



File: PE-05803

Date: **OCT 19 2004**

REGISTERED: RT 558 067 265 CA

Quesnel River Pulp Company
1000 Finning Road
Quesnel BC V2J 6A1

Dear Permittee:

Enclosed is Amended Permit PE-05803 issued under the provisions of the *Environmental Management Act*. Your attention is respectfully directed to the terms and conditions outlined in the permit. An annual fee will be determined according to the Waste Management Permit Fees Regulation.

This permit does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority rests with the permittee. This permit is issued pursuant to the provisions of the *Environmental Management Act* to ensure compliance with Section 120(3) of that statute, which makes it an offence to discharge waste, from a prescribed industry or activity, without proper authorization. It is also the responsibility of the permittee to ensure that all activities conducted under this authorization are carried out with regard to the rights of third parties, and comply with other applicable legislation that may be in force.

This decision may be appealed to the Environmental Appeal Board in accordance with Part 8 of the *Environmental Management Act*. An appeal must be delivered within 30 days from the date that notice of this decision is given. For further information, please contact the Environmental Appeal Board at (250) 387 3464.

Administration of this permit will be carried out by staff from the Thompson and Cariboo Regions. Plans, data and reports pertinent to the permit are to be submitted to the Regional Manager, Environmental Protection, at Ministry of Water, Land and Air Protection, Regional Operations, Thompson and Cariboo Regions, Suite 400 - 640 Borland St, Williams Lake, BC V2G 4T1.

Yours truly,

A handwritten signature in black ink, appearing to read "Douglas Hill". The signature is written in a cursive, flowing style.

Douglas Hill, P.Eng.
for Director, *Environmental Management Act*
Thompson and Cariboo Regions

Enclosure

cc: Environment Canada



MINISTRY OF WATER, LAND
AND AIR PROTECTION

Environmental Protection
400-640 Borland Street
Williams Lake, British Columbia
V2G 4T1
Telephone: (250) 398-4530
Fax: (250) 398-4214

PERMIT
PE-05803

Under the Provisions of the Environmental Management Act

West Fraser Mills Ltd.
doing business under the firm name and style of
Quesnel River Pulp Company
1000 Finning Road
Quesnel British Columbia
V2J 6A1


is authorised to discharge effluent to the Fraser River from a market thermomechanical / bleached chemi-thermomechanical pulp mill and a medium density fibreboard plant located in Quesnel, British Columbia, subject to the conditions listed below. Contravention of any of these conditions is a violation of the Environmental Management Act and may result in prosecution.

This permit supersedes and amends all previous versions of Permit PE-05803, issued under Part 2 Section 10 of the Waste Management Act.

Date Issued: June 30, 1981

Date Amended:
(most recent) **OCT 19 2004**

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for Director, Environmental Management Act
Thompson and Cariboo Regions
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DEFINITIONS

"EFF" means the 90th percentile of the rate of effluent, expressed as m³/d 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 the manager for determination of the 90th percentile of the rate of discharge of effluent.

"PROD" means the 90th percentile of the daily production rate of a pulp or paper or pulp and paper mill, expressed as air dried tonnes ("ADt"), determined by the use of statistical methods, and using a period of time approved by the manager for determination of the 90th percentile of the rate of production.

"Reference Production Rate" means the highest value of the 90th percentiles of the daily production of finished product at the mill for any of the previous three years.

"96 hr LC₅₀ toxicity (rainbow trout)" means the calculated concentration of effluent that is lethal to 50% of the test fish (rainbow trout (*Oncorhynchus mykiss*)) during a 96 hour exposure. The effluent is considered toxic when, at 100% concentration, it kills more than 50% of the test fish population subjected to it during a 96 hour period.

"48 hr LC₅₀ toxicity (*Daphnia magna*)" means the calculated concentration of effluent that is lethal to 50% of the *Daphnia magna* subjected to it during a 48 hour exposure. The effluent is considered toxic when, at 100% concentration, it kills more than 50% of the *Daphnia magna* subjected to it during a 48 hour period.

"ADt" means an air dry tonne of pulp 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.

"MDF" means medium density fibreboard

1. **AUTHORISED DISCHARGE**

1.1 This section applies to the discharge of effluent from a **PULP MILL AND MDF PLANT EFFLUENT TREATMENT FACILITY**. The site reference number for this discharge is E103144.

1.1.1 The maximum authorised rate of discharge is 34000 m³/d.

1.1.2 The characteristics of the discharge shall be:

a). Total Suspended Solids (TSS) concentration shall not exceed:

938 mg/l (daily maximum);

b). Total Suspended Solids (TSS) loading shall not exceed:

20 976 kg/day (24 hour maximum) and,
347 814 kg/month (monthly maximum);

c). Biochemical Oxygen Demand (BOD5) concentration shall not exceed:

364 mg/l (monthly average) and,
364 mg/l (daily maximum);

d). Biochemical Oxygen Demand (BOD5) loading shall not exceed:

13 560 kg/day (24 hour maximum) and,
231 876 kg/month (monthly maximum);

e). 96 hour LC50 toxicity (rainbow trout) shall not be less than 100% V/V;

f). Temperature shall not exceed 38°C;

g). pH shall be in the range of 6.5 to 8.5 pH units.



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- 1.1.3 The authorised works are in-plant fibre recovery facility, chip pile leachate collection system, perimeter ditches and spill pond, MDF effluent inlet line, sludge bunker, effluent collection system and treatment facility consisting of transfer chest, gravity clarifier, three air flotation type clarifiers, two heat sink (cooling) tanks, spill tank, two moving bed biofilm reactors, an aerated stabilization basin, spray coolers, submerged outfall and diffuser, and related appurtenances, approximately located as shown on the attached Site Plan.
- 1.1.4 The authorised works must be complete and in operation on or before March 30, 2005.
- 1.1.5 The location of the facilities from which the discharge originates is Lot 1, District Lot 5013, Cariboo District, Plan 26442 except Plan 27974 (effluent treatment facility and pulp mill) and Lot 1, District Lots 221 and 5011, Cariboo District Plan 20392 (MDF plant) approximately as shown on the attached Site Plan.
- 1.1.6 The location of the point of discharge is within the Fraser River, adjacent to District Lot 221, Cariboo District, approximately as shown on the attached Site Plan.

2. GENERAL REQUIREMENTS

2.1 Regulatory Requirements

Nothing in this permit releases the Permittee from the requirements of any applicable legislation, including the federal *Fisheries Act, Pulp and Paper Effluent Regulations* (SOR/92-269), the *Canadian Environmental Protection Act (1999)*, *Pulp and Paper Defoamer and Wood Chip Regulations* (SOR/92-268), and *Pulp and Paper Mill Effluent Chlorinated Dioxins and Furans Regulations* (SOR/92-267), and B.C. Reg. 470/90, the *Pulp Mill and Pulp and Paper Mill Liquid Effluent Control Regulation*. Where there is any apparent conflict between the requirements of this permit and any other legislation, the more stringent requirements shall apply.

2.2 Maintenance of Works and Emergency Procedures

The permittee shall inspect the pollution control works regularly and maintain them in good working order. In the event of an emergency or condition beyond the control of the permittee which prevents continuing operation of the approved method of pollution control, the permittee shall notify the Regional Manager, Environmental Protection and take appropriate remedial action. The Director may reduce or suspend the operation of the permittee to protect the environment until the approved method of pollution control has been restored.

Notification to the Regional Manager, Environmental Protection may be

- a) by telephone at 250-398-4530 if the condition occurs between the hours of 08:00 and 16:30, Monday to Friday, excluding statutory holidays;
- b) by facsimile transmission at 250-398-4214 if the condition occurs at any other time.

All such reports must be received within 24 hours of the detection of the occurrence.

All spills to the environment (as defined in the Spill Reporting Regulation) or to the effluent treatment facility with potential to impair the treatment process shall be reported immediately to the Regional Manager, Environmental Protection. During office hours (8:00 am - 4:30 pm, Monday through Friday, excluding Statutory Holidays) reports shall be made via telephone at 250-398-4530. Outside regular office hours, notification shall be via the Provincial Emergency Program 24 hour spill reporting line at 1-800-663-3456. The foregoing does not exempt the permittee from compliance with all other applicable legislation, whether or not an emergency exists.

2.3 Bypasses

The discharge of effluent which has bypassed the authorized treatment works is prohibited unless:

- the bypass is of a portion of the authorized treatment works and is in accordance with the treatment system design, and effluent quality meets the characteristics of section 1.1, or
- the approval of the Director is obtained and confirmed in writing.

2.4 Process Modifications

The Regional Manager, Environmental Protection, shall be notified prior to implementing changes to any process that may affect the quality and/or quantity of the discharge.

2.5 Foam

Should foam, attributable to the effluent, become objectionable on the receiving waters, the permit may be amended by the Director to require additional treatment to eliminate the foam. Alternatively, measures may be implemented to eliminate the cause of the foam.

2.6 Colour

Should colour, attributable to the effluent, become objectionable in the receiving environment, the permit may be amended by the Director to require additional treatment to remove colour forming constituents from the effluent prior to discharge.

2.7 Sludge Wasting and Disposal


Sludge wasted from the treatment facility shall be disposed of to a site and in a manner approved by the Director, or as authorized by regulation under the Environmental Management Act.

2.8 Nutrients

Should nutrients be added to increase the efficiency of any biological treatment system, the quantity of nutrient shall be so controlled that excess nutrients are not discharged to the receiving waters. The ratio of BOD:N:P shall be recorded and data kept available for inspection.

2.9 **Emergency Response Plan**

The permittee shall prepare and submit an emergency response plan that describes the procedures to be taken to prevent or mitigate any deposit of deleterious substance out of the normal course of events. The emergency response plan shall be implemented immediately if there is a deposit, or any risk of a deposit, of a deleterious substance out of the normal course of events. In addition, an updated emergency response plan, including a report on any emergency responses undertaken in the previous year, shall be submitted by January 31 of each year. The permittee shall also prepare, update annually and keep available for inspection, a remedial plan, describing procedures to be taken by the permittee to eliminate all unauthorized deposits of deleterious substances if the effluent fails an acute lethality test using rainbow trout.



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3. MONITORING AND REPORTING REQUIREMENTS

3.1 Discharge Monitoring

The permittee shall carry out the following monitoring program on the discharge authorized in Section 1. Samples of the effluent shall be collected, and analysed for the following specified parameters:

Composite Samples:

- | | |
|-------------------------------|----------------|
| a) Biochemical Oxygen Demand, | 3 times /week; |
| b) Total Suspended Solids, | daily; |
| c) Volatile Suspended Solids, | weekly. |

Grab Samples:

- | | |
|--|----------|
| d) 96 hour LC ₅₀ toxicity (rainbow trout) | monthly; |
| e) 48 hr LC ₅₀ toxicity (Daphnia magna) | weekly; |
| f) Dissolved Oxygen | weekly; |
| g) Chemical Oxygen Demand | weekly; |
| h) Total Ammonia | weekly; |
| i) Kjeldahl Nitrogen | monthly; |
| j) Ortho Phosphate | monthly; |
| k) Colour | monthly. |

Continuous Samples:

- l) Temperature;
- m) pH.
- o) Conductivity
- p) Dissolved Oxygen

3.2 Composite Sampling

All composite samples shall be 24 hour composites, consisting of at least one sample every 15 minutes.

3.3 Continuous Monitoring

Continuous monitors shall be capable of collecting measurements every 15 minutes. Values for daily maximum and daily average shall be determined. The results of these tests shall be kept available for inspection for a period of at least three years.

3.4 Toxicity Monitoring

For the discharge authorized under Section 1, 96 hour LC₅₀ toxicity (rainbow trout) testing frequency shall be increased from once per month to once per week if a sample of effluent fails the rainbow trout toxicity test. Samples shall continue to be collected and tested on one day each week until three consecutive non-toxic test results are obtained, at which time testing can revert to once per month.

Daphnia magna toxicity testing shall be conducted once per week. However, if a sample of effluent fails the Daphnia magna toxicity test, a sample of effluent shall be collected without delay and tested for 96hr LC₅₀, using rainbow trout in accordance with accepted procedures.

3.5 Flow Measurement

The permittee shall provide and maintain a suitable flow measuring device on the discharge authorized under Section 1. Once per day, the effluent volume discharged over a 24 hour period shall be recorded. In addition, once per month, the total effluent volume over the calendar month shall be recorded.

The flow monitoring equipment shall be calibrated to be accurate to within 10 percent.

3.6 Sampling Location and Techniques

Samples required under Subsection 3.1 shall be obtained at the final outlet of the treatment facility, or at such other point as may be approved by the Regional Manager, Environmental Protection.

Sampling and flow measurement shall be carried out in accordance with the procedures described in "British Columbia Field Sampling Manual For Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment and Biological Samples 2003 Edition (Permittee)", or most recent edition, or by suitable alternative procedures as authorized by the Director.



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3.7 Analyses

Analyses are to be carried out in accordance with procedures described in the "British Columbia Environmental Laboratory Manual For the Analysis of Water, Wastewater, Sediment, Biological Materials and Discrete Air Samples 2003 Edition", or most recent edition, or by suitable alternative procedures as authorized by the Director.

Copies of the above manuals may be purchased from the Queen's Printer Publication Centre, PO Box 9452, Stn. Prov. Gov't. Victoria, British Columbia, V8W 9V7 (1.800.663.6105 or 250.387.6409) or through their web site at <http://www.bcsolutions.gov.bc.ca/qp/>.

3.8 Data Quality Assurance

The permittee shall maintain 'Laboratory Quality Protocols' and 'Quality Assurance Criteria' to the satisfaction of the Regional Manager, Environmental Protection. The 'Laboratory Quality Protocols' shall include the procedures used to assess precision, accuracy, and blank quality, including the frequency of application, the procedures for sample handling (preservation, hold times, etc.), and the corrective measures to be taken in the event deficiencies are indicated.

The 'Quality Assurance Criteria' shall include the acceptance criteria for accuracy (based on the recoveries for reference samples/spiked samples), precision (based on deviation on field and lab duplicates), and method blanks (designed to indicate false positives).

The permittee shall ensure that all data required by Subsection 3 are produced in accordance with the 'Laboratory Quality Protocols' and meets the 'Quality Assurance Criteria' as approved by the Regional Manager, Environmental Protection. The permittee shall maintain a record of the laboratory quality assurance data, the results of associated field blanks, and duplicate analysis results. These records shall be submitted along with the data required by Section 3, in a format acceptable to the Regional Manager, Environmental Protection.

The permittee shall ensure that all laboratory analysis required under this permit are conducted by a laboratory acceptable to the Regional Manager, Environmental Protection.

Laboratory Quality Protocols and Quality Assurance Criteria developed for use in any other QA/QC programs the permittee may be involved with, may be submitted in partial fulfilment of this requirement.

3.9 Receiving Environment Monitoring

The permittee shall monitor the receiving water quality and carry out chemical, physical, and biological studies on the receiving environment as required by the Regional Manager, Environmental Protection. This program may be drawn up in such a manner as to include other similar major discharges in the area and with the participation of other dischargers.

A summary of the results of the program, including an interpretation of the effect on the receiving waters and the environment, is to be submitted in a form which is suitable for release to the public. The data from the program will also be reviewed periodically by the Regional Manager, Environmental Protection to determine cause and effect relationships and to facilitate modifications to the program's content and frequency.

The frequency of these studies will be determined by the Regional Manager, Environmental Protection following an evaluation of each preceding study.

The federal requirement to participate in Environmental Effects Monitoring is acknowledged. The Regional Manager, Environmental Protection may require additional monitoring, as is deemed necessary, taking into consideration the results of these and any other studies.

3.10 Determination of PROD, EFF, and Reference Production Rate

Record once per day the production rate of pulp in ADt/day and effluent discharge in m³/d. Calculate and submit to the Regional Manager, Environmental Protection for approval, by January 31 of each year, the Reference Production Rate, PROD and EFF.

These values will be used as inputs to the formulas set out in the federal and provincial regulations governing liquid effluent discharges from pulp mills. The discharge limits for TSS and BOD₅ determined by these calculations will apply to the discharge authorized in Section 1.1 if they are lower than the corresponding limits in Section 1.1.2.



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3.11 Reporting

The permittee shall submit any information required under this permit to the Regional Manager, Environmental Protection, located at 400 - 640 Borland Street, Williams Lake, B.C., V2G 4T1.

The permittee shall submit the information required in Section 3 of the Permit, along with any pertinent process data, in an acceptable electronic format, within 30 days of the end of the month in which the samples were collected.

In the event of a failure of any 96 hr LC₅₀ trout bioassay test, the result shall be reported immediately to the Regional Manager, Environmental Protection. The results of any subsequent toxicity testing, whether pass or fail, shall also be immediately reported until otherwise directed by the Regional Manager, Environmental Protection.

Any reporting format required under federal legislation, such as the reporting of deposits out of the normal course of events, will be acceptable as fulfilling provincial requirements for the incident or information being reported.

The need for increased or decreased frequency of testing will be reviewed periodically, and may be amended accordingly by the Regional Manager, Environmental Protection

