



BRITISH
COLUMBIA

Environmental Management Act

PULP MILL AND PULP AND PAPER
MILL LIQUID EFFLUENT CONTROL
REGULATION

B.C. Reg. 470/90

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Consolidated Regulations of British Columbia

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Environmental Management Act

**PULP MILL AND PULP AND PAPER MILL LIQUID
EFFLUENT CONTROL REGULATION**

B.C. Reg. 470/90

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SCHEDULE 1 [Repealed]

SCHEDULE 2

SCHEDULE 3 [Repealed]

Interpretation

- 1** (1) In this regulation:

“**Act**” means the *Environmental Management Act*;

“**ADt**” means an air dry tonne of pulp product where the weight of the pulp product is corrected to reflect the weight that the pulp product would be if the pulp were composed of 10% water and 90% fibre;

“**AOX**” means halogenated organic compounds that are adsorbable by activated carbon;

“**CBPROD**” means, subject to subsection (2), the 90th percentile of the daily production rate of bleached pulp produced from an on-site bleach plant with the use of chlorine or chlorine compounds, or both chlorine and chlorine compounds, expressed as ADt, determined by the use of statistical methods, and using a period of time approved by a director for determination of the 90th percentile of the rate of chlorine or chlorine compound bleached pulp production;

“**compliance sampling method**” means the technique used to collect samples which are subsequently analyzed to determine if the effluent satisfies the quality standards established under sections 2, 3 and 6;

“**EFF**” means, subject to subsection (2), the 90th percentile of the rate of effluent, expressed as m³/day, including any sanitary effluent combined with process effluent, discharged from a pulp or paper or pulp and paper mill, determined by the use of statistical methods, and using a period of time approved by a director for determination of the 90th percentile of the rate of discharge of effluent;

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“**permittee**” means a person who holds a permit issued under section 14 of the Act;

“**phase I**” means a compliance sampling period commencing on the date this regulation comes into force and expiring on the date that phase II commences;

“**phase II**” means a compliance sampling period commencing on a date specified in writing by the director;

“**PROD**” means, subject to subsection (2), the 90th percentile of the daily production rate of a pulp or paper or pulp and paper mill, expressed as ADt, determined by the use of statistical methods, and using a period of time approved by a director for determination of the 90th percentile of the rate of production;

“**96 h LC50 toxicity**” means the calculated concentration of effluent that is lethal to 50% of the test fish (rainbow trout (*Oncorhynchus mykiss*)) during a 96 hour exposure.

- (2) If there is an insufficient number of days of production to perform a valid 90th percentile calculation of CBPROD, EFF or PROD, the director may use the mill’s chlorine or chlorine compound bleached pulp production design figure, effluent flow design figure or production design figure respectively as values for CBPROD, EFF or PROD until such time as these parameters may be calculated in accordance with subsection (1).

[am. B.C. Regs. 13/92, s. 1; 321/2004, s. 25 (a) to (e).]

Prohibitions

- 2** (1) A permittee that operates a bleached kraft pulp mill that uses chlorine or chlorine compounds to bleach the pulp shall not discharge effluent into the environment if the amount of AOX in the effluent exceeds the lesser of
- (a) a monthly average of 0.6 kg of AOX/ADt of pulp produced in the bleach plant, or
 - (b) the maximum AOX discharge rate, expressed in kg/ADt, authorized by a permit issued under section 14 of the Act.
- (1.1) A permittee that operates a bleached sulphite pulp mill or pulp and paper mill that uses chlorine or chlorine compounds to bleach the pulp shall not discharge effluent into the environment if the amount of AOX in the effluent exceeds the lesser of
- (a) a monthly average of 1.0 kg of AOX/ADt of pulp produced in the bleach plant, or
 - (b) the maximum AOX discharge rate, expressed in kg/ADt, authorized by a permit issued under section 14 of the Act.
- (2) Repealed. [B.C. Reg. 321/2004, s. 25 (f).]
- (3) No permittee shall discharge effluent into the environment from an operation that produces pulp or paper unless the quality of the effluent is equal to or better than the quality requirement specified in Column 3 of Schedule 2.

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- (4) Subsection (3) does not apply to the pulp and paper mill operations at Port Alberni existing on July 6, 2004 or to the pulp mill operation at Port Alice existing on July 6, 2004.
- (5) The pulp and paper mill operations at Port Alberni existing on July 6, 2004 shall not discharge effluent into the environment from those operations unless the quality of the effluent is equal to or better than the quality requirement in Column 4 of Schedule 2.
- (6) The pulp mill operation at Port Alice existing on July 6, 2004 shall not discharge effluent into the environment from that operation unless the quality of the effluent is equal to or better than the quality requirement in Column 5 of Schedule 2.
- (7) to (9) Repealed. [B.C. Reg. 188/2002, s. 1 (c).]
[am. B.C. Regs. 13/92, s. 2; 188/2002, s. 1; 321/2004, s. 25 (d) and (f).]

Sampling methods for compliance determination

- 3** (1) The compliance sampling method used to determine the effluent flow rate and temperature shall be as specified in writing by a director.
- (2) The compliance sampling method used to provide an effluent sample for determination of the 96 h LC50 toxicity shall consist of a grab sample.
- (3) The compliance sampling method used to provide effluent samples for determination of the 5 day biochemical oxygen demand (BOD₅), the total suspended solids (TSS) and the AOX during phase I shall consist of collecting an effluent sample during a period of 24 hours by taking
 - (a) a continuous sample of the effluent being discharged from each effluent outfall,
 - (b) a composite of equal samples from each effluent outfall at least every 15 minutes, or
 - (c) a composite of samples from each effluent outfall at least every 15 minutes in an amount proportionate to the amount of the effluent.
- (4) The compliance sampling method used to provide effluent samples for determination of BOD₅, TSS and AOX during phase II shall be as specified in writing by the director.
[am. B.C. Reg. 321/2004, s. 25 (b).]

- 4** Repealed. [B.C. Reg. 321/2004, s. 25 (g).]

Sampling and reporting schedule

- 5** (1) In accordance with section 3, each permittee that produces pulp or paper shall sample each effluent outfall at the following minimum frequencies:
 - (a) 5 times per week for TSS;
 - (b) 3 times per week for BOD₅;

- (c) for a pulp mill that bleaches pulp with chlorine or a chlorine compound, once a week for AOX;
 - (d) once per month for toxicity;
 - (e) continuous or daily grab for temperature;
 - (f) daily for flow.
- (2) and (3) Repealed. [B.C. Reg. 321/2004, s. 25 (g).]
- (4) A director may specify an alternate sampling schedule for non-process effluent outfalls to replace the requirements outlined in subsection (1).
- (5) Each permittee must submit to a director monitoring data collected under subsection (1) or (4) within 30 days of the end of the month in which the data is collected.

[am. B.C. Regs. 13/92, s. 4; 188/2002, s. 2; 321/2004, s. 25 (e) and (g) to (j).]

Waiver

- 6** (1) Repealed. [B.C. Reg. 321/2004, s. 25 (g).]
- (2) Repealed. [B.C. Reg. 13/92, s. 5.]
- (3) Repealed. [B.C. Reg. 321/2004, s. 25 (g).]
- (4) If, in the opinion of a director, a permittee is unable to comply with a requirement of this regulation because of
- (a) an act of God or natural disaster,
 - (b) an act of war, terrorism or vandalism,
 - (c) a labour dispute or work stoppage, or
 - (d) an unforeseen mechanical breakdown,
- the director may, in writing, grant a waiver from all or part of this regulation for a period not exceeding 90 days.
- (5) The power under subsection (4) may be exercised only once in respect of the same incident.

[am. B.C. Regs. 13/92, s. 5; 321/2004, s. 25 (e), (g) and (k).]

Compliance

- 7** Analytical and arithmetic methods used to evaluate compliance with the requirements of this regulation shall be approved by the director.

8 and 8.1 Repealed. [B.C. Reg. 188/2002, s. 3.]

Offence and penalty

- 9** (1) A person who contravenes section 3 or 5 (1) or (4) commits an offence and is liable to a penalty not exceeding \$200 000.

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- (2) A person who, with intent to mislead, submits false monitoring data under section 5 (5) commits an offence and is liable to a penalty not exceeding \$200 000.

[am. B.C. Regs. 188/2002, s. 4; 321/2004, s. 25 (l).]

Annual charges

- 10** For the purpose of calculating the annual charge under the Permit and Approval Fees and Charges Regulation, B.C. Reg. 299/92, the maximum authorized discharge rate and concentration is the following:

- (a) for a bleached kraft pulp mill, the lesser of
- (i) 0.6 kg of AOX/ADt, or
 - (ii) the maximum AOX discharge rate, expressed in kg/ADt, authorized by a permit issued under section 14 of the Act;
- (b) for a bleached sulphite pulp mill, the lesser of
- (i) 1.0 kg of AOX/ADt, or
 - (ii) the maximum AOX discharge rate, expressed in kg/ADt, authorized by a permit issued under section 14 of the Act.

[en. B.C. Reg 188/2002, s. 5; am. B.C. Regs. 321/2004, s. 25 (d) and (m); 46/2018, App. 3, s. 6.]

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Schedule 2

SCHEDULE 1

Repealed. [B.C. Reg. 321/2004, s. 25 (n).]

SCHEDULE 2*(Section 2)*

[en. B.C. Reg. 518/95; am. B.C. Reg. 321/2004, s. 25 (o).]

Column 1 Characteristic	Column 2 Units	Column 3 Quality Requirements		Column 4 – Special Quality Requirements – Port Alberni		Column 5 – Special Quality Requirements – Port Alice	
		Monthly Average*	Daily Max.	Monthly Average*	Daily Max.	Monthly Average*	Daily Max.
TSS	mg/l	$11.25 \times \frac{PROD}{EFF} \times 1000$	$18.75 \times \frac{PROD}{EFF} \times 1000$	$\frac{6092}{EFF} \times 1000$	$\frac{10154}{EFF} \times 1000$	$\frac{16200}{EFF} \times 1000$	$\frac{27300}{EFF} \times 1000$
BOD ₅	mg/l	$7.5 \times \frac{PROD}{EFF} \times 1000$	$7.5 \times \frac{PROD}{EFF} \times 1000$	$\frac{3385}{EFF} \times 1000$	$\frac{5641}{EFF} \times 1000$	$\frac{3635}{EFF} \times 1000$	$\frac{7270}{EFF} \times 1000$
Acute Toxicity: 96 h LC50 toxicity	% effluent volume	100%	100%	100%	100%	100%	100%

* Monthly average value is the arithmetic average of the test values collected during the calendar month.

SCHEDULE 3

Repealed. [B.C. Reg. 321/2004, s. 25 (n).]

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