



**MINISTRY OF ENVIRONMENT,
LANDS AND PARKS**

**PERMIT
PR-01751**

Under the Provisions of the Waste Management Act

**MacMillan Bloedel Limited
925 West Georgia Street
Vancouver, British Columbia
V6C 3L2**

is authorized to discharge refuse to the land near Port Alberni, British Columbia, from a pulp and paper mill, two sawmills, and various dryland log sorting operations, 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 PR-01751 issued under Part 2 Section 8 of the Waste Management Act.

1. AUTHORIZED DISCHARGES

1.1 This subsection applies to the discharge of refuse from a **PULP AND PAPER MILL, TWO SAWMILLS, AND VARIOUS DRYLAND LOG SORTING OPERATIONS**. The site reference number for this discharge is E223077.

1.1.1 The maximum authorized rate of discharge is 78,000 m³/a.

1.1.2 The components of the refuse that may be discharged are:

flyash	asbestos
wood waste	log pond dredgate
primary & secondary effluent treatment sludges	general pulp and paper mill & sawmill refuse, excluding putrescibles and special wastes

1.1.3 The authorized works are a landfill operation as directed, leachate collection and settling ponds, surface water diversion ditches, and related appurtenances approximately located as shown on attached Site Plan A.

1.1.4 The authorized works must be complete and in operation in accordance with the following schedule:

- (a) Original landfill and Phase 1 landfill operations, including two existing leachate collection and settling ponds, on and from the date of this amended permit;
- (b) Phase 2 and 3 landfill operations, including additional leachate collection and treatment works, subject to Subsections 2.6 and 2.7.

1.1.5 The location of the point of discharge is Block 105, Alberni Land District.

2. GENERAL REQUIREMENTS .

2.1 Landfill Operation

- (a) The permittee shall maintain the landfill authorized in Subsection 1.1 as a Level B operation in accordance with the *Pollution Control Objectives for the Forest Products Industry of British Columbia of British Columbia*, dated November 23, 1977, with the exception that suitable cover material, such as soil with a *low* organic content, shall be applied once each quarter.
- (b) The disposal of waste asbestos is subject to the requirements of Subsection 2.5.
- (c) No refuse shall be placed within 15 m of any surface water diversion ditch. The ditches shall be maintained in good working order.
- (d) The completed portion of the landfill surface shall be graded in a manner to promote the runoff of surface water without causing unacceptable erosion.
- (e) A final layer of at least 0.6 m of suitable cover material shall be placed over each completed phase of the tan fill.
- (f) The Regional Waste Manager may vary the frequency of covering or issue specific instructions when weather conditions affect normal operation.
- (g) The Regional Waste Manager may reduce the frequency of covering based on the level of leachate treatment provided, as specified in Subsection 2.7.

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 immediately, notify the Regional Waste Manager and take appropriate, remedial action.

2.3 Site Preparation and Restoration

Provision of fencing, site access, vehicle safety barriers, surface water diversionary works, firebreaks and site restoration as required, shall be carried out to the satisfaction of the Regional Waste Manager.

2.4 Waste Reduction and Alternative Disposal

The Ministry of Environment, Lands and Parks has developed a policy to reduce, recycle and reuse solid wastes. The permittee is encouraged to segregate for recycling and reuse, where possible, materials destined for disposal at this site.

2.5 Waste Asbestos Disposal

The waste asbestos shall be segregated from other refuse and packaged, handled and disposed of in accordance with the following requirements:

- (1) the waste asbestos shall be confined during handling, storage and transportation by:
 - a. dry airtight containment techniques such as:
 - (1) packing in 6 mm plastic bags placed within a non-reusable drum and then sealed, or;
 - (2) packing in a 6 mm plastic bag placed within a second 6 mm plastic bag and then sealed or;
 - b. wet containment techniques such as saturation with water and containment in non-leaking sealed drums or equivalent, or;
 - c. other approved containment techniques.
- (2) the waste asbestos shall be disposed of at the landfill by being immediately buried with a minimum of 0.5 m of cover material.

2.6 Phase 2 and Phase 3

Prior to the commencement of Phases 2 and 3, the permittee shall submit a comprehensive report that shall include, but is not limited to, the following:

- (a) a hydrogeological study of the area;
- (b) a landfill design and operation plan;
- (c) the number and location of additional groundwater monitoring wells; and
- (d) a proposal for additional leachate collection, treatment, and monitoring works.

The report shall be submitted to the Regional Waste Manager and the approval of the Regional Waste Manager shall be obtained prior to the discharge of refuse to these areas.

2.7 Upgrading of Works

The permittee shall investigate options available for the treatment of leachate discharged from the site. These options may include the installation of on-site biological treatment facilities or collection and transport of leachate to an approved off-site treatment facility. The results of this investigation shall be submitted to the Regional Waste Manager in the form of a report by December 31, 1996.

Based on the results of the monitoring program specified in Section 3 and/or other information obtained in connection with this discharge, the Regional Waste Manager may require the implementation of any of these or other treatment options.

3. MONITORING AND REPORTING REQUIREMENTS

3.1 Groundwater Monitoring Wells

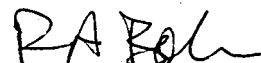
The permittee shall install and maintain a maximum of seven groundwater monitoring wells during the operation of Phases 1, 2, and 3. The exact number, locations, and piezometer sampling depths of these wells and any additional groundwater monitoring wells required in Subsection 2.6 are subject to the approval of the Regional Waste Manager.

3.2 Sampling and Analyses

During January, April, July, and October of each year, the permittee shall collect samples of the leachate discharged from the collection and settling pond(s), and the groundwater monitoring wells required in Subsection 3.1, and obtain analyses for the following

Sample Type	Parameter
Leachate collection and settling pond discharges)	Flow Rate Chemical Oxygen Demand Chloride Specific Conductance pH Phenols Sodium Tannins & Lignins Total & Dissolved Metals (Al, Cu, Fe, Mg, Mn, fin) Toxicity (LC50 Daphnia)
Groundwater	Chloride Specific Conductance pH Sodium Total & Dissolved Metals (Al, Cu, Fe, Mg, Mn, Zn)

The first set of samples is to be collected by October 31, 1996. Based on the results of the monitoring program and/or other information obtained in connection with this discharge, the monitoring requirements may be extended or altered by the Regional Waste Manager.



R.A. Bollans, P.Eng.
Assistant Regional Waste Manager

3.3 Sampling and Analytical Procedures

Sampling and flow measurement shall be carried out in accordance with the procedures described in "*Field Criteria for Sampling Effluents and Receiving Waters*", April 1989, or by suitable alternative procedures as authorized by the Regional Waste Manager.

Copies of the above manual are available from the Environmental Protection Division, Ministry of Environment, Lands and Parks, 777 Broughton Street, Victoria, British Columbia, V8V 1X4, at a cost of \$20.00, and are also available for inspection at all Environmental Protection offices.

Analyses are to be carried out in accordance with procedures described in the latest version of "*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 manual may be purchased from Queens Printer Publications Centre, 2nd Floor, 563 Superior Street, Victoria, British Columbia, V8V 4R6 (1-800-663-6105). A copy of the manual is also available for inspection at all Environmental Protection offices.

3.4 Reporting

An annual report shall be prepared by the permittee and submitted to the Regional Waste Manager on or before March 31 each year. The report shall include, but is not limited to, the following information obtained during the previous calendar year:

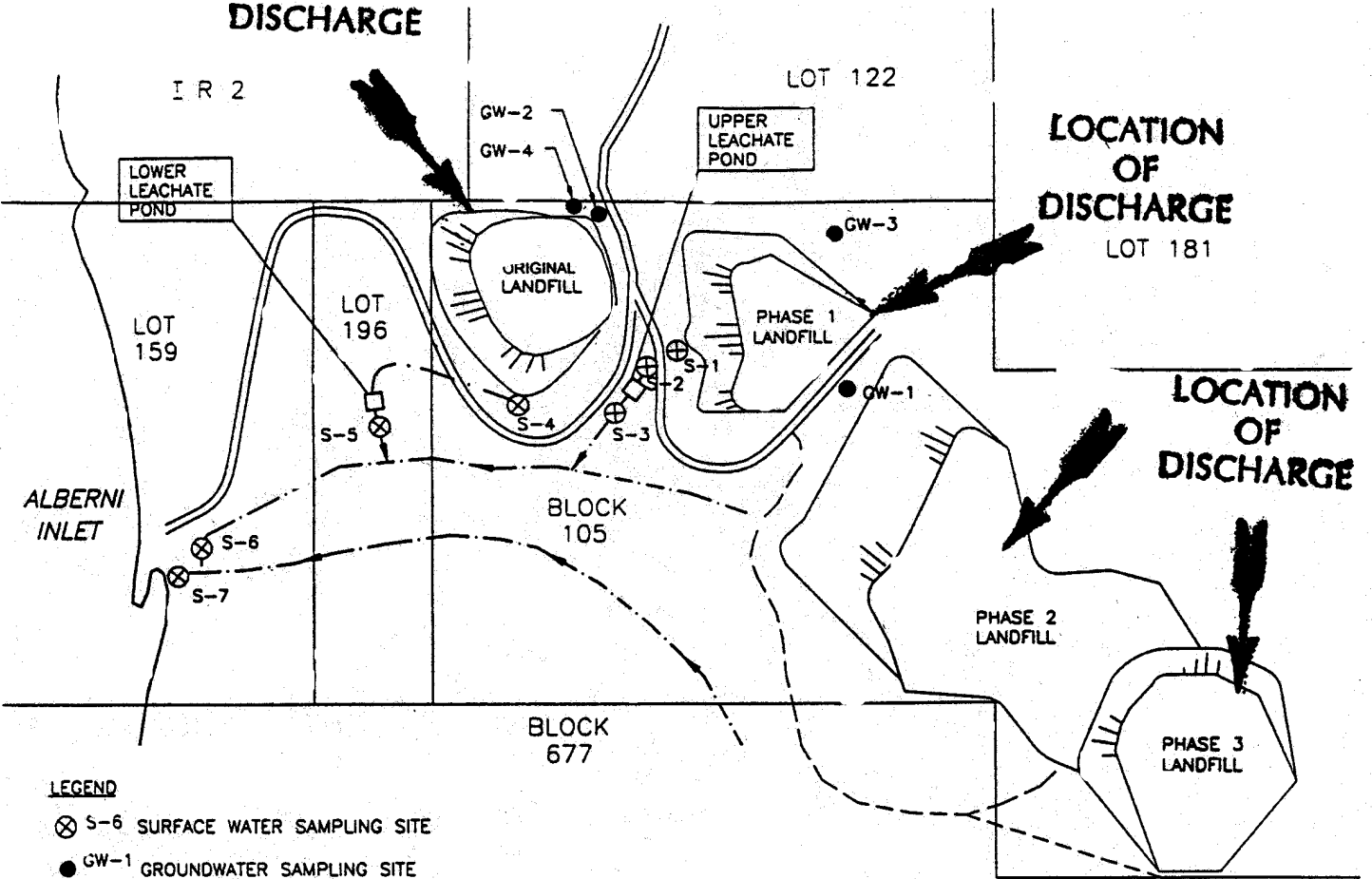
- (a) volume of refuse discharged in the reporting period;
- (b) volume of each major constituent of the refuse discharged during the reporting period;
- (c) monitoring data obtained during the reporting period and interpretation;
- (d) remaining capacity of the phase in active use;
- (e) operational plan for the following 12 months;
- (f) closure plans.

The first report is to be submitted by March 31, 1997.



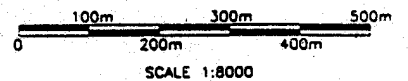
SITE PLAN A

LOCATION OF DISCHARGE

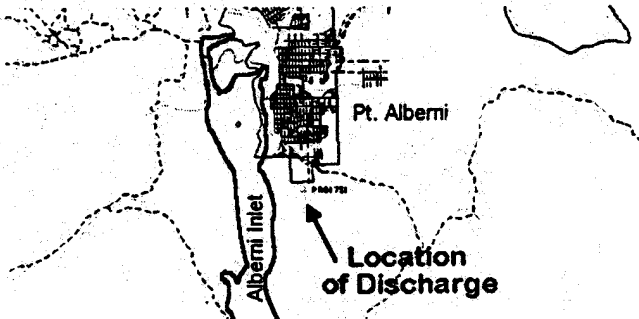


LEGEND

- ⊗ S-6 SURFACE WATER SAMPLING SITE
- GW-1 GROUNDWATER SAMPLING SITE



Location Map



Scale: As Shown

Permit: PR-01751

Date: JUL 09 1996

R.A. Bollans, P.Eng.
Assistant Regional Waste Manager