BRITISH
COLUMBIA

**MINISTRY OF ENVIRONMENT,
LANDS AND PARKS**

**Vancouver Island Region
Pollution Prevention
2080-A Labieux Road
Nanaimo, British Columbia
V9T 6J9
Telephone: (250) 751-3100
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PERMIT
PA-01863

Under the Provisions of the Waste Management Act

Pacifica Papers Inc.

1900 - 700 West Georgia Street

PO Box 10354 Pacific Centre

Vancouver, British Columbia

V7Y 1G5

is authorized to discharge air contaminants from a pulp and paper mill located in Port Alberni, British Columbia, subject to the conditions listed below. Contravention of any of these conditions is a violation of the *Waste Management Act* and may result in prosecution.
This permit supersedes and amends all previous versions of Permit PA-01863, issued under Part 2 Section 10 of the *Waste Management Act*.

1. AUTHORISED DISCHARGES

1.1 This subsection applies to the discharge of air contaminants from POWER BOILERS #2, #3 AND #4 through a combined stack identified as 1C as shown on the attached Site Plan A. The site reference number for this discharge is E100141.

1.1.1 The maximum authorized rate of discharge is 9 800 m3/min.

1.1.2 The authorized discharge period is 24 hours per day, 7 days per week.

1.1.3 The fuels authorized for use are wood waste, natural gas, primary and secondary effluent treatment sludge (Subject to Subsection 2.4), oil (subject to the Sulphur Content of Fuel Regulation) and tire derived fuel (TDF) (subject to the Sulphur Content of Fuel Regulation and Subsections 2.6 and 3.3).

D. F. Brown, B.Sc.
Regional Waste Manager

Date Issued: January 6, 1977
Date Amended:
(most recent) SEP 23 1999

1.1.4 The characteristics of the discharge shall not exceed:

Total Particulate Matter (Maximum)	230 mg/m3 @ 12% C02
Total Particulate matter (Average)*	115 mg/m3 @ 12% CO,

* The running average of four subsequent stack sampling results obtained in accordance with Subsection 3.1

1.1.5 The authorized works are multicyclones, electrostatic precipitator, stack, and related appurtenances approximately located as shown on attached Site Plan A.

1.1.6 The authorized works must be complete and in operation on and from the date of this amended permit.

1.1.7 The location of the facilities from which the discharge originates and the location of the point of discharge is PID: 024-356-735, Lot A District Lot 1, Alberni Land District, and part of the bed of the public harbour of Alberni Plan VIP 68037.

1.2 This subsection applies to the discharge of air contaminants from TWO CYCLONES identified as 11 and 13 as shown on the attached Site Plan A. The site reference for this discharge is E214754.

1.2.1 The maximum authorized rate of discharge is 1 200 m3/min.

1.2.2 The authorized discharge period is 24 hours per day, 7 days per week.

1.2.3 The characteristics of the discharge shall not exceed:

Total Particulate Matter (each cyclone)	115 mg/m3

1.2.4 The authorized works are two cyclones and related appurtenances approximately located as shown on attached Site Plan A.

1.2.5 The authorized works must be complete and in operation on and from the date of this amended permit.,

1.2.6 The location of the facilities from which the discharge originates and the location of the point of discharge is the same location as set out in Subsection 1.1.7.

1.3 This subsection applies to the discharge of air contaminants from **TWO NATURAL GAS - FIRED PAPER DRYERS** (an infrared dryer identified as 1H and an air float dryer identified as 2H) and a **NATURAL GAS - FIRED HOT OIL HEATER** identified as 3H as shown on the attached Site Plan A. The site reference number for this discharge is E221677.

1.3.1 The maximum authorized rate of discharge is 640 m3/min.

1.3.2 The authorized discharge period is 24 hours per day, 7 days per week.

1.3.3 The characteristics of the discharge shall be typical of the emission levels from the combustion of natural gas.

1.3.4 The authorized works are vents, fans, ducts and related appurtenances approximately located as shown on attached Site Plan A.

1.3.5 The authorized works must be complete and in operation on and from the date of this amended permit.

1.3.6 The location of the facilities from which the discharge originates and the location of the point of discharge is the same location as set out in Subsection 1.1.7.

1.4 This subsection applies to the discharge of air contaminants from **MISCELLANEOUS SOURCES.** The site reference number for this discharge is E212034.

1.4.1 The maximum authorized rate of discharge is 60 000 m3/min.

1.4.2 The authorized discharge period is 24 hours per day, 7 days per week.

1.4.3 The characteristics of the discharge shall be of the nature originating from:

Miscellaneous Sources(Quantity)	Site Plan Identification
Paper machine vacuum pumps(3)	7F, 10F
Paper machine formers(3)	1F, SF
Paper machine dryer hood(13)	6F, 8F, 9F
Savealls(3)	3F, 4F
Repulpers(2)	2F
Grinder room(2)	3G, 1G
Groundwood deckers(2)	SG, 7G
Grinder pocket	2G
Groundwood reject chest and refiner(2)	4G
CTMP chip washer, chest and decker(5)	2C

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Miscellaneous Sources(Quantity)	Site Plan Identification
CTMP scrubber condenser	3C
CTMP chip drainer, rotary valve, pre-steaming, cyclotube, flash tank and impressifiner	4C
CTMP sulphur dioxide scrubber	5C
Peroxide bleach press(2)	1P
Effluent treatment cooling tower(2)	1E
Effluent treatment sludge presses(2)	2E
Bellingham debarker	3B
Chip blowers(3)	2B
Miscellaneous tank vents (unspecified)	
Miscellaneous building vents(unspecified)	

1.4.4 The authorized works are CTMP scrubber condenser, scrubber for the sulphur dioxide handling and storage facilities, vents, fans, ducts and related appurtenances approximately located as shown on attached Site Plan A.

1.4.5 The authorized works must be complete and in operation on and from the date of this amended permit.

1.4.6 The location of the facilities from which the discharge originates and the location of the point of discharge is the same location as set out in Subsection 1.1.7.

2. GENERAL REQUIREMENTS

2.1 Standard Conditions

For the administration of this permit all gaseous volumes shall be converted to standard conditions of 293.15 K and 101.325 kPa with zero percent moisture.

2.2 Maintenance of Works and Emergency Procedures

The permittee shall inspect the authorized 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 effective operation of the approved method of pollution control, the permittee shall notify the Regional Waste Manager immediately and take appropriate remedial action. The Regional Waste Manager may reduce or suspend the operation of the permittee to protect the environment until the approved method of pollution control has been restored.

2.3 Bypasses

The permittee shall ensure that no waste is discharged without being processed through the authorized works unless prior written approval is received from the Regional Waste Manager.

2.4 Effluent Treatment Sludge

The disposal of secondary effluent treatment sludges by incineration is subject to an evaluation by the Ministry of Environment, Lands and Parks. Based on the results of this evaluation, the Regional Waste Manager may request an alternate disposal method.

2.5 Nitrogen Oxides

The permittee may be required to install additional works or take measures to control the discharge of nitrogen oxides from the power boilers, the natural gas fired paper dryers and the hot oil heater.

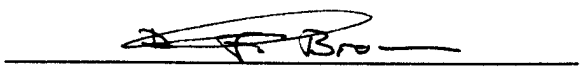
In the interim the permittee shall operate the existing equipment in such a manner as to maintain the lowest practical level of contaminants discharging from the existing works.

2.6 Tire Derived Fuel (TDF) Rate of Feed

The TDF shall be metered into the boiler at a rate not to exceed 5% by weight of the wood waste feed into the boiler, to a maximum of 40 tonnes of TDF/day.

2.7 Disposal of Solid Residues

Residue from the boiler (bottom ash) and electrostatic precipitator (flash) shall be disposed of in a manner acceptable to the Regional Waste Manager.



3. MONITORING AND REPORTING REQUIREMENTS

The following monitoring program shall be undertaken by the permittee. Based on the results of this monitoring program, the Regional Waste Manager may alter the sampling frequency and/or specify additional monitoring requirements.

3.1 Emission Monitoring:

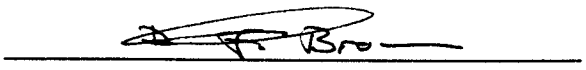
SOURCE AND NATURE OF CONTAMINANTS	SAMPLING FREQUENCY
Power boilers (authorized in Section 1. l)	
Particulate Matter (Notes 1 and 2)	quarterly
Zinc	quarterly
Iron	quarterly
Nitrogen Oxides	(Note 3)
Sulphur Dioxide	(Note 4)
Carbon Monoxide	(Note 3)
Opacity	(Note 3)
Paper dryers and hot oil heater (authorised in Section 1.3)	
Nitrogen Oxides	(Note 3)

Note l: Sampling for total particulate matter from #2, #3 and #4 power boilers shall be conducted at wood waste and TDF burning rates above the 90`h percentile (in terms of steam produced) for the ninety (90) days prior to the date the sample is to be taken or using a period approved by the Regional Waste Manager.

Note 2: In addition to determining the total particulate concentration in mg/m3, the particulate collected shall also be analyzed for chlorides and the results are to be reported in terms of sodium chloride.

Note 3: The Regional Waste Manager may specify a monitoring program for .. nitrogen oxides, carbon monoxide and/or opacity.

Note 4: Determine the sulphur content of each oil delivery.



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3.2 Monitoring of Residues

The permittee shall obtain separate representative samples from the boiler (bottom ash) and the electrostatic precipitator (flyash) and analyse the samples for iron (Fe) and zinc (Zn). The samples shall be taken quarterly.
The results of analyses, which shall be reported in accordance with Subsection 3.6.3, shall also include the daily TDF feed rate into the boiler for the period of seven days prior to each residue sample being taken.

3.3 Additional Monitoring for the Power Boilers

The permittee shall carry out a monitoring program to characterize the discharge of Polycyclic Aromatic Hydrocarbons from the combined #2, #3 and #4 power boilers with and without burning TDF in #4 power boiler. The boiler operating conditions, sampling techniques and analyses shall be established in consultation with the Regional Waste Manager and a detailed proposal for the program submitted for approval by October 31, 1999. The monitoring program shall be completed and final report submitted by February 29, 2000.
Based on the results of monitoring in this section and/or any other information obtained in connection with the discharge from the power boilers, the permittee may be required to provide additional treatment or cease burning TDF.

3.4 Building and Ventilation Type Discharges

Visual monitoring of the ventilation type discharges authorized in Section 1.4 will be carried out by Pollution Prevention staff as part of an ambient air monitoring program for the entire mill operation. Based on these monitoring results, upgrading may be required and/or the permit amended to specify discharge limits.

3.5 Ambient Air Monitoring

At locations (maximum four) and a frequency approved by the Regional Waste Manager, the permittee shall measure the PM10 component of total suspended particulate and record the results as micrograms per cubic metre averaged over one hour periods. The sampling frequency and locations may be adjusted from time-to-time as directed by the Regional Waste Manager.

3.6 Monitoring: Procedures

3.6.1 Sampling Locations and Techniques

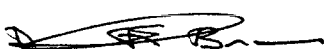
All sampling locations, techniques and equipment are to be approved by the Regional Waste Manager prior to use. Source sampling and monitoring data, which also should include rate of discharge measurements, shall be accompanied by process data relevant to the operation of the source of the emission(s) and to the performance of the pollution abatement equipment involved in the testing.

3.6.2 Sampling and Analytical Procedures

Sampling shall be carried out in accordance with the procedures described in the "British Columbia Field Sampling Manual for Continuous Monitoring Plus the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples. 1996 Edition (Permittee)", or by suitable alternative procedures as authorized by the Regional Waste Manager.

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 and Biological Materials (March 1994 Permittee Edition)", or by suitable alternative procedures as authorized by
the Regional Waste Manager.,

Copies of the above manuals may be purchased from the Queen's Printer Publications Centre, P. O. Box 9452, Stn. Prov. Gov't. Victoria, British Columbia, V8W 9V7 (1-800-663-6105 or (250) 387-6409), and are also available for inspection at all Pollution Prevention offices.

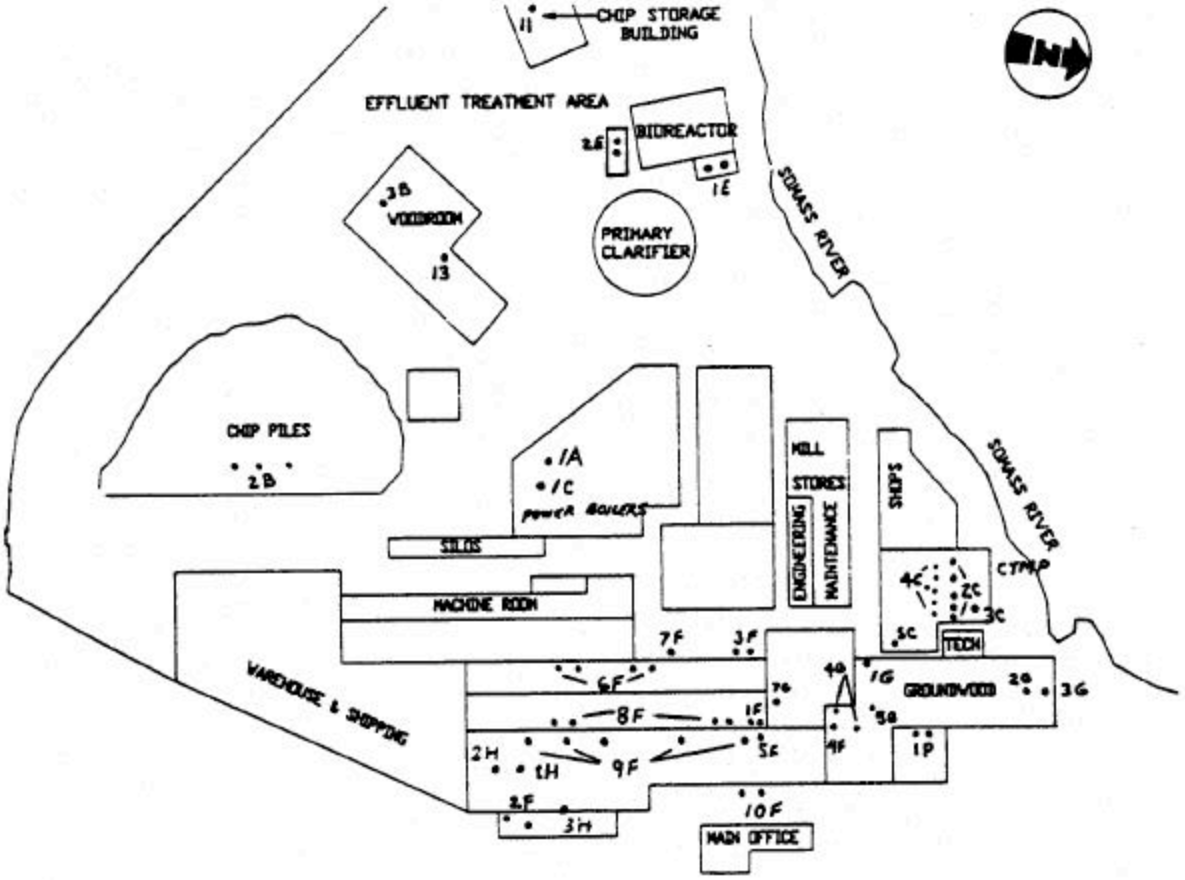


3.6.3 Reporting

The permittee shall submit to the Regional Waste Manager, once each quarter, the results of the monitoring program specified in Subsection 3.1. The Regional Waste Manager may request that data be submitted in a machine readable format suitable for entry into the Ministry of Environment, Lands and Parks computer data base. The information shall be submitted within 30 days following the quarter in which the data was collected. The first report is to be submitted by October 31, 1999.

In addition, the permittee shall submit on or before June 30 of each year a comprehensive review and analysis of the ambient air monitoring data obtained during the previous calendar year in a format acceptable to the Regional Waste Manager.

SITE PLAN A



Location Map

Scale: Not to Scale

PERMIT: PA-01863

Date: SEP 23 1999

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Regional Waste Manager
Vancouver Island region