product unrelated to psychology.

73. Psychologists who are involved in the commercial distribution of instruments, books or other products related to psychology must base any statement concerning the operation, advantages and performance of such products on proof scientifically and professionally recognized in psychology.

74. Psychologists who, in their advertising, claim to possess skills or specific qualities, in particular as to the effectiveness or scope of their professional services and to those generally provided by other members of their profession, or as to their level of competence, must be able to substantiate such claims.

75. Psychologists must keep a copy of every advertisement for a period of three years following the date on which it was last broadcast or published. The copy must be given, on request, to a syndic.

CHAPTER VIII USE OF THE GRAPHIC SYMBOL OF THE ORDER

76. Psychologists who reproduce the graphic symbol of the Order for advertising purposes must ensure that the symbol conforms to the original held by the Order.

77. Where psychologists use the graphic symbol of the Order in their advertising, they may not suggest that such advertising emanates from the Order.

78. Psychologists who carry on their activities within a partnership must ensure that any use of the graphic symbol of the Order in the partnership complies with sections 76 and 77.

79. Psychologists must ensure that a partnership within which they carry on their professional activities does not use the graphic symbol of the Order in connection with the advertising or name of the partnership unless all the services provided by the partnership are professional services provided by psychologists.

In the case of a partnership which provides the professional services of psychologists and the services of persons other than psychologists, the graphic symbol of

the Order may be used in connection with the name of the partnership or in its advertising provided the graphic symbol identifying each of the professional orders or organizations to which such persons belong is also used.

The graphic symbol of the Order may, however, always be used in connection with the name of a psychologist.

80. This Code of ethics replaces the Code of ethics of psychologists, approved by Order in Council 3048-82 dated 20 December 1982 and replaced by a decision dated 18 February 1983, and the Regulation respecting advertising by psychologists (R.R.Q., 1981, c. C-26, r.153).

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

7328

Draft Regulation

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

Pulp and paper mills

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

The purpose of the draft Regulation is to replace the Regulation respecting pulp and paper mills made by Order in Council 1353-92 dated 16 September 1992. It harmonizes the method of calculating the discharge limits of certain contaminants into effluents with that of the federal regulation, adjusts certain effluent monitoring and analysis standards, and improves closure and post-closure management standards for mill residual materials landfill sites.

The replacement of the current regulation entails an updating of a number of references to provisions of Acts, regulations and policies that have been amended or revoked over time. The draft Regulation facilitates the retrieval of forms since each form is now in a separate, numbered schedule.

The impact of the draft Regulation on enterprises will not entail new equipment set-up expenses. The modification to the method of calculating discharge limits

simplifies the application of the requirements, although without relaxing them. For mills that discharge effluents into sewer systems and that generally are smaller enterprises, their effluent monitoring requirements are slightly reduced by the draft Regulation.

Further information may be obtained by contacting

Sylvain Chouinard, Engineer
Ministère du Développement durable, de
l'Environnement et des Parcs
Direction des politiques de l'eau
Service des eaux industrielles
675, boulevard René-Lévesque Est, 8^e étage, boîte 42
Québec (Québec) G1R 5V7

Telephone: 418 521-3885, extension 4988
Fax: 418 643-2124
E-mail: sylvain.chouinard@mddep.gouv.qc.ca

Any person having comments to make on the draft Regulation is asked to send them in writing, before the expiry of the 60-day period, to Sylvain Chouinard, édifice Marie-Guyart, 8^e étage, boîte 42, 675, boulevard René-Lévesque Est, Québec (Québec) G1R 5V7.

THOMAS J. MULCAIR,
*Minister of Sustainable Development,
Environment and Parks*

Regulation respecting pulp and paper mills

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

I. 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)

“AOH” means adsorbable organic halogens; (COHA)

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

“complex” means a physical space consisting of at least two mills, 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 AOH discharge expressed in kg/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 AOH; (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 Division IV and the period during which daily production 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 other than dissolving grade sulphite pulp; (produit fini)

“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 that manufactures 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 paragraph 21 of section 1 of the Environment Quality Act (R.S.Q., c. Q-2); (matières résiduelles de fabrique)

“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 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; (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 the number of cubic centimetres of a gaseous contaminant per cubic metre of gas; (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; (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 and, where applicable, the interim reference production rate for finished product; (RPR_F)

“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)

“TSS” means total suspended solids; (MES)

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

The person who has custody of a mill, 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 is considered to be an operator.

2. The operator of a mill 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 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. Despite section 12 of the Regulation respecting the application of the Environment Quality Act made by Order in Council 1529-93 dated 3 November 1993, any equipment used or installed for the purpose of reducing the emission, deposit, issuance or discharge of contaminants into the environment must at all times be in good working order and function optimally, including outside production hours, even if the equipment has the effect of reducing the emission, deposit, issuance or discharge of contaminants to a level above the standards prescribed in any regulation of the Government made under the Environment Quality Act.

5. 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

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

DIVISION II

REFERENCE PRODUCTION RATE

7. The reference production rate of a mill for finished product, dissolving grade sulphite pulp or bleached pulp with a chlorinated bleaching agent for any year corresponds

respectively to the highest value of the 90th percentiles of the daily production of finished product, dissolving grade sulphite pulp or bleached pulp for any of the previous three years.

The 90th percentile is the statistically derived value corresponding respectively to the daily production of finished product, dissolving grade sulphite pulp or bleached pulp at the mill that was exceeded on 10% of the days that the mill operated in the year.

8. Where less than three years of the data referred to in section 7 are available on which to calculate the reference production rate, the operator of the mill 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, dissolving grade sulphite pulp or bleached pulp. The operator must send the estimation to the Minister, along with supporting documents.

9. If the 90th percentile of the daily production of finished product, dissolving grade sulphite pulp or 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 8.

10. If the 90th percentile of the daily production of finished product, dissolving grade sulphite pulp or 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 30 days after the decrease occurs or after becoming aware of the expected decrease and must comply with the conditions in section 8.

DIVISION III

STANDARDS FOR EFFLUENTS

§1. General

11. 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.

12. 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.

13. 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.

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

15. No effluent may contain a concentration of hydrocarbons in excess of 2 milligrams per litre.

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

16. 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-TCDD toxic equivalents.

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

17. 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.

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

19. Dilution of an effluent is prohibited.

20. Despite section 19, two effluents may be combined if each of them complies with the standards prescribed in sections 15 to 17.

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

21. Despite sections 19 and 20, 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.

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

23. 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.

24. 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.

25. During the first day following the day on which a total production stoppage occurs, the total daily TSS or BOD₅ loss may not exceed the daily limit calculated under sections 30 and 32 or sections 38 and 40, as the case may be, for the day on which the total production stoppage occurred.

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

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

27. This Subdivision applies in respect of final effluent from a mill, whose construction was completed before 22 October 1992 and that is discharged into the environment or into a storm sewer.

It also applies in respect of final effluent from such a mill that is discharged into a sewer system if the mill also discharges final effluent into the environment or into a storm sewer.

28. The monthly loss of TSS, BOD₅ or AOH in the final effluents may not exceed the monthly limit established in sections 29, 31 and 33.

The total daily loss of TSS, BOD₅ or AOH in the final effluents may not exceed the daily limit established in sections 25, 26, 30, 32 and 34.

29. The monthly TSS discharge limit is equal to the product of the mill's 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 equal to 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.

30. The daily TSS discharge limit is equal to the product of the 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 equal to 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.

31. The monthly BOD₅ discharge limit is equal to the product of the mill's 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 dissolving grade sulphite pulp mill, the monthly BOD₅ discharge limit is equal to the limit established under the first 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.

32. The daily BOD₅ discharge limit is equal to the product of the mill's RPR_F multiplied by a discharge standard of 7.1 kilograms per tonne.

For a dissolving grade sulphite pulp mill, the daily BOD₅ discharge limit is equal to the limit established under the first paragraph, to which is added the product of the RPR_D multiplied by a discharge standard of 31 kilograms per tonne.

33. The monthly AOH discharge limit is equal to the product of the mill's RPR_B multiplied by a discharge standard of 0.7 kilograms per tonne and by the number of days in the month concerned.

34. The daily AOH discharge limit is equal to the product of the mill's RPR_B multiplied by a discharge standard of 0.85 kilograms per tonne.

§3. Standards applicable to the final effluent from a mill whose construction was completed on or after 22 October 1992

35. This Subdivision applies in respect of final effluent from a mill whose construction was completed on or after 22 October 1992 and that is discharged into the environment or into a storm sewer.

It also applies in respect of final effluent from a mill that is discharged into a sewer system if the mill also discharges final effluent into the environment or into a storm sewer.

36. The monthly loss of TSS, BOD₅ or AOH in the final effluents may not exceed the monthly limit established in sections 37, 39 and 41.

The total daily loss of TSS, BOD₅ or AOH in the final effluents may not exceed the daily limit established in sections 25, 26, 38, 40 and 42.

37. The monthly TSS discharge limit is equal to the product of the mill's RPR_F multiplied by a discharge standard of 2.7 kilograms per tonne and by the number of days in the month concerned.

38. The daily TSS discharge limit is equal to the product of the mill's RPR_F multiplied by a discharge standard of 5.3 kilograms per tonne.

39. The monthly BOD₅ discharge limit is equal to the product of the mill's RPR_F multiplied by a discharge standard of 2.2 kilograms per tonne and by the number of days in the month concerned.

40. The daily BOD₅ discharge limit is equal to the product of the mill's RPR_F multiplied by a discharge standard of 3.6 kilograms per tonne.

41. The monthly AOH discharge limit is equal to the product of the mill's RPR_B multiplied by a discharge standard of 0.2 kilograms per tonne and by the number of days in the month concerned.

42. The daily AOH discharge limit is equal to the product of the mill's RPR_b multiplied by a discharge standard of 0.25 kilograms per tonne.

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

DIVISION IV SANITARY WASTEWATER STANDARDS

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

45. 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.

46. 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 BOD₅ in excess of 30 milligrams per litre.

DIVISION V MONITORING EQUIPMENT

47. 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.

48. 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.

49. Where an effluent is combined in accordance with section 21, 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 BOD₅ reduction.

50. 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.

51. The sampling stations and flow measurement systems referred to in sections 47 to 50 must have a manhole enabling them to be monitored.

DIVISION VI DESIGN STANDARDS FOR STORAGE AREAS AND EMERGENCY BASINS

52. An operator who 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.

In addition, an outdoor storage area established or altered after (*insert the date of coming into force of this Regulation*) must be watertight.

53. 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 the materials stored or with the runoff from those materials.

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

If the stored materials consist of primary sludge, section 129 applies and if they consist of bark, the water from those materials that is not treated with process water or discharged into a sewer system must comply with the provisions of sections 105 and 106 before it is discharged into the environment or into a storm sewer.

55. For an outdoor storage area established before 22 October 1992 that does not comply with the siting standards referred to in section 52, sections 53 and 54 apply.

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

CHAPTER III ATMOSPHERIC EMISSION STANDARDS

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

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

59. 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.

60. 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 on or after 22 October 1992, the standard prescribed in the first paragraph is 100 milligrams per cubic metre.

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

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

“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 the gases at the sampling site.

CHAPTER IV MONITORING AND ANALYSIS OF EFFLUENT AND WASTEWATER

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

63. 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 13 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.

64. The operator must test on an annual basis the accuracy of the primary element in each flow measurement system referred to in sections 47 and 48, using a flow measurement method in Book 7 of the Guide d'échantillonnage à des fins d'analyses environnementales, published by 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%.

65. The operator must inspect on a monthly basis the primary element and on a daily 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.

66. Within 30 days after the day on which the testing required by section 64 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.

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

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

(1) the taking of at least 8 equal and representative samples each hour containing at least 50 millilitres each, at a fixed frequency; or

(2) the taking of at least 192 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.

69. 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.

In the case of a total production stoppage, those requirements cease to apply from the 60th day that follows the day on which the stoppage occurs, except where wastewater from a storage area, leachate, municipal or industrial wastewater or septic tank sludge is discharged into the process water collection or treatment system.

70. The operator must continuously measure and record the flow of the final effluents at the stations referred to in section 47 and, where applicable, the flow of effluents at the stations referred to in section 48. The operator must take a reading of the flow at the beginning and at the end of each day.

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

(1) TSS and BOD₅ on each production day in the case of a mill that discharges an effluent into the environment, into a storm sewer or into a sewer system if, in the latter case, the mill also discharges an effluent into the environment or into a storm sewer, and three times a week, on non-consecutive production days, in the case of a mill that discharges its effluents into a sewer system;

(2) TSS and BOD₅ on each day, for the first 10 days following a total production stoppage, except for regular weekend stoppages, and throughout the duration of equipment maintenance work performed during the total production stoppage if such work continues for more than 10 days, and thereafter 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;

(3) toxicity and resinic and fatty acids, once a month at an interval of at least 21 days, except in the case of an effluent discharged into a sewer system; the compounds of resinic and fatty acids to be analyzed are those appearing in Schedule V;

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

(5) hydrocarbons, once a week, except where they are already measured at the sampling stations referred to in section 48;

(6) in respect of a mill using a chlorinated product as a pulp bleaching agent, AOH, three times a week on non-consecutive production days of bleached pulp and, where section 48 does not apply, chlorinated dioxins and furans and chlorophenols, once a month at an interval of at least 21 days; the congeners of chlorinated dioxins and furans and chlorophenol compounds to be analyzed are those appearing in Schedules II and VI; and

(7) in respect of a mill recycling paper or paperboard in a quantity exceeding 1,000 tonnes per month and, where section 48 does not apply, polychlorinated biphenyls, once a month at an interval of at least 21 days; the homologous groups of polychlorinated biphenyls to be analyzed are those appearing in Schedule III.

In the case of a total production stoppage, subparagraphs 2 to 7 of the first paragraph cease to apply from the 60th day that follows the day on which the stoppage occurs, except 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.

72. The operator must measure the following at the sampling stations referred to in section 48:

(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, and hydrocarbons, once a week;

(2) chlorinated dioxins and furans, and chlorophenol compounds, once a month at an interval of at least 21 days, in the case of a mill using a chlorinated product as a pulp bleaching agent; the congeners of dioxins and furans and chlorophenol compounds to be analyzed are those appearing in Schedules II and VI; and

(3) polychlorinated biphenyls, once a month at an interval of at least 21 days, in the case of a mill recycling paper or paperboard in a quantity exceeding 1,000 tonnes per month; the homologous groups of polychlorinated biphenyls to be analyzed are those appearing in Schedule III.

Subparagraphs 2 and 3 of the first paragraph do not apply in respect of an effluent that has not undergone treatment.

In the case of a total production stoppage, the first paragraph ceases to apply from the 60th day that follows the day on which the stoppage occurs, except 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.

73. If an effluent is combined in accordance with section 21, the operator must measure the BOD₅ each day at the sampling station referred to in section 49.

74. An operator who discharges treated sanitary wastewater into the environment or into an effluent must measure, at the sampling station referred to in section 50, TSS and BOD₅ once a month at an interval of at least 21 days.

75. The operator must continuously measure and record the pH and temperature at the points referred to in section 63, on each day on which there is a discharge.

76. 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.

77. Subject to section 78, the analyses necessitated by the measurements referred to in sections 71 to 74 must be performed on a portion of a composite sample.

78. In respect of toxicity, the analyses necessitated by the measurements referred to in sections 71 and 72 must be performed on a grab sample.

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

80. The analyses necessitated by the measurements referred to in sections 71 to 74 and 76 must be performed by a laboratory accredited by the Minister under section 118.6 of the Environment Quality Act, in accordance with the methods described in the Liste des méthodes d'analyses relatives à l'application des règlements

découlant de la Loi sur la qualité de l'environnement published by the Minister of Sustainable Development, Environment and Parks.

Despite the foregoing, the analyses necessitated by the measurements of toxicity referred to in section 72 must be performed in accordance with Division 6 of Reference Method EPS 1/RM/13 described in the aforementioned list, in the case where effluents are combined in accordance with section 21.

81. The operator must send to the Minister, within 30 days following the last day of each month, the results of the measurements made under sections 69 to 76 and the mill's daily production data of finished product, and where applicable, of dissolving grade sulphite pulp. For the results of the chlorinated dioxin and furan 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 XII and XIV.

The operator must also keep a log of the 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

82. 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 20% 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 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.

83. 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 on or after 22 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, screen knoter or knoter, foam tank or scum breaker and seal tank;

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

(4) volatile organic compounds emitted by the recovery furnace.

84. 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.

85. 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.

86. The contaminants referred to in sections 83 to 85 must be sampled and analyzed in accordance with the following prescriptions. The polycyclic aromatic hydrocarbons and the volatile organic compounds are those listed in Schedule XV.

The sampling must be performed as provided in Book 4 of the Guide d'échantillonnage à des fins d'analyses environnementales, published by 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 and in accordance with the methods described in the Liste des méthodes d'analyses relatives à l'application des règlements découlant de la Loi sur la qualité de l'environnement published by the Minister of Sustainable Development, Environment and Parks.

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 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 XVI.

87. 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

88. The operator of a mill 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 must be sent using media-based information technology conforming to the standard format provided by the Minister that contains the information required by Schedule XVII.

89. The mill residual materials must be stored, treated or landfilled in accordance with the provisions of this Chapter or the provisions of 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.

90. The dilution of leachate from residual materials, 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

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

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

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

94. The ash produced by the combustion of residual materials must be stored or landfilled in accordance with Division 3 of this Chapter or in a solid waste sanitary landfill site to which Division IV of the Regulation respecting solid waste applies or be reclaimed in accordance with the Environment Quality Act.

95. The standards prescribed in Division IV and in subparagraphs *a* and *b* 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 prescribed 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.

96. Sections 105 and 106 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.

97. 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

98. This Division applies to the operator of a mill, the operator of a process water purification plant that is not a municipal plant and the operator of a facility for the final deposit of mill residual materials by landfilling.

Despite the foregoing, Subdivision 2, section 123, subparagraph 3 of the first paragraph and the second and third paragraphs of section 124 do not apply to the operator of a landfill site permanently closed on or after 22 October 1992 but before (*insert the date of coming into force of this Regulation*).

99. The operator of a mill and the operator of a process water purification plant that is not a municipal plant must, once a week, measure the dryness of the residual materials referred to in section 118, except bark, wood residue, paper and paperboard discards, pulper residues, dry ash handled, rubble and debris before directing those residual materials to a landfill site referred to in Subdivision 1 or a solid waste sanitary landfill site subject to the provisions of Division IV of the Regulation respecting solid waste.

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

100. No facility for the final deposit of mill residual materials by landfilling 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 plain;

(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.

101. 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 and 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.

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

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

103. 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 105, unless it is treated with the mill's process water or discharged into a sewer system.

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

105. The operator may not allow leachate to be discharged into the environment or into a storm sewer if it contains contaminants in excess of the following concentrations:

(1) aluminum (Al): 10 milligrams per litre;

(2) chromium (Cr): 1 milligram per litre;

(3) iron (Fe): 10 milligrams per litre;

(4) mercury (Hg): 0.05 milligrams per litre;

(5) lead (Pb): 0.3 milligrams per litre;

(6) zinc (Zn): 1 milligram per litre;

(7) BOD₅: 50 milligrams per litre;

(8) TSS: 50 milligrams per litre;

(9) phenolic compounds: 50 micrograms per litre;

(10) total sulphides (expressed in S²⁻): 1 milligram per litre;

(11) resinic and fatty acids: 300 micrograms per litre.

The limit value prescribed in subparagraph 7 of the first paragraph may be replaced by removal of at least 90% of the BOD₅ contained in the leachate. That removal rate must be calculated each week by comparing the average of the concentrations measured in the last 12 samples taken at the outflow of the treatment system with the average of the concentrations measured in the last 12 samples taken at the entry to the treatment system.

Resinic and fatty acids are the sum of the compounds listed in Schedule V and the phenolic compounds are the sum of the compounds listed in Schedule XIII.

Despite the foregoing, in the case of other wastewater to which the provisions of this section apply, the standard for TSS and for BOD₅ is 30 milligrams per litre and, in the case of phenolic compounds, the standard is 10 micrograms per litre.

106. 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 contaminants to be analyzed are those listed in section 105.

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 a weekly measurement of those flows on the form provided by the Minister. The operator must inspect the measurement system on a weekly basis and test its accuracy on an annual basis in the manner provided in section 64. Sections 66 and 67 apply to the measurement system.

If the leachate is treated so as to reduce by 90% the average concentration of BOD₅ at the treatment system entry or outflow, the operator must measure the concentration in BOD₅ on a weekly basis, unless there is no discharge into the environment or into a storm sewer. Both measurements must be taken on the same day using a grab sample.

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 and in accordance with the methods described in the Liste des méthodes d'analyses relatives à l'application des règlements découlant de la Loi sur la qualité de l'environnement published by the Ministère du Développement durable, de l'Environnement et des Parcs.

The operator must send the results of the measurements referred to in this section to the Minister within 30 days following the last day of each month during which the measurements are taken.

The results 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 XII.

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

107. Subject to section 108, before being directed to a landfill site, the residual materials referred to in section 118 must have an average dryness value of at least 25%.

Despite the foregoing, the 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 103.

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

109. 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.

110. 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.

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

112. A landfill site must have at least five water table monitoring 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 five centimetres and have a strainer over the entire width of the most permeable water-saturated layer.

At least 1 reference well must be situated upstream from the landfill site in relation to the direction of flow of the water table. The other monitoring 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.

113. In June and October each year, the operator must analyze the physicochemical characteristics of the water in the monitoring 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 XIII.

The analyses must be performed by a laboratory accredited by the Minister under section 118.6 of the Environment Quality Act and in accordance with the methods described in the Liste des méthodes d'analyses relatives à l'application des règlements découlant de la Loi sur la qualité de l'environnement published by the Ministère du Développement durable, de l'Environnement et des Parcs.

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

114. The operator must forward 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, using media-based information technology, the results of the water characterization in the monitoring wells of a landfill site, conforming to the standard format provided by the Minister that contains the information required by Schedule XVIII.

115. 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.

116. 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 134 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 117.

117. 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 cover may also be added to the vegetation cover. Holes, subsidence and fissures must be filled in or repaired until the soil has been fully stabilized.

118. The operator may accept only

(1) mill residual materials and rubble and debris 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.

119. The residual materials referred to in section 118, except rubble and debris, may be stored in an area of the landfill site intended for storage. Stored residual materials that have not been used after two years must be landfilled.

§2. Closure

120. 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.

121. 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 monitoring 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 monitoring 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 105, 110, 112 and 117 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 listed in subparagraph 1 of the first paragraph.

§3. Post-closure management

122. The operator must comply with the requirements of sections 103, 105, 106, 109, 111 to 114 and 117 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 monitoring 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.

123. Leachate sampling pursuant to section 106 may be reduced to a frequency of one sample per year if, after a monitoring period of a minimum duration of five years after the landfill closure date, none of the parameters analyzed in the leachate samplings taken before treatment has exceeded the limit values set out in the first paragraph of section 105.

The results of the analyses must be sent to the Minister in accordance with the fifth and sixth paragraphs of section 106.

124. The operator of a permanently closed landfill site may apply to the Minister to be released from any environmental monitoring or maintenance obligation under this Subdivision if, during a post-closure monitoring period of a minimum duration of five years,

(1) none of the parameters analyzed in the samples of leachate discharged into the environment or into a storm sewer taken before treatment has exceeded the limit values set out in the first paragraph of section 105; if the leachate is discharged into a sewer system or is treated with the mill's process water, the leachate was sampled and analyzed in accordance with section 106 and none of the parameters analyzed in the samples taken before treatment has exceeded the limit values set out in the first paragraph of section 105;

(2) the results of the parameters analyzed in the samples of the water in monitoring 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 is impermeable, the results of the parameters analyzed in the samples of the water in the monitoring wells bordering the landfill 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) the concentration of methane in biogas produced by landfilled residual materials has been measured at a frequency of at least four times a year and at intervals spread evenly throughout the year using a biogas collection system or measurement stations installed in the landfilled residual materials, and all the measurements have indicated a concentration of methane less than 1.25% by volume. The measurement stations must be laid out evenly over the entire landfill area.

The date, time, temperature and barometric pressure must be recorded every time a measurement is taken pursuant to the provisions of the first paragraph.

The analyses of biogas, where applicable, must be performed by a laboratory accredited by the Minister under section 118.6 of the Environment Quality Act and in accordance with the methods provided for in the Liste des méthodes d'analyses relatives à l'application des règlements découlant de la Loi sur la qualité de l'environnement published by the Ministère du Développement durable, de l'Environnement et des Parcs.

The operator's release application must be supported by a status report from an independent expert pertaining to 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.

125. The operator is released from the environmental monitoring and maintenance requirements as of the date on which the Minister received the notice informing the Minister that the landfill site complies in every respect with the applicable standards and that it is no longer likely to be a source of contamination.

DIVISION IV STORAGE

126. 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.

127. The first paragraph of section 52 and section 53 apply to the storage area.

128. 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 2, be landfilled in accordance with Division 3, or be reclaimed in accordance with the Environment Quality Act.

129. The storage area must be watertight and the water from the area must be collected and comply with the provisions of sections 105 and 106 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.

130. The operator may accept only

- (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**

131. An applicant for a certificate of authorization to establish or alter a facility for the storage, final deposit by landfilling or treatment by combustion of mill residual materials 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 132; and
- (3) pay the fees under section 136 by money order or certified cheque payable to the Minister of Finance.

132. 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, domicile 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 1 kilometre 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 133;

(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 134 or 135, 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.

133. 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 1 kilometre;

(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 monitoring wells; and

(9) a hydrogeological report establishing that the land complies with the hydrogeological standards set out in sections 101 to 103, the quality and extent of the current and potential use of groundwater and the vulnerability of groundwater to pollution.

134. The plans and specifications for a final deposit 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 monitoring 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.

135. The plans and specifications for a facility that stores or treats mill residual materials by combustion 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.

136. The fees payable for the issue of a certificate of authorization are \$1,238.

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.

137. 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.

138. 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

139. An offence against any of the provisions of sections 13 to 21, 25 or 26, the second paragraph of section 28, section 30, 32 or 34, the second paragraph of section 36, section 38, 40, 42 or 58 to 60 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 fine referred to in the first paragraph is doubled.

140. An offence against any of the provisions of the first paragraph of section 28, section 29, 31 or 33, the first paragraph of section 36, section 37, 39 or 41 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 fine is

(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.

141. An offence against any of the provisions of sections 4, 11, 22, 24, 43 to 56, 63, 68, 89, 90, 94 to 97, 100, 103 to 105, 107 to 112, 115 to 123 and 127 to 130 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 fine referred to in the first paragraph is doubled.

142. An offence against any of the provisions of sections 2, 3, 12, 23, 64 to 67, 69 to 88, 92, 93, 106, 113 and 114 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 fine referred to in the first paragraph is doubled.

CHAPTER VIII TRANSITIONAL AND FINAL

143. 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 11 and 12.

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

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

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. interventions planned in the event of 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, in a 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 2 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 2 kilometres;
 4. the current drainage configuration and the general topography of the land within a radius of 2 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;
 4. the atmospheric emission points regulated under this Regulation or under the Regulation respecting the quality of the atmosphere.
- 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. 16, 2nd par., s. 71, 1st par., subpar. 6, s. 72, 1st par., subpar. 2 and s. 81, 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- T4CDD			
12378-P5CDD			
123478-H6CDD			
123678-H6CDD			
123789-H6CDD			
1234678-H7CDD			
OCDD			
2378-T4CDF			
12378-P5CDF			
23478-P5CDF			
123478-H6CDF			
123678-H6CDF			
234678-H6CDF			
123789-H6CDF			
12346789-H7CDF			
1234789-H7CDF			
OCDF			
TOTAL			

(1) This concentration corresponds to the concentration of the congener multiplied by its toxicity equivalency factor (NATO, 1988).

 Do not write in this space.

**International toxicity equivalency factors
(NATO, 1988)**

Dioxins - Furans	Equivalency factor
2378-T4CDD	1.0
12378-P5CDD	0.5
123478-H6CDD	0.1
123678-H6CDD	
123789-H6CDD	
1234678-H7CDD	0.01
OCDD	0.001
2378-T4CDF	0.1
12378-P5CDF	0.5
23478-P5CDF	0.05
123478-H6CDF	0.1
123678-H6CDF	
234678-H6CDF	
123789-H6CDF	
12346789-H7CDF	0.01
1234789-H7CDF	0.001
OCDF	

SCHEDULE III

(s. 17, 2nd par., s. 71, 1st par., subpar. 7, s. 72, 1st par., subpar. 3 and s. 81, 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. 58)

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 on or after 22 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;
- screen knotter or knotter;
- foam tank or scum breaker;
- 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.

SCHEDULE V

(s. 71, 1st par., subpar. 3, s. 81, 2nd par. and s. 105, 3rd par.)

MONTHLY REPORT ON COMPOSITION OF RESINIC AND FATTY ACIDS IN EFFLUENTS

NAME OF OPERATOR : _____

LOCATION OF MILL : _____

DATE OF SAMPLING : _____

NAME OF LABORATORY : _____

IDENTIFICATION OF EFFLUENT : _____

Compounds	Concentration (µg/l)	Detection limit (µg/l)
FATTY ACIDS		
Linoleic acid		
Linolenic acid		
Oleic acid		
Stearic acid		
9, 10 – dichlorostearic acid		
TOTAL OF FATTY ACIDS		
RESINIC ACIDS		
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		
TOTAL OF RESINIC ACIDS		
TOTAL OF RESINIC AND FATTY ACIDS		

 Do not write in this space.

SCHEDULE VI

(s. 71, 1st par., subpar. 6, s. 72, 1st par., subpar. 2 and s. 81, 2nd par.)

MONTHLY REPORT ON COMPOSITION OF CHLOROPHENOLS IN EFFLUENTS

NAME OF OPERATOR: _____

LOCATION OF MILL: _____

DATE OF SAMPLING: _____

NAME OF LABORATORY: _____

IDENTIFICATION OF EFFLUENT: _____

Compounds	Concentration (µg/l)	Detection limit (µg/l)
2 – chlorophenol		
3 – chlorophenol		
4 – chlorophenol		
2,3 – dichlorophenol		
2,4 – dichlorophenol		
2,5 – dichlorophenol		
2,6 – dichlorophenol		
3,4 – dichlorophenol		
3,5 – dichlorophenol		
2,4,6 – trichlorophenol		
2,3,4 – trichlorophenol		
2,3,6 – trichlorophenol		
2,3,5 – trichlorophenol		
2,4,5 – trichlorophenol		
3,4,5 – trichlorophenol		
2,3,5,6 – tetrachlorophenol		
2,3,4,6 – tetrachlorophenol		
2,3,4,5 – tetrachlorophenol		
Pentachlorophenol		
4 – chlorocatechol		
3,5 – dichlorocatechol		
4,5 – dichlorocatechol		
3,4,5 – trichlorocatechol		

Compounds	Concentration (µg/l)	Detection limit (µg/l)
Tetrachlorocatechol		
4 – chloroguaiacol		
4,5 – dichloroguaiacol		
4,6 – dichloroguaiacol		
3,4,5 – trichloroguaiacol		
4,5,6 – trichloroguaiacol		
Tetrachloroguaiacol		
6 – chlorovanilline		
5,6 – dichlorovanilline		
3,4,5 – trichlorosyringol		
4,5 – dichloroveratrol		
3,4,5 – trichloroveratrol		
3,4,5,6 – tetrachloroveratrol		
TOTAL		

Do not write in this space.

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

(1) 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 AOH.

SCHEDULE VIII

(s. 71, 1st par., subpars. 3 to 7, ss. 72 and 81, 2nd par.)

MONTHLY REPORT ON EFFLUENT CHARACTERISTICS

NAME OF OPERATOR : _____

LOCATION OF MILL : _____

NAME OF LABORATORIES : _____

MONTH : _____ YEAR : _____

IDENTIFICATION OF EFFLUENT : _____ BEGINNING OF DAY : _____ O'CLOCK

Parameters	Date of sampling and type of sample or date of flow measurement	(A)	(B)	(C)
		Treated effluent (2)(4)	Untreated effluent (3)(4)	Final effluent (5)
Flow (1)(m ³ /day)				
Resinic and fatty acids (µg/l)				
Chlorophenols (µg/l)				
Chemical oxygen demand (mg/l)				
Aluminum (mg/l)				
Copper (mg/l)				
Nickel (mg/l)				
Lead (mg/l)				
Zinc (mg/l)				
Hydrocarbons (mg/l)				

Parameters	Date of sampling and type of sample or date of flow measurement	(A)	(B)	(C)
		Treated effluent (2)(4)	Untreated effluent (3)(4)	Final effluent (5)
Toxicity (T.U.) (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.

SCHEDULE IX

(s. 81, 2nd par.)

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

NAME OF OPERATOR : _____

LOCATION OF MILL : _____

NAME OF LABORATORY : _____

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

DAYS	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			

DAYS	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.

(1) The data is required where effluents are combined in accordance with section 21.

Day	Daily production Finished product (tonnes)	Flow Total Final effluents (m ³ /d)	BOD ₅		TSS		AOH		pH (1)		Max. temp. Standard 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 (hour)		
									< 6.0	> 9.5	
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
Average loss											
Monthly loss											

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.

Contaminants not in compliance: _____

Reasons or comments: _____

Remedial measures implemented or planned: _____

SCHEDULE XI

(s. 81, 2nd par.)

MONTHLY REPORT ON COMPLIANCE OF EFFLUENTS

NAME OF OPERATOR: _____

LOCATION OF MILL: _____

IDENTIFICATION OF EFFLUENT: _____ MONTH: _____ YEAR: _____

Standardized contaminants	Effluent treated biologically	Untreated effluent	Final effluent	Effluent treated other than biologically	Standards
Toxicity (T.U.) (rainbow trout)					<= 1 T.U. ou < 3 T.U.
					<= 1 T.U.
Hydrocarbons (mg/l)					2 mg/l
Polychlorinated biphenyls (µg/l)					3 µg/l
Chlorinated dioxins and furans (pg _{eq} /l)					15 pg _{eq} /l

 Do not write in this space.

Contaminants not in compliance: _____

Reasons or comments: _____

Remedial measures implemented or planned: _____

SCHEDULE XII

(s. 81, 2nd par. and s. 106, 6th par.)

MONTHLY REPORT ON COMPLIANCE OF OTHER WASTEWATER

NAME OF OPERATOR: _____

LOCATION OF MILL: _____

MONTH: _____ YEAR: _____

NAME OF LABORATORIES: _____ TYPE OF SAMPLE: _____

IDENTIFICATION OF WASTEWATER: _____

Contaminants to be analyzed	Standards	Date of sampling	Sanitary wastewater	Storage area water (1)	Leachate (2)		Storage area water	Gas scrubbing water	Ash cooling water	
					mg/l	%				
BOD ₅	50 mg/l or 90% removal 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									
Phenolic compounds	50 µg/l for leachate 10 µg/l for other water									
Total sulphides	1 mg/l									
Resinic and fatty acids	300 µg/l									

Do not write in this space.

(1) The standards of other parameters apply where primary sludge or bark is stored.

(2) Where leachate is treated by a stand-alone system and where the 90% removal standard for BOD₅ is used, enter in the table above the removal rate (%) in BOD₅, based on 12 weeks and calculated each week. Enter in the table below the weekly data used to calculate the removal rate. In the case of the flow, the measurement may be made at the treatment system entry or outflow.

Week	BOD ₅ concentration (mg/l)		Flow (m ³ /week)
	Entry into treatment system	Outflow from treatment system	
From to			
From to			
From to			
From to			
From to			

Contaminants not in compliance : _____

Reasons or comments : _____

Remedial measures implemented or planned : _____

SCHEDULE XIII

(s. 105, 3rd par. and s. 113, 1st par.)

LIST OF PHENOLIC COMPOUNDS FOR OTHER WASTEWATER

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

SCHEDULE XIV

(s. 81, 2nd par.)

MONTHLY REPORT ON DAILY PRODUCTION

NAME OF OPERATOR: _____

LOCATION OF MILL: _____

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

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

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

(1) Indicate the monthly average of the cooking yield _____ %.

(2) Applies in the case of a mill in a complex built on or after 22 October 1992.

SCHEDULE XV

(s. 86, 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

LIST OF VOLATILE ORGANIC COMPOUNDS

Trichlorofluoromethane	Ethylbenzene
1,1-dichloroethene	M,P-xylene
Dichloromethane	Styrene
1,2-dichloroethene	Bromoform
1,1-dichloroethane	Isopropylbenzene
2,2-dichloropropane	1,1,2,2-tetrachloroethane
Chloroforme	Bromobenzene
1,1,1-trichloroethane	1,2,3-trichloropropane
1,1-dichloropropylene	N-propylbenzene
Carbon tetrachloride	1-chloro-2-methylbenzene
Benzene	1,3,5-trimethylbenzene
1,2-dichloroethane	1-chloro-4-methylbenzene
Trichloroethene	1,1-dimethyl ethylbenzene
1,2-dichloropropane	1,2,4-trimethylbenzene
Dibromomethane	1-methyl propylbenzene
Bromodichloromethane	P-isopropyltoluene
Trans-1,3-dichloropropylene	1,3-dichlorobenzene
Toluene	1,4-dichlorobenzene
Cis-1,3-dichloropropylene	N-butylbenzene
1,1,2-trichloroethane	1,2-dichlorobenzene
1,1,2,2-tetrachloroethylene	1,2,4-trichlorobenzene
1,3-dichloropropane	Hexachlorobenzene
Dibromochloromethane	Naphtalene
1,2-dibromoethane	1,2-dibromo-3-chloropropane
Chlorobenzene	1,2,3-trichlorobenzene
1,1,1,2-tetrachloroethane	

SCHEDULE XVI

(s. 86, 5th par.)

COMPLIANCE REPORT OF ATMOSPHERIC EMISSIONS

NAME OF OPERATOR: _____

LOCATION OF MILL: _____

MONTH: _____ YEAR: _____

Process equipment	Identification	Parameter	Unit	Concentrations	Standard
Recovery furnace		Particles	mg/m ³		
		Total reduced sulphur compounds	ppm		
		Polycyclic aromatic hydrocarbons	ug/m ³		
		Volatile organic compounds	ug/m ³		
		Sulphur dioxide	mg/m ³		
Lime kiln		Particles	mg/m ³		
		Total reduced sulphur compounds	ppm		
		Polycyclic aromatic hydrocarbons	ug/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		
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		

Process equipment	Identification	Parameter	Unit	Concentrations	Standard
Biomass boiler (1)		Total reduced sulphur compounds	ppm		
Oil boiler (1)		Total reduced sulphur compounds	ppm		
Residual materials boiler (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 or comments : _____

Remedial measures implemented or planned : _____

SCHEDULE XVII

(s. 88, 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 an elimination site (Under Division IV of the Regulation respecting solid waste)	
#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)	Dryness (1) %
Bark				
Wood residue				
Bark and wood residue				
Paper and paperboard discards				
Dry ash handled				
Pulper residues				
Wet ash handled				Av.:
				Min.:
Pulp discards				Av.:
				Min.:
Knots				Av.:
				Min.:
Lime slaking rejects				Av.:
				Min.:
Lime sludge				Av.:
				Min.:
Lime slaking rejects and sludge				Av.:
				Min.:

Type of mill residual materials	Management method (Code)	Real weight (tonnes)	Volume (m ³)	Dryness (1) %
Green liquor dregs				Av.:
				Min.:
Primary treatment sludge				Av.:
				Min.:
Biological treatment sludge				Av.:
				Min.:
De-inking sludge				Av.:
				Min.:
Primary and biological treatment sludge				Av.:
		% biological sludge (2):		Min.:
Primary treatment and de-inking sludge				Av.:
				Min.:
Biological treatment and de-inking sludge				Av.:
		% biological sludge (2):		Min.:
Primary, biological treatment and de-inking sludge				Av.:
		% biological sludge (2):		Min.:
Other mill residual materials				Av.:
				Min.:

Do not write in this space.

(1): The minimum and maximum dryness value is required only for mill residual materials whose management code is #1 or #2.

(2): The percentage of biological sludge in dry weight on all the mixture of buried sludge is required only where the mill is to benefit from a dryness standard of 15% in accordance with the conditions of section 107.

“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 (debris and rubble), used oils, solid residual materials similar to household refuse and sawmill residual materials.

Reasons or comments: _____

Remedial measures implemented or planned: _____

