

CANADA

**PROVINCE OF QUEBEC
DISTRICT OF MONTREAL**

No. 500-11-036133-094

SUPERIOR COURT

**Commercial Division
(Sitting as a court designated pursuant to the
Companies' Creditors Arrangement Act,
R.S.C., c. C-36, as amended)**

**IN THE MATTER OF THE PLAN OF
COMPROMISE OR ARRANGEMENT
OF:**

ABITIBIBOWATER INC.

and

ABITIBI-CONSOLIDATED INC.

and

**BOWATER CANADIAN HOLDINGS INC.
and the other Petitioners listed on
Schedules A, B, and C**

Debtors

and

ERNST & YOUNG INC.

Monitor

and

**HER MAJESTY THE QUEEN IN RIGHT
OF THE PROVINCE OF
NEWFOUNDLAND AND LABRADOR**

Petitioner

AFFIDAVIT OF MAUREEN BILAWCHUK

I, Maureen Bilawchuk , of Suite 325, 1011 – 4th Avenue, in the City of Prince George, in the
Province of British Columbia, MAKE OATH AND SAY THAT:

1. I am a Environmental Management Section Head with the Environmental Protection Division of the Ministry of Environment and in that capacity am one of the persons responsible for overseeing the discharge of wastes from industrial operations in the Omineca and Peace Regions of British Columbia, and for assembling and managing information gathered or submitted under or in respect of British Columbia's legislative scheme for environmental regulation, and as such have personal knowledge of the matters hereinafter deposed to, save and except where stated to be based upon information and belief, and where so stated, I verily believe the same to be true.

2. All documents attached as Exhibits to this affidavit are true copies of original records kept by the government of British Columbia in the ordinary course of its business and operations, save and except for the exhibit pages numbers added for purpose of these proceedings.

3. One or more of the Debtors ("Abitibi") is the owner of land in or about the District of Mackenzie, in the Province of British Columbia including the following:

Sawmill Site #1

Part of District Lot 12572, Cariboo Land District

Sawmill Site #2

Part of District Lot 12571, Cariboo Land District

Paper Mill Site

Part of District Lot 12572, Cariboo Land District

(collectively, the "Sites").

4. From or about January 2002 to or about January 2008 Abitibi operated two sawmills ("Sawmill #1" and "Sawmill #2") and a paper mill (the "Paper Mill") from the Sites.

5. Prior to Abitibi, Sawmill #1, Sawmill #2 and the Pulp Mill (collectively, the "Mills") were owned and operated by:

Paper Mill

- Finlay Forest Industries Ltd. from or about February 1972 to or about December 1999
- Donohue Forest Products Inc. from or about December 1999 to or about January 2002

Sawmill #1

- Finlay Forest Industries Ltd. from or about March 1974 to or about December 1999
- Donohue Forest Products Inc. from or about December 1999 to or about January 2002

Sawmill #2

- Carrier Lumber Ltd. from or about June 1973 to or about August 1981
- Finlay Forest Industries Ltd. from or about August 1981 to or about December 1999
- Donohue Forest Products Inc. from or about December 1999 to or about January 2002

6. Abitibi continues to own the Mills but they were idled on or about January 20, 2008. Sawmill #1 and Sawmill #2 were restarted on a limited basis on or about October 18, 2009.

7. Abitibi is subject to the provisions of the *Environmental Management Act*, S.B.C. 2003, c. 53 (“EMA”) and the regulations made thereunder relating to the management, protection and use of the environment. The governing legislation prior to the coming into force of EMA was the *Waste Management Act*, R.S.B.C. 1996, c. 482. EMA is administered by the Ministry of Environment (“MoE”).

8. The regulations under EMA of particular application to Abitibi and its British Columbia mill operations include:

Contaminated Sites Regulation, B.C. Reg. 375/96

Hazardous Waste Regulation, B.C. Reg. 63/88

Waste Discharge Regulation, B.C. Reg. 320/2004

Spill Reporting Regulation, B.C. Reg. 263/90

9. Part 2 of EMA contains provisions respecting prohibitions against and authorizations for the discharge of waste (as defined in section 1 of EMA) into the environment. Section 6 of EMA provides, in material part, as follows:

Waste disposal

6 (1) For the purposes of this section, "the conduct of a prescribed industry, trade or business" includes the operation by any person of facilities or vehicles for the collection, storage, treatment, handling, transportation, discharge, destruction or other disposal of waste in relation to the prescribed industry, trade or business.

(2) Subject to subsection (5), a person must not introduce or cause or allow waste to be introduced into the environment in the course of conducting a prescribed industry, trade or business.

(3) Subject to subsection (5), a person must not introduce or cause or allow to be introduced into the environment, waste produced by a prescribed activity or operation.

(4) Subject to subsection (5), a person must not introduce waste into the environment in such a manner or quantity as to cause pollution.

(5) Nothing in this section or in a regulation made under subsection (2) or (3) prohibits any of the following:

(a) the disposition of waste in compliance with this Act and with all of the following that are required or apply in respect of the disposition:

- (i) a valid and subsisting permit;
- (ii) a valid and subsisting approval;
- (iii) a valid and subsisting order;
- (iv) a regulation;
- (v) a waste management plan approved by the minister;

For the purposes of s. 6 of EMA each of the Mills has been treated as and is generally accepted to be a “prescribed industry, trade or business” and/or a “prescribed activity or operation”.

10. Abitibi is the assignee of and/or has been issued permits under EMA and the regulations for the discharge of waste into the environment, including the following:

Sawmill Site #1

- PR-15668 PR-15668 authorizes the discharge of refuse to the land from a sawmill and planer mill complex. A copy of PR-15668 issued on September 2, 1998 as amended as at July 19, 2001 together with related correspondence and/or other documents and a copy of an amendment on January 7, 2002 are attached hereto as Exhibit “1”.
- PR-04984 PR-04984 authorizes the discharge of refuse from a sawmill and planer mill complex. A copy of PR-4984 issued on August 25, 1978 as amended as at July 29, 1994 together with related correspondence and/or other documents and copies of amendments on December 6, 1999 and January 7, 2002 are attached hereto as Exhibit “2”.
- PA-03057 PA-03057 authorizes the discharge of contaminants to air from a sawmill and planer mill operation. A copy of PA-03057 issued on

March 20, 1974 as amended as at September 9, 2008 together with related correspondence and/or other documents are attached hereto as Exhibit "3".

Sawmill Site #2

- PA-01722 PA-01722 authorizes the discharge of contaminants to the air from a sawmill and planer mill operation. A copy of PA-01722 issued on June 13, 1973 as amended as at December 5, 2001 together with related correspondence and/or other documents and a copy of an amendment on October 31, 2002 are attached hereto as Exhibit "4".
- PR-06207 PR-06207 authorizes the discharge of refuse to the land from a sawmill and planer mill complex. A copy of PR-06207 issued on October 16, 1981 as amended as at June 30, 2004 together with related correspondence and/or other documents and a copy of a letter dated June 30, 2004 are attached hereto as Exhibit "5".

Paper Mill Site

- PE-01174 PE-01174 authorizes the discharge of effluent to Williston Lake from an integrated thermomechanical/chemical thermomechanical paper mill. A copy of PE-01174 issued on February 4, 1972 as amended as at June 27, 1996 together with related correspondence and/or other documents and copies of amendments on December 6, 1999, January 7, 2002, September 19, 2003, July 30, 2008 and February 4, 2009 are attached hereto as Exhibit "6".
- PA-03647 PA-03647 authorizes the discharge of contaminants to the air from an integrated thermomechanical/chemical thermomechanical paper mill. A copy of PA-03647 issued on November 25, 1974 as amended as at November 1, 2004 together with related correspondence and/or other documents and copies of amendments on November 23, 2006,

February 20, 2008 and October 28, 2008 are attached hereto as Exhibit "7".

- PR-04133 PR-04133 authorizes the discharge of refuse to the ground from an integrated thermomechanical/chemical thermomechanical paper mill. A copy of PR-04133 issued on September 16, 1976 as amended as at September 20, 2000 together with related correspondence and/or other documents and copies of amendments on January 24, 2001, January 25, 2001, January 7, 2002, January 15, 2002, April 7, 2005, August 26, 2008, September 16, 2008 and February 17, 2009 are attached hereto as Exhibit "8".
- PR-15166 PR-15166 authorizes the discharge of refuse to the ground from an integrated thermomechanical/chemical thermomechanical paper mill. A copy of PR-15166 issued on March 30, 1999 as amended as at September 28, 1999 together with related correspondence and/or other documents and copies of amendments on December 6, 1999, August 23, 2000, January 7, 2002, January 15, 2002, August 5, 2005 and February 20, 2008 are attached hereto as Exhibit "9".
- PR-18335 PR-18335 authorizes the discharge of wood chips to ground from an integrated thermomechanical/chemical thermomechanical paper mill. A copy of PR-18335 issued on August 29, 2007 together with related correspondence and/or other documents and a copy of an amendment on September 13, 2007 are attached hereto as Exhibit "10".
- PS-08555 PS-8555 authorizes a short term special waste storage facility at an integrated thermomechanical/chemical thermomechanical paper mill. A copy of PS-08555 issued on August 31, 1990 as amended as at July 29, 1994 together with related correspondence and/or other documents and copies of amendments on December 6, 1999 and January 7, 2002 are attached hereto as Exhibit "11".

(collectively, the "Mill Permits")

11. Annual permit fees are calculated having regard to the type of contaminant and the quantity of the contaminant authorized by the permit.

12. Abitibi has ongoing specific obligations under the Mill Permits, and is subject to site inspections, including as follows:

Sawmill Site #1

- PR-15668 Section 3 requires annual refuse reporting and section 4 requires an annual update to the landfill site restoration plan. The next reports are due on January 31, 2010. The last site inspection was on September 25, 2009 and a copy of the Permit Inspection Report is attached hereto as Exhibit "12".
- PR-4984 The last site inspection was on September 25, 2009 and a copy of the Permit Inspection Report is attached hereto as Exhibit "13".
- PA-03057 The last site inspection was on November 25, 2009 and a copy of the Permit Inspection Report is attached hereto as Exhibit "14".

Sawmill Site #2

- PA-01722 Section 10 requires monitoring and reporting. Abitibi is not in compliance with these requirements. The last site inspection was on November 25, 2009 and a copy of the Permit Inspection Report is attached hereto as Exhibit "15" together with a copy of the September 25, 2009 Permit Inspection Report referred to therein.
- PR-06207 Section 3.2 requires groundwater monitoring. One of the conditions of the approval of the site closure plan requires annual groundwater reporting on January 31. The groundwater report for 2009 is due on January 31, 2010. A receiving environment assessment report was due January 31, 2007 and every three years thereafter starting January 31, 2007. The 2007 report has not been received and the January 31, 2010

report is pending due. Section 4 requires an annual landfill site restoration plan update by January 31, 2010. The last site inspection was on September 25, 2009 and a copy of the Permit Inspection Report is attached hereto as Exhibit "16".

Paper Mill Site

- PE-01174 Sections 4.1, 4.4 and 4.5 require data collection and reporting, including quarterly groundwater reports. The groundwater report for Q4 of 2009 is due January 30, 2010. The last site inspection was on September 25, 2009 and a copy of the Permit Inspection Report is attached hereto as Exhibit "17".
- PA-03647 Section 4 requires monitoring and reporting. A letter confirming the inoperative state of the mill and its related air discharge sources was due on November 25, 2009 as per October 28, 2008 letter of amendment. No such confirming letter was found among the records I reviewed.
- PR-04133 Section 4.7.1 as per February 17, 2009 letter of amendment requires quarterly refuse reporting. Reports for Q1, Q2 and Q3 of 2009 are overdue and report for Q4 of 2009 is due January 30, 2010. Sections 4.2 and 4.7.2 require groundwater monitoring and reporting. The report for Q4 of 2009 is due on January 30, 2010. The last site inspection was on September 25, 2009 and a copy of the Permit Inspection Report is attached hereto as Exhibit "18".
- PR-15166 Sections 4.2 and 4.7.2 require groundwater monitoring and reporting. The complete 2009 report is due on March 31, 2010 as per February 20, 2008 letter of amendment. The last site inspection was on September 25, 2009 and a copy of the Permit Inspection Report is attached hereto as Exhibit "19".
- PR-18335 Sections 3.1 and 5.2 require reports. 2008 and 2009 reports are overdue. Further reports are due April 30, 2010. The last site

inspection was on September 25, 2009 and a copy of the Permit Inspection Report is attached hereto as Exhibit "20".

- PS-08555 Section 6 requires an updated waste inventory and reporting annually. The 2009 report is due on January 31, 2010.

13. In addition to those specific obligations, permits (including some or all of the Mill Permits) impose general responsibilities and obligations, including with respect to the following:

- Inspection and maintenance of authorized works
- Requirements respecting emergency procedures
- Sampling, monitoring and reporting of active discharges, where required
- Site preparation and restoration
- Management of any special waste
- Upgrading authorized works or other remedial action, where required
- Compliance with federal regulatory requirements

14. Attached hereto and marked as Exhibit "21" is a copy of a letter dated September 30, 2009 from MoE to Abitibi enclosing and summarizing various permit reports.

15. Attached hereto and marked as Exhibit "22" is a copy of a letter dated November 26, 2009, from MoE to Abitibi enclosing and summarizing permit reports for PA-1722 and PA-3057.

16. Attached hereto and marked as Exhibit "23" is a copy of a letter dated January 26, 2010, from MoE to Abitibi summarizing the status of various permits.

17. Permits authorizing the discharge of refuse to the ground also generally require submission of a closure plan. Abitibi has provided the following closure plans:

Sawmill Site #1

- PR-4984. A copy of the closure plan for PR-4984 dated February 28, 2003 (without attachments) is attached hereto as Exhibit "24".

Sawmill Site #2

- PR-06207. A copy of the closure plan for PR-06207 dated February 28, 2003 together with a copy of the approval (with conditions) dated June 30, 2004 are attached hereto as Exhibit "25".

Paper Mill Site

- PR-04133. A copy of the closure plan for PR-04133 dated February, 2003 is attached hereto as Exhibit "26".
- PR-15166. A copy of the closure plan for PR-15166 dated February 2003 (without appendices) together with related correspondence and/or other documents and copy of the approval (with conditions) dated June 25, 2004 are attached hereto as Exhibit "27".

18. In addition to the Mill Permits, permits were issued to Abitibi or its predecessors for logging camps and logging operations, including:

- PR-09044. PR-09044 authorizes the discharge of refuse to the ground from a logging camp and logging operations commonly known as the Dry Creek Camp. A copy of PR-09044 issued on January 7, 1991 as amended as at July 29, 1994 together with related correspondence and/or other documents are attached hereto as Exhibit "28". PR-09044 has been cancelled.
- PR-8720. PR-8720 authorizes the discharge of refuse to the ground from a logging camp and logging operations commonly known as the Nabesche Camp. A copy of PR-8720 issued on March 30, 1990 as amended as at July 29, 1994 together with related correspondence and/or other

documents are attached hereto as Exhibit "29". PR-8720 has been abandoned pursuant to section 20(3) of EMA.

- PE-03015. PR-03015 authorizes the discharge of effluent to the ground from a logging camp commonly known as the Mesilinka Camp. A copy of PR-03015 issued on May 8, 1974 as amended as at July 29, 1994 together with related correspondence and/or other documents and copies of amendments on December 6, 1999 and January 7, 2002 are attached hereto as Exhibit "30". PE-03015 has been abandoned pursuant to section 20(3) of EMA.
- PR-04401. PR-04401 authorizes the discharge of refuse and contaminants to the ground and air from a logging camp commonly known as the Mesilinka Camp. A copy of PR-04401 issued on February 1, 1977 as amended as at July 29, 1994 together with related correspondence and/or other documents and copies of amendments on December 6, 1999 and January 7, 2002 are attached hereto as Exhibit "31". PR-04401 has been abandoned pursuant to section 20(3) of EMA.
- PR-8721. PR-8721 authorizes the discharge of refuse to the ground from a logging camp commonly known as the Osilinka Camp. A copy of PR-8721 issued on March 30, 1990 as amended as at November 22, 2001 together with related correspondence and/or other documents and a copy of an amendment on January 7, 2002 are attached hereto as Exhibit "32".
- PR-08722. PR-08722 authorizes the discharge of refuse to the ground from a logging camp and logging operations commonly known as the Ted Brown Camp. A copy of PR-08722 issued on March 30, 1990 as amended as at October 19, 1994 together with related correspondence and/or other documents and copies of amendments on December 6, 1999 and January 7, 2002 are attached hereto as Exhibit "33". PR-08722 has been abandoned pursuant to section 20(3) of EMA.
- PR-11116. PR-11116 authorizes the discharge of refuse to the ground from a logging camp commonly known as the Swannell Camp. A copy of PR-11116 issued on February 5, 1992 as amended as at November 22,

2001 together with related correspondence and/or other documents and a copy of an amendment on January 7, 2002 are attached hereto as Exhibit "34". PR-11116 has been abandoned pursuant to section 20(3) of EMA.

- PR-11638. PR-11638 authorizes the discharge of refuse to the ground from a logging camp commonly known as the Omineca Camp. A copy of PR-11638 issued on July 19, 1993 as amended as at November 22, 2001 together with related correspondence and/or other documents and a copy of an amendment on January 7, 2002 are attached hereto as Exhibit "35".
- PE-14802. PE-14802 authorizes the discharge of effluent to the ground from a 150-person logging camp commonly known as the Osilinka Camp. A copy of PE-14802 issued on February 2, 1999 together with related correspondence and/or other documents and copies of amendments on December 6, 1999 and January 7, 2002 are attached hereto as Exhibit "36".
- PR-15742. PR-15742 authorizes the discharge of refuse to the ground from a logging camp commonly known as the Ottertail Camp. A copy of PR-15742 issued on October 20, 1998 as amended as at November 22, 2001 together with related correspondence and/or other documents and a copy of an amendment on January 7, 2002 are attached hereto as Exhibit "37".

(collectively, the "Camp Permits")

19. Section 18 of EMA empowers the minister or director to cancel a permit or approval. Normally, that power is exercised as a result of the sort of non-compliance described in section 18. Cancellation at the request of the holder of a permit or approval is not granted unless the director is satisfied, based on existing facts known to him, that there are no ongoing obligations.

20. Section 20(5)(b) of EMA provides:

"(5) A person who elects under subsection (3) to abandon a permit or an approval

...

(b) despite the abandonment, is bound by those additional requirements that the director imposes respecting restoration of the environment or the control and monitoring of the waste discharged or the waste that continues to be discharged after abandonment.”

21. Attached hereto and marked as Exhibit “38” are copies of correspondence and/or other documents from MoE to Abitibi relating to the abandonment of certain of the Camp Permits.

22. Attached hereto and marked as Exhibit “39” is a copy of a letter dated January 4, 2008 from MoE to Abitibi relating to obligations of Abitibi during the shutdown of Abitibi’s woodlands operations.

23. Contaminated sites provisions under EMA require MoE to provide public information about site investigations and cleanups. MoE maintains a site registry (the “Site Registry”) for this purpose. MoE has the following site details reports from the Site Registry for sites owned and operated by Abitibi or its predecessors:

Site 1469 Abitibi Site 1 Sawmill

Attached hereto and marked as Exhibit “40” is a copy of the Site Details Report for Site 1469.

I am advised by Amy Sloma, Senior Contaminated Sites Officer, of the B.C. Ministry of Environment, and verily believe that:

- Site 1469 consists of a sawmill, paper mill, maintenance building, above ground waste oil storage tank, fuelling facility and a former underground storage tank basin. The site is noted to have contamination associated with liquid phase petroleum hydrocarbons, and hydrocarbon contaminated soil and groundwater.

- A notice of independent remediation initiation was submitted in 2001. Management of contamination at this site was under the independent remediation process, with some minimal Ministry involvement.
- A detailed site investigation report was submitted in 2000. A remedial plan without risk assessment was submitted in 2000. A detailed site investigation report addendum was submitted to MOE in 2003. All report reviews were placed on hold because fees for the review of the documents were not paid.
- The most recent documentation relates to maintenance shop area remedial action and groundwater quality results for wells in that area of the shop.
- The current status listed in the Site Registry is 'Active-Under Assessment'. This code means that a site is undergoing or requires an environmental investigation, with further obligations potentially to follow. The assigned site category is "complex".

Site 6254 Former Gold River Pulp Mill

Attached hereto and marked as Exhibit "41" is a copy of the Site Details Report for Site 6254.

I am advised by counsel and verily believe that the Gold River Pulp Mill was operated by a predecessor of one or more of the Debtors therein.

I am further advised by the said Amy Sloma, and verily believe that:

- Site registry notations for Site 6254 span a time period from 1999 to 2001.

- Site 6254 consists of a historic package boiler, black liquor storage tanks and pulping group. The site is noted to have had contamination associated with petroleum hydrocarbons and polycyclic aromatic hydrocarbons in soil.
- In 2001 a Certificate of Compliance ('CoC') was issued for PIDs 009-526-510 & 009-526-757, Block D, & PID 009-526-820 except for Area 1 and Area 2. The CoC confirms the ministry's concurrence that the upland area specified had been cleaned up to provincial standards. Area 1 and Area 2 was issued a conditional certificate of compliance ("CCoC") in 2001. This means that Area 1 and Area 2 had been cleaned up to the risk-based standards in the *Waste Management Act* and Contaminated Sites Regulation.
- The current status listed in the Site Registry is 'Active – Remediation Complete'. This means that the site is compliant under the risk assessment/risk management approach. All risk management works at a site have been constructed, appropriate permits and approvals have been obtained, official sign-off has been issued, and requirements such as treatment, monitoring, or maintenance are ongoing. This code is also sometimes applied to sites which are compliant under the numerical standards approach.
- In August 2003, MoE noted that dioxin and furan contamination in sediments located off-site identified by Transport Canada may have originated from the historical pulp and paper mill operations.
- If the dioxin and furan contamination is attributable to the historic pulp operations, then Abitibi may have obligations under EMA notwithstanding the CoC and/or the CCoC.

Site 1947 Victoria Plywood, 1201 Hallowell Rd

Attached hereto and marked as Exhibit "42" is a copy of the Site Details Report for Site 1947.

I am advised by counsel and verily believe that the Victoria Plywood site was operated by a predecessor of one or more of the Debtors herein.

I am further advised by the said Amy Sloma, and verily believe that:

- Site registry notations for Site 1947 span a time period from 1997 to 2006.
- Site 1947 consists of a plywood mill facility near downtown Victoria. The site is noted to have had contamination associated with petroleum hydrocarbons, metals, and polycyclic aromatic hydrocarbon contamination in soil, and petroleum hydrocarbon contamination in groundwater.
- A Notice of Independent Remediation initiation was submitted in 2006. Contamination at the site is noted to be under the independent remediation process, whereby remediation is carried out without any Ministry involvement, other than the party doing the remediation notifying the Ministry of initiation and completion.
- In August 2005 an approval in principle for a remediation plan was issued on the recommendation of an approved professional under Protocol 6 of the CSR for Phase 1a and Phase 2a areas. In August 2005 a certificate of compliance using numerical standards was issued on the recommendation of an approved professional under Protocol 6 of the CSR for the Phase 1 and Phase 2 areas.
- The current status listed in the Site Registry is 'Active – Under Remediation'. This code means that a remediation plan for a site has been developed and accepted by the ministry, or even implemented already, or that remediation is known by the ministry to be occurring at the site. No information, however, has been submitted to the ministry or obtained by it to indicate that remediation is complete.

24. The Site Registry also contains historical notifications respecting specific incidents or issues at Abitibi's logging camps, including what was done to address those incidents or issues and the current status where known, as follows:

Site 1465 Osilinka Camp

Attached hereto and marked as Exhibit "43" is a copy of the Site Details Report for Site 1465.

Site 1466 Omineca Camp

Attached hereto and marked as Exhibit "44" is a copy of the Site Details Report for Site 1466.

Site 1468 Mesilinka Camp

Attached hereto and marked as Exhibit "45" is a copy of the Site Details Report for Site 1468.

Site 5987 Nabesche Camp

Attached hereto and marked as Exhibit "46" is a copy of the Site Details Report for Site 5987.

Site 2155 Swannell Camp

Attached hereto and marked as Exhibit "47" is a copy of the Site Details Report for Site 2155.

Site 2178 Ottertail Camp

Attached hereto and marked as Exhibit "48" is a copy of the Site Details Report for Site 2178

25. I am further advised by the said Amy Sloma and verily believe that attached hereto and marked as Exhibit "49" is a copy of a letter from the physical file for Site 6254.

26. Under section 79(5) of EMA, if a polluting substance escapes or is spilled or waste is introduced into the environment (each a "Spill") other than as allowed or authorized, the person who had possession, charge or control of the substance must report the Spill. There are records for approximately 90 Spills at the sites covered by the Mill Permits and the Camp Permits.

27. Based on my own responsibilities, as well as on advice from my colleagues in the MoE with respect to their areas of responsibilities and from MoE's solicitors, I understand and believe that Part 4 of EMA and the Contaminated Sites Regulation comprise a comprehensive code for identifying, dealing with and remediating contaminated sites. Material provisions include the following:

- Division 2 deals with the identification of contaminated sites through the provision of site profiles, including by order of the director (section 40(8)), by a receiver or trustee (Section 40(7)), or by a vendor for the benefit of a prospective purchaser (section 40(6)). It also empowers the director to order site investigations at the owner's expense, if a site profile shows the site may be a contaminated site or present a threat to health or the environment (section 41(1)). It also provides for the site registry. Division 2 also empowers the director to determine whether a site is a contaminated site, and the boundaries of it (section 44).
- Division 3 assigns responsibility for remediation of contaminated sites (sections 45 and 46) and creates liability for costs of remediation (section 47). The persons responsible for remediation are set out in section 45 and include the current owner or operator, a

previous owner or operator, and persons who produced or transported a substance which caused a site to become contaminated. Under section 47(1), a person who is responsible for remediation is “absolutely, retrospectively and jointly and separately liable” for costs of remediation. These costs are described in section 47(3). Section 48 allows for remediation orders to be made. Section 50 provides for the allocation of responsibility for remediation through the designation by the director of a responsible person as a minor contributor.

- Division 4 provides for the implementation of remediation, including through voluntary remediation agreements (section 51), approvals in principle and certificates of compliance (section 53), as well as independent remediation (section 54). Section 56 then provides as follows:

Selection of remediation options

56 (1) A person conducting or otherwise providing for remediation of a site must give preference to remediation alternatives that provide permanent solutions to the maximum extent practicable, taking into account the following factors:

- (a) any potential for adverse effects on human health or for pollution of the environment;
- (b) the technical feasibility and risks associated with alternative remediation options;
- (c) remediation costs associated with alternative remediation options and the potential economic benefits, costs and effects of the remediation options;
- (d) other prescribed factors.

(2) When issuing an approval in principle or a certificate of compliance, a director must consider whether permanent solutions have been given preference to the

maximum extent practicable as determined in accordance with any guidelines set out in the regulations.

- Division 6 governs what are known as orphan sites (section 58) and recovery of costs of remediation incurred by government (sections 59 and 60).

28. Part 7 of the Contaminated Sites Regulation sets out further rules respecting responsibility for remediation, including limits in that regard pertaining to receivers, etc. who become owners or operators of contaminated sites. There is no specific mention in that regard of companies or monitors in *Companies Creditors Arrangement Act* proceedings. Part 9 of the regulation deals with remediation plan approval and completion. Part 13 deals with independent remediation procedures. Part 14 deals with site investigations.

29. The scheme in Part 4 and the Contaminated Sites Regulation is supplemented through provisions in EMA Part 7, including as follows:

- Section 79 empowers the minister to make orders to lessen the risk of an escape or spill of a polluting substance including orders that a person undertake investigations, prepare, test and/or carry out a contingency plan, construct works and carry out other measures to prevent or abate an escape or spill.
- Section 81 empowers the director to cause information to be provided and/or steps to be taken with respect to operations potentially causing pollution, including by persons who were previously involved, at their expense, with authorization to enter land to prevent pollution. Those powers relate to activities and operations not in compliance with permits, etc.
- Section 83 empowers the director to issue pollution abatement orders.

- Sections 85 to 88 empower the minister to make environmental protection orders, environmental management plans and to deal with environmental emergencies, and to recover the cost to government of doing so.

30. Part 9 of EMA contains provisions to enable enforcement of compliance with the Act and regulations. Part 10 of EMA completes the scheme through offence provisions and applicable penalties for failure to comply with the requirements of the Act and regulations.

31. There is no record of any orders
yet having been made under EMA in
connection with any of the sites covered)
by the Mill Permits and the Camp)
Permits.)

SWORN BEFORE ME at the City of)
Prince George, in the Province of British)
Columbia, this 4th day of February,)
2010.)


MAUREEN BILAWCHUK



A Notary Public in and for the Province
of British Columbia

(Affix Seal)

Anne Barnes
Barrister and Solicitor
250 George St
Prince George B.C.

SUPERIOR COURT

Commercial Division

**(Sitting as a court designated pursuant to the
Companies' Creditors Arrangement Act,
R.S.C., c. C-36, as amended)**

No. 500-11-036133-094

**In the matter of the Plan of Compromise or
Arrangement of:**

ABITIBIBOWATER INC., *et al*

Petitioners

- and -

ERNST & YOUNG INC.

Monitor

AFFIDAVIT

**Richard Butler Phone (250) 356-6559
Fax (250) 356-9154**

**MINISTRY OF ATTORNEY GENERAL
LEGAL SERVICES BRANCH
PO BOX 9289 STN PROV GOVT
6th Floor, 1001 Douglas Street
Victoria, BC V8W 9J7**

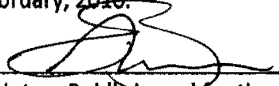
This is Exhibit 11
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 1



Pollution Prevention
1011 Fourth Avenue
Prince George
British Columbia V2L 3H9
Telephone: (250) 565-6155
Fax: (250) 565-6629

MINISTRY OF WATER, LAND
AND AIR PROTECTION

PERMIT
PR-15668

Under the Provisions of the Waste Management Act

Produits Forestiers Donohue Inc. – Donohue Forest Products Inc.

P.O. Box 250

Mackenzie, British Columbia

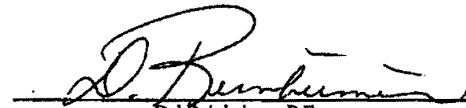
V0J 2C0

is authorised to discharge refuse to the land from a sawmill and planermill complex identified as Site I located in Mackenzie, 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.

1. AUTHORISED DISCHARGES

- 1.1** This subsection applies to the discharge of refuse from a **SAWMILL LOGYARD**. The site reference number for this discharge is E233672.
 - 1.1.1** The maximum authorised rate of discharge is 15,000 tonnes/year.
 - 1.1.2** The components of the refuse which may be discharged are logyard debris including, dirt, bark, and wood residue which is no greater than one (1) metre in length.
 - 1.1.3** The authorised works are a landfill approximately located as shown on attached Site Plan A.
 - 1.1.4** The location of the facilities from which the discharge originates and the location of the point of discharge is District Lot 12572, Cariboo Land District, British Columbia.

Date Issued: September 2, 1998
Date Amended: **JUL 19 2001**
(most recent)
Page: 1 of 4


Del Reinheimer, P.Eng.
Assistant Regional Waste Manager

PERMIT: PR-15668

2

2. GENERAL REQUIREMENTS

2.1. 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, including, but not limited to, an unauthorized fire arising from spontaneous combustion or other causes or the detection of leachate on the property, the Permittee shall notify the Regional Pollution Prevention office forthwith and take appropriate remedial action.

2.2. Bypasses

The discharge of refuse which has bypassed the authorised works is prohibited unless the approval of the Regional Waste Manager is obtained and confirmed in writing.

2.3. Cover Material Application

The Permittee shall compact the refuse and apply cover material at least twice per year. A compacted lift of refuse shall not exceed a depth of 3 metres prior to application of intermediate or final cover. The site shall be maintained in such a way to prevent pooling of surface water and to minimize edge erosion.

2.4. Additional Restrictions

The Permittee shall comply with the following additional restrictions and prohibitions:

2.4.1. Open burning is prohibited.

2.4.2. The discharge of refuse material into free standing water is prohibited.

2.4.3. The discharge of domestic or putrescible waste is prohibited.

2.4.4. The Permittee shall ensure that the waste is separated from the groundwater by a minimum of 1.25 metres of soil.

2.4.5. No other type of waste, except that authorized in section 1.1.2 shall be deposited at the site without the written consent of the Regional Waste Manager.

2.5. Site Preparation and Restoration

Provisions 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.

2.6. Special Waste Regulation Requirements

The Permittee shall comply with all applicable provisions of the *Special Waste Regulation* of the *Waste Management Act* (B.C. Reg. 63/88). If information or data indicates that a waste specifically authorized for landfill may be designated as a Special Waste, discharge of that waste shall cease immediately; the waste shall be managed in accordance with the *Special Waste Regulation*; and the Pollution Prevention office shall be notified within five (5) working days. Where a conflict exists between this Permit and the *Special Waste Regulation*, the latter shall take precedence.

2.7. Monitoring and Reporting

The Regional Waste Manager may, in writing, modify the monitoring and reporting requirements.

3. REPORTING REQUIREMENT

The Permittee shall maintain a record of the type, quantity and source of refuse discharged to the landfill site on a daily basis during discharge periods and shall make these records available for inspection by Pollution Prevention personnel. The Permittee shall compile and submit the data collected during the preceding calendar year to the Regional Pollution Prevention office by **January 31st** of each year.

The monitoring report shall also include a discussion of site maintenance conducted during the preceding year. This shall include the frequency of site compaction and approximate dates of intermittent soil cover as well as the approximate depth of the compacted lift of refuse material prior to intermittent soil application. A description of any surface water diversionary works should also be included in the report.

Date Issued: September 2, 1998

Date Amended: **JUL 19 2001**
(most recent)

Page: 3 of 4


Del Reinheimer, P.Eng.
Assistant Regional Waste Manager

PERMIT: PR-15668

4

4. **LANDFILL SITE RESTORATION PLAN**

The Permittee shall prepare and submit a revised landfill site restoration plan by **January 31, 2002** to the regional Waste Manager for approval. The plan shall include the following:

- 4.1. A site plan showing the areas of the refuse site which will be closed within the next year and a proposed closure plan for the other active portions of the site. The plan shall specify the design of the final cover material including thickness and permeability of barrier layers, site drainage, vegetative cover and erosion prevention controls.
- 4.2. The plan shall include measures to prevent leachate generation at the site and a schedule of implementation.

The Permittee shall maintain on file a copy of the current site restoration plan and shall submit an update to the Regional Pollution Prevention office by **January 31st of each year**, or as otherwise directed by the Regional Waste Manager.

Date Issued: September 2, 1998

Date Amended:
(most recent)

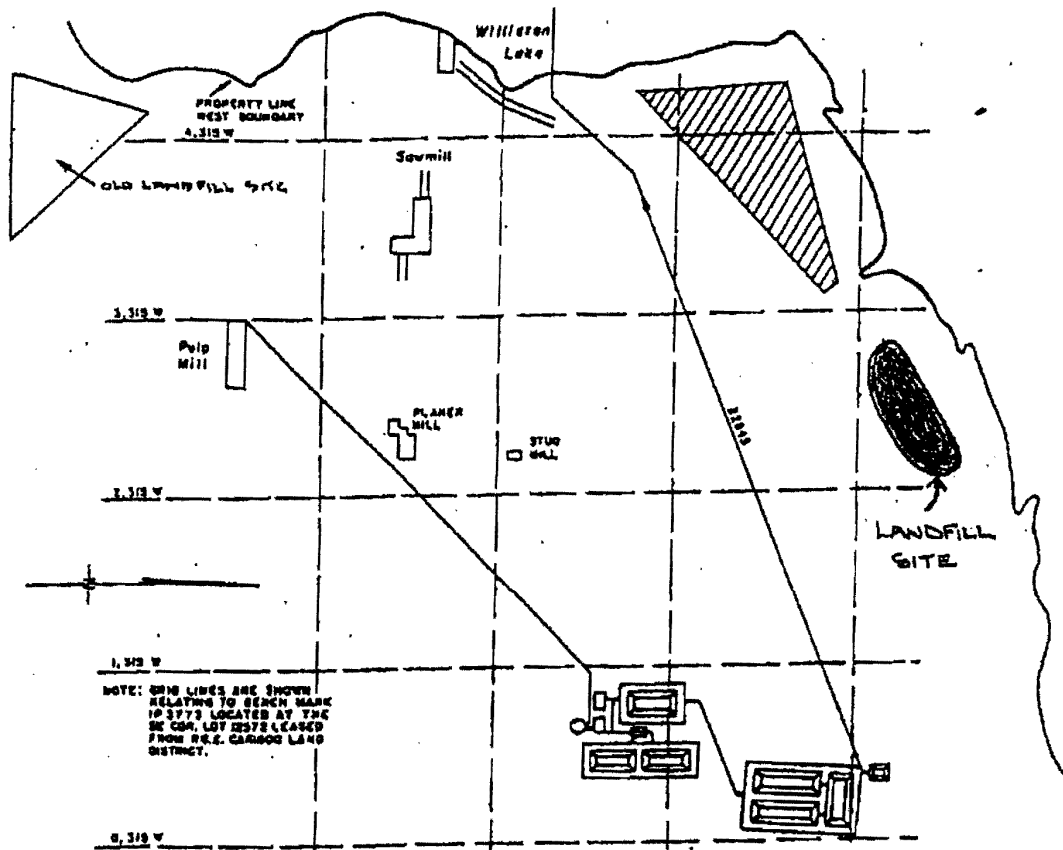
JUL 19 2001

Page: 4 of 4

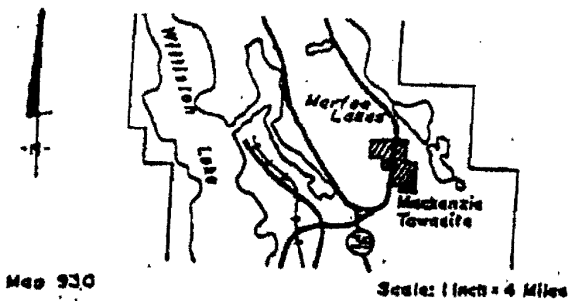

Del Reinheimer, P.Eng.
Assistant Regional Waste Manager

PERMIT: PR-15668

SITE PLAN A



Location Map



Scale: Not to Scale

Permit: PR-15668

Date: JUL 19 2001

Del Reinheimer

Del Reinheimer, P.Eng.
Assistant Regional Waste Manager
Omineca Peace Region



Date: JUL 19 2001

File: PR-15668

REGISTERED MAIL

Produits Forestiers Donohue Inc. - Donohue Forest Products Inc.
P.O. Box 250
Mackenzie British Columbia V0J 2C0

Attention: Les Skaalid

Dear Les:

Enclosed is Permit PR-15668 issued under the provisions of the *Waste Management Act*. Your attention is respectfully directed to the terms and conditions outlined in the permit. An annual permit fee will be determined according to the *Waste Management Permit Fees Regulation*.

This permit amendment increases the annual amount of refuse allowed for discharge into your landfill to 15,000 tonnes per year, as per your request dated June 18, 2001.

This permit does not authorise entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorised by the owner of such lands or works. The responsibility for obtaining such authority shall rest with the Permittee. This permit is issued pursuant to the provisions of the *Waste Management Act* to ensure compliance with Section 54(3) of that statute, which makes it an offence to discharge waste without proper authorisation. It is also the responsibility of the Permittee to ensure that all activities conducted under this authorisation 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. Notice of the appeal must:

- (1) be in writing,
- (2) include the grounds for appeal
- (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria B.C., V8V 1X5
- (4) be delivered within 30 days from the date notice of the decision is given, and
- (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

**Ministry of
Water, Land and
Air Protection**

Pollution Prevention
Omineca-Peace Region

Mailing Address:
1011 - 4th Avenue
Prince George, BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629

7 -

Administration of this permit will be carried out by staff from our Regional Office located at 3rd Floor, 1011 Fourth Avenue, Prince George, British Columbia, V2L 3H9. Plans, data and reports pertinent to the permit are to be submitted to the Regional Waste Manager at this address.

Yours truly,



Del Reinheimer, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

enclosure

**Ministry of
Water, Land and
Air Protection**

Pollution Prevention
Omineca-Peace Region

Mailing Address:
1011 - 4th Avenue
Prince George, BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629



8
File: PR-15668

REGISTERED MAIL

January 7, 2002

Produits Forestiers Donohue Inc. – Donohue Forest Products Inc.
PO Box 250
Mackenzie BC V0J 2C0

Attention: Les Skaalid
Environmental Coordinator

Dear Les,

Re: PERMIT AMENDMENT FOR PR-15668

Further to and as per the request dated December 11, 2001 by McCarthy Tetrault LLP, and in accordance with Section 13 of the *Waste Management Act*, Permit PR-15668 (dated September 2, 1998 and last amended July 19, 2001), is hereby amended so the Permit Holder for this permit is now:

**Compagnie Abitibi-Consolidated du Canada – Abitibi-Consolidated
Company of Canada**
PO Box 250
Mackenzie BC V0J 2C0

This decision may be appealed to the Environmental Appeal Board. Notice of the appeal must:

- (1) be in writing,
- (2) include the grounds for appeal,
- (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria B.C., V8V 1X5
- (4) be delivered within 21 days from the date notice of the decision is given, and
- (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Please attach this letter to the original permit. If you have any questions, please feel free to contact Maureen Bilawchuk at 250-565-6459.

Yours truly,

Del Reinheimer, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

:msb / cc. Jim Titerle, McCarthy Tetrault LLP, PO Box 10424, Pacific Centre, Suite 1300, 777
Dunsmuir Street, Vancouver, BC, V7Y 1K2.

**Ministry of Water,
Land and Air
Protection**

Pollution Prevention
Environment and Lands
Omineca-Peace Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6166
Facsimile: (250) 565-6629

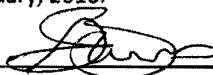
This is Exhibit "2"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 2



MINISTRY OF ENVIRONMENT

PERMIT
PR-4984

Under the Provisions of the Waste Management Act

Finlay Forest Industries Inc.

P.O. Box 250

Mackenzie, British Columbia

VOJ 2C0

Is authorized to discharge refuse from a sawmill and planer mill complex identified as Site 1 at Mackenzie, B.C. 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 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 shall rest with the Permittee.

The Permittee shall ensure that any discharge under this permit meets the requirements of other regulatory agencies including but not restricted to Environment Canada and the Department of Fisheries (Canada).

An annual permit fee will be determined according to the Waste Management Fees Regulation.

1. Specific Authorized Discharges and Related Requirements

1.1 Wood Waste

1.1.1 The authorized rate of discharge is an average of 15.3 m³/day up to a yearly maximum discharge of 3900 m³.

1.1.2 The components of the refuse which may be discharged are waste wood, broken logs and waste lumber.

1.1.3 The works authorized are a landfill operation located as shown in Appendix A.

2. Location of the Facilities

The location of the facilities from which and to which the discharges occur is Lot 12572, Cariboo Land District, British Columbia.

Date issued: August 25, 1978
Amendment date:
(most recent)
Page: 1 of 3

JUL 29 1994

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

PERMIT NO. PR-4984

3. Landfill Operation

3.1 The Permittee shall compact the refuse and apply cover material at least once every month. The Regional Waste Manager may vary the frequency of covering when freezing conditions adversely affect normal operation or when sufficient quantities of soil material are incorporated with the waste.

3.2 No other type of waste, except that authorized in section 1.1.2 shall be disposed of at the site without the written consent of the Regional Waste Manager.

3.3 Metal waste may be disposed of at the refuse site authorized in Permit PR-4133. Such discharges must be in accordance with the requirements of that permit.

4. Open Burning

No open burning is permitted at this site without prior written authorization from the Regional Waste Manager.

5. Bypasses

The discharge of refuse which has bypassed the authorized works is prohibited unless written consent from the Regional Waste Manager is obtained and confirmed in writing.

6. Process Modifications

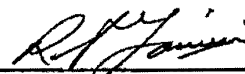
The Permittee shall notify the Regional Waste Manager in writing prior to implementing changes that may affect the quality and/or quantity of the discharge.

7. Maintenance of Works and Emergency Procedures

The Permittee shall inspect the pollution control works regularly and maintain them in good working order. No fires are permitted in the refuse site; should a fire be detected in the refuse site, arising from spontaneous combustion or other causes, the Permittee shall immediately extinguish the fire, and shall notify the Regional Waste Manager within 60 hours.

8. Site Preparation and Restoration

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



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

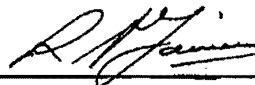
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9. Sampling and Monitoring Program

The need for sampling and monitoring will be dependent on the visual monitoring of the operation carried out by Environmental Protection staff as part of an ambient monitoring program for the operation, plus any other pertinent information.

Date issued: August 25, 1978
Amendment date:
(most recent)
Page: 3 of 3

JUL 29 1994



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

PERMIT NO. PR-4984



Province of
British Columbia

BC
Environment

MINISTRY OF
ENVIRONMENT,
LANDS AND PARKS

Environmental Protection
1011 4th Avenue
Prince George, British Columbia
V2L 3H9
Telephone: (604) 565-6155
Fax: (604) 565-6629

REGISTERED MAIL

Date: JUL 29 1994

File: PR-4984

Finlay Forest Industries Inc.
P.O. Box 250
Mackenzie, British Columbia
V0J 2C0

Attention: A.J. Boldt

Dear Permittee:

Enclosed is an amended copy of Permit No. PR-4984 issued under the provisions of the Waste Management Act. Your attention is respectfully directed to the terms and conditions outlined in the Permit.

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 shall rest with the Permittee.

The Permittee shall ensure that any discharge under this Permit meets the requirements of other regulatory agencies including, but not restricted to, Environment Canada and the Department of Fisheries and Oceans (Canada).

An annual permit fee will be determined according to the Waste Management Permit Fees Regulation.

The administration of this Permit will be carried out by staff from our Regional Office located in Prince George, (telephone 565-6155). Plans, data and reports pertinent to the Permit are to be submitted to the Environmental Protection office, 3rd Floor, 1011 Fourth Avenue, Prince George, British Columbia, V2L 3H9.

This decision may be appealed in accordance with Section 27 of the Waste Management Act by giving written notice to me within 21 days of this notification.

Yours truly,

R.A. Fairservice P.Eng.
Assistant Regional Waste Manager
Northern Interior Region

enclosure



File: PR-04984

REGISTERED MAIL

December 6, 1999

Finlay Forest Industries Inc.
PO Box 250
Mackenzie BC V0J 2C0

Attention: Chuck Kovacs

Dear Permittee

Re: Permit Amendment for PA-04984

As per the request dated October 27, 1999 by Ladner Downs Barristers & Solicitors, and in accordance with Section 13 of the Waste Management Act, Permit PR-04984 (dated August 25, 1978 with an amendment date of July 29, 1994) is hereby amended so that the Permit Holder for this permit is now:

Produits Forestiers Donohue Inc. - Donohue Forest Products Inc.
PO Box 250
Mackenzie BC V0J 2C0

This decision may be appealed to the Environmental Appeal Board. Notice of the appeal must: (1) be in writing, (2) include the grounds for the appeal, (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal board, 4th Floor 836 Yates Street, Victoria, BC, V8V 1X5, (4) be delivered within 21 days from the date notice of the decision is given, and (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Yours truly,

R.A. Fairservice, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

:msb/ cc. Original to be sent to Robert Owen, Ladner Downs Barristers & Solicitors, 1200 Waterfront Centre, 200 Burrard Street, PO Box 48600, Vancouver, BC, V7X 1T2.
cc. Huges Simon, Comptroller, Donohue Forest Products Inc., PO Box 250, Mackenzie, V0J 2C0.

**Ministry of
Environment,
Lands and Parks**

Pollution Prevention
Environment and Lands
Omineca-Peace
Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629



File: PR-04984

REGISTERED MAIL

January 7, 2002

Produits Forestiers Donohue Inc. – Donohue Forest Products Inc.
PO Box 250
Mackenzie BC V0J 2C0

Attention: Les Skaalid
Environmental Coordinator

Dear Les,

Re: PERMIT AMENDMENT FOR PR-04984

Further to and as per the request dated December 11, 2001 by McCarthy Tetrault LLP, and in accordance with Section 13 of the *Waste Management Act*, Permit PR-04984 (dated August 25, 1978 and last amended December 6, 1999), is hereby amended so the Permit Holder for this permit is now:

**Compagnie Abitibi-Consolidated du Canada – Abitibi-Consolidated
Company of Canada**
PO Box 250
Mackenzie BC V0J 2C0

This decision may be appealed to the Environmental Appeal Board. Notice of the appeal must:

- (1) be in writing,
- (2) include the grounds for appeal,
- (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria B.C., V8V 1X5
- (4) be delivered within 21 days from the date notice of the decision is given, and
- (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Please attach this letter to the original permit. If you have any questions, please feel free to contact Maureen Bilawchuk at 250-565-6459.

Yours truly,

Del Reinheimer, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

:msb / cc. Jim Titerle, McCarthy Tetrault LLP, PO Box 10424, Pacific Centre, Suite 1300, 777 Dunsmuir Street, Vancouver, BC, V7Y 1K2.

**Ministry of Water,
Land and Air
Protection**

Pollution Prevention
Environment and Lands
Omineca-Peace Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-8155
Facsimile: (250) 565-8829

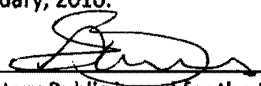
This is Exhibit "3"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 3



MINISTRY OF ENVIRONMENT
Environmental Protection

PERMIT
PA-03057

Under the Provisions of the
Environmental Management Act

Compagnie Abitibi-Consolidated du Canada-
Abitibi-Consolidated Company of Canada

Site 1, PO Box 250
MACKENZIE, BC
V0J 2C0

is authorized to discharge contaminants to the air from a sawmill and planer mill operation located at Mackenzie, 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 revokes and replaces all previously issued permits under the number PA-3057, PA-03057 or PA03057 issued under Part 2, Section 14 of the *Environmental Management Act*.

1. AUTHORIZED DISCHARGES

1.1. This subsection applies to the discharge of air contaminants from five (5) lumber dry kilns. The site reference number for this discharge is **E211046**.

1.1.1 The total maximum authorized rate of the discharge from the five (5) kilns is 5.68 m³/s. The maximum authorized discharge period is 24 hours/day, 7 days/week.

Date issued: March 20, 1974
Date amended: **SEP 09 2008**
(most recent)

Page 1 of 7


Maureen Bilawchuk, P.Ag.
for Director, *Environmental Management Act*
Omineca and Peace Regions

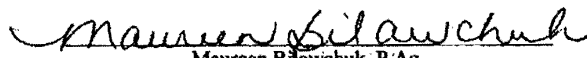
PA-03057

- 1.1.2 The characteristics of the contaminants are of the nature originating from lumber dry kilns.
- 1.1.3 The authorized works are five (5) natural gas fired lumber dry kilns and related appurtenances.
- 1.1.4 The location of the facilities from which the discharge originates and the location of the point of discharge is District Lot 12572, Cariboo Land District.
- 1.2. This subsection applies to the discharge of air contaminants from **five (5) cyclones**. The site reference number for this discharge is **E211045**.
 - 1.2.1 The maximum authorized rate of discharge is 22.4 m³/s from a dust cyclone, two shavings cyclones, a chip cyclone, and a chipper cyclone for 24 hours a day for 5 days a week, and 17.5 m³/s from four cyclones for 12 hours a day on the sixth day of the week.
 - 1.2.2 The characteristics of the contaminants shall not exceed 230 mg/m³ of particulate matter from each cyclone.
 - 1.2.3 The works authorized are five (5) cyclones, ducting, fans and related appurtenances approximately located as shown on attached Site Plan A.
 - 1.2.4 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 1.1.4.
- 1.3. This subsection applies to the discharge of air contaminants from a **pneumatic chip car loading system**. The site reference number for this discharge is **E211047**.
 - 1.3.1 The maximum authorized rate of discharge is 4.0 m³/s. The maximum authorized discharge period is 24 hours a day for 5 days a week.
 - 1.3.2 The characteristics of the contaminants are of a nature originating from a pneumatic chip car loading system.
 - 1.3.3 The works authorized are a pneumatic chip car loading system and related appurtenances approximately located as shown on attached Site Plan A.
 - 1.3.4 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 1.1.4.
- 1.4. This subsection applies to the discharge of air contaminants from **forced air ventilation vents**. The site reference number for this discharge is **E263079**.
 - 1.4.1 The maximum authorized rate of discharge and authorized discharge is variable, as required for operation purposes.
 - 1.4.2 The characteristics of the discharge are of the nature originating from a ventilation vent.

Date Issued: March 20, 1974

Date Amended: **SEP 09 2008**
(most recent)

Page 2 of 7


Maureen Blawchuk, P.Ag.
for Director, Environmental Management Act
Omineca and Peace Regions

PA-03057

1.4.3 The authorized works are two (2) dust/fume vents located in the millwright shop, one (1) dust/fume vent located in the barker maintenance shop, two (2) dust/fume vents located in the filing room, one (1) dust/fume vent in the mobile shop and miscellaneous ventilation vents in the sawmill and related appurtenances.

1.4.4 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 1.1.4.

2. GENERAL REQUIREMENTS

2.1. General requirements that apply to all of the authorized discharges

All gaseous volumes are at standard conditions which are:

temperature = 293.15 K; pressure = 101.325 kPa; water vapour = zero.

2.2. Bypasses

The discharge of air contaminants which has bypassed the authorized works is prohibited unless the consent of the Director is obtained and confirmed in writing.

2.3. Maintenance of authorized works

The Permittee shall inspect the authorized works regularly and maintain them in good working order. In the event of a malfunction of the authorized works or emergency condition, including fires on the site, the Permittee shall take immediate remedial action. The Permittee shall notify the regional Environmental Protection office by telephone or facsimile transmission within 60 hours of the detection of the malfunction or emergency. Written documentation shall be submitted within 30 days of the malfunction or emergency.

2.4. Fugitive dust control

The Permittee shall suppress fugitive dust created within the location of the facilities. If the measured ambient air quality, in the town of Mackenzie, compares unfavourably to the objective value, the Director may require the Permittee to implement additional works to control fugitive dust.

Date Issued: March 20, 1974

Date Amended: **SEP 09 2008**
(most recent)

Page 3 of 7


Maureen Bilawchuk, P.Ag.
for Director, *Environmental Management Act*
Omineca and Peace Regions

PA-03057

3. **MONITORING AND REPORTING REQUIREMENTS**

The Director may, in writing, change the monitoring and reporting requirements.

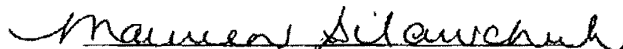
3.1. **Additional Monitoring**

The Permittee shall participate in an ambient air monitoring program in the town of Mackenzie. This program, as specified in **Appendix B**, shall determine total ambient concentrations of total reduced sulphur (TRS) compounds, concentrations of suspended particulate (PM₁₀ & PM_{2.5}), and meteorological data such as wind speed and direction.

Visual monitoring of the discharges authorized in Section 2 above will be carried out by Environmental Protection staff as part of an ambient monitoring program for the entire mill operation. Based on these monitoring results, the Permittee may be required to undertake source monitoring.

Date Issued: March 20, 1974
Date Amended: **SEP 09 2008**
(most recent)

Page 4 of 7


Maureen Bilawchuk, P.Ag.
for Director, *Environmental Management Act*
Omineca and Peace Regions

PA-03057

Appendix B

1. Participating Members

Pope & Talbot Ltd.
P.O. Bag 6000
Mackenzie, BC V0J 2C0

Abitibi-Consolidated Company of Canada
P.O. Bag 2800
Mackenzie, BC V0J 2C0

Canadian Forest Products Ltd.
P.O. Box 310
Mackenzie, BC V0J 2C0

District of Mackenzie
P.O. Bag 340
Mackenzie, BC V0J 2C0

2. Definition

Total reduced sulphur (TRS) is a generic term for hydrogen sulphide (H_2S) and organic compounds with bivalent sulphur.

3. Details of the Ambient Air Monitoring Program in Mackenzie

3.1. Purpose

The purpose of the program is to monitor ambient total reduced sulphur (TRS) and fine particulate matter (PM_{10} and $PM_{2.5}$) in the town of Mackenzie.

3.2. Location of the Monitors

The approved site is in the town of Mackenzie, on the roof top of Sweders Bakery located at #4 - 320 Mackenzie Road.

3.3. Contributions

Pope & Talbot is solely responsible for all aspects of the program which deals with TRS.

Pope & Talbot, Abitibi-Consolidated, Canadian Forest Products, and the District of Mackenzie shall share all costs associated with the ambient air monitoring program (e.g. installing, servicing, calibrating, monitoring, maintenance, and reporting) associated with the PM_{10} and $PM_{2.5}$ portion of the program.

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Maureen Bilawchuk, P.Ag.
for Director, Environmental Management Act
Omineca and Peace Regions

PA-03057

4. **Program Requirements**

4.1. **Data Collection**

Pope & Talbot shall undertake all data collection as stated below.

Using an approved monitor, ambient air shall be continuously monitored for PM_{2.5} (particulate matter less than 2.5 microns in diameter) at the approved ambient monitoring station April 1, 2006 and onwards.

Using an approved monitor, ambient air shall be monitored for PM₁₀ (particulate matter less than 10 microns in diameter) every three (3) days according to the NAPS schedule, at the approved ambient monitoring station.

Using an approved monitor, the ambient air shall be continuously monitored for TRS, at the approved ambient monitoring station.

4.2. **QA/QC Program**

Pope & Talbot shall undertake all aspects of the QA/QC program as outlined below.

Regular maintenance and calibration shall be undertaken on all data collection equipment in order to meet data quality assurance standards. An external qualified contractor must be used for calibration and instrument service.

Additionally, participation in the Ministry's independent instrument auditing program for continuous monitors must be undertaken.

A monitoring plan outlining quality assurance procedures, performance and schedules for both continuous and non continuous instruments maintenance and calibration schedules shall be submitted by July 31, 2006.

4.3. **Monitoring Reporting**

Pope & Talbot shall forward monthly and yearly monitoring data for TRS, PM₁₀ and PM_{2.5}, as outlined below. All monthly reports shall be submitted in a table format, showing each hourly average, daily average and maximum. The reports shall be submitted within 30 days of the month end in which the data was collected.

4.3.1. **Reporting – TRS Continuous Monitoring Reporting**

The Ministry shall have real time access to all data via telephone modem.

The TRS monitoring data shall also be submitted in electronic format via the Ministry's data base (Environmental Monitoring System (EMS)), using the site reference number E266003.

4.3.2. **Reporting – PM₁₀ Discontinuous Monitoring**

The PM₁₀ sample results shall be submitted from the laboratory by fax or email to the Environmental Quality Section Head upon completion of the analysis. These results shall include the replicate filter weights and the sample volumes.

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Maureen Bilawchuk, P.Ag.
for Director, *Environmental Management Act*
Omineca and Peace Regions

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The PM₁₀ monitoring data shall also be submitted in electronic format via the Ministry's data base (Environmental Monitoring System (EMS)), using the site reference number **E209558**.

4.3.3. Reporting – PM_{2.5} Continuous Monitoring

The Ministry shall have real time access to all data via telephone modem.

The PM_{2.5} monitoring data shall also be submitted in electronic format via the Ministry's data base (Environmental Monitoring System (EMS)), using the site reference number **E266002**.

4.4. Annual Reports (TRS, PM₁₀ and PM_{2.5})

Pope & Talbot shall forward two (2) yearly monitoring data reports for TRS, PM₁₀ and PM_{2.5}, as outlined below.

The data collected from the ambient air monitoring program shall be compiled, reviewed, compared to the applicable air quality objectives and interpreted in an annual report to be submitted by June 30, 2007 and June 30, 2008. The reports shall represent all data collected between March 31 of the previous year and April 1 of the corresponding year. Annual reports shall include tabular and graphical summaries of air quality and meteorological data from that particular year, including a summary of exceedances of air quality objectives, and an analysis of contributions of each continuously monitored pollutant by wind direction.

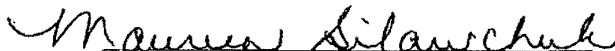
4.5. Three Year Summary Report (TRS, PM₁₀, and PM_{2.5})

The data collected from the three (3) year program shall be compiled, reviewed, compared to applicable air quality objectives. A report shall be completed, including a summary of findings, trends, interpretation and recommendations. The report shall be submitted by June 30, 2009.

All report submissions shall be submitted to the Regional Environmental Management Office and shall be prepared to the satisfaction of the Director.

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for Director, *Environmental Management Act*
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PA-03057



File: PA-03057

Date: SEP 09 2008

REGISTERED MAIL

Abitibi-Consolidated Company of Canada
Site 1, PO Box 250
Mackenzie, British Columbia V0J 2C0

Dear Permittee:

Enclosed is Amended Permit PA-03057 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 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.

Ministry of
Environment

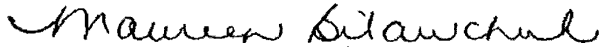
Regional Operations
Omineca and Peace Regions

Mailing/Location Address
325 - 1011 Fourth Ave.
Prince George, V2L 3H9

Telephone: (250) 565-6135
Facsimile: (250) 565-6829
<http://www.gov.bc.ca/>
<http://www.gov.bc.ca/env>

Administration of this permit will be carried out by staff from the Omineca and Peace Regions. Plans, data and reports pertinent to the permit are to be submitted to the Regional Manager, Environmental Protection, at Ministry of Environment, Regional Operations, Omineca and Peace Regions, 325 - 1011 Fourth Ave., Prince George, V2L 3H9.

Yours truly,



Maureen Bilawchuk, P.Ag.
for Director, *Environmental Management Act*
Omineca and Peace Regions

Enclosure

cc: Environment Canada

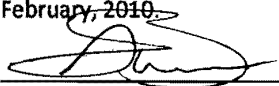
This is Exhibit V 411
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 4



Pollution Prevention
1011 Fourth Avenue
Prince George
British Columbia V2L 3H9
Telephone: (250) 565-6155
Fax: (250) 565-6629

MINISTRY OF ENVIRONMENT,
LANDS AND PARKS

PERMIT
PA-01722

Under the Provisions of the Waste Management Act

Compagnie Abitibi-Consolidated du Canada

Abitibi-Consolidated Company of Canada

PO Box 250

MACKENZIE BC V0J 2C0

is authorized to discharge contaminants to the air from a sawmill and planer mill operation, known as Site II, located in Mackenzie, 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.

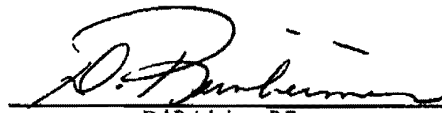
This permit revokes and replaces all previously issued permits under the number PA-1722, PA-01722 or PA01722 issued under Part 2, Section 10 of the *Waste Management Act*.

1. DEFINITIONS

For the purposes of this permit:

- 1.1. "Antisapstain Chemical" means chlorophenol, 2-(thiocyanomethylthio) benzothiazole (TCMTB), copper-8-quinolinolate (cu-8), 3-iodo-2-propynyl butyl carbamate (IPBC) and didecyldimethyl ammonium chloride (DDAC).
- 1.2. "Cold Start-up" is the moment when fuel in the burner is ignited after either the removal of combustion residue from the burner or following a 36 hour period wherein fuel has not entered the burner.
- 1.3. "Correlation Temperature" means a statistically derived exit temperature for air contaminants from the subject burner that has the written approval of the Regional Waste Manager and corresponds to 20% opacity for that burner.

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Del Reinheimer, P.Eng.
Assistant Regional Waste Manager

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- 1.4. "Fuel Feed Interruption" means a period greater than two hours when due to conditions beyond the control of the Permittee there is an equipment failure which stops the flow of fuel entering the burner.
- 1.5. "Opacity" means the degree to which an emission reduces the passage of light or obscures the view of an object in the background, and is expressed numerically from 0 per cent (transparent) to 100 per cent (opaque).
- 1.6. "Opacity Reader" means a person who holds a valid certificate to measure the opacity of air contaminants. Certification includes successfully completing the requirements of an Opacity Reading Course which satisfies the requirements of the Ministry of Environment, Lands and Parks.
- 1.7. "Total Daily Operating Time of the Burner" means a period, beginning with the daily start and ignition of fuel feed to the burner, and ending with the fuel feed shutdown at the end of the day's production.
- 1.8. "Warm Start-up" refers to the re-establishment of fuel feed to the burner after a fuel feed interruption, shift change greater than two hours in duration, or fuel feed shutdown at the end of the working day. (A warm start-up occurs when burning fuel is already present in the burner and fuel feed begins.)

2. AUTHORIZED DISCHARGES

- 2.1. This subsection applies to the discharge of air contaminants from a **wood residue burner**, also known as a burner or beehive burner. The site reference number for this discharge is E211695.
 - 2.1.1. The maximum authorized rate of discharge is 54 m³/s. The maximum authorized discharge period is 24 hours each day 5 days per week. The maximum annual amount of wood residue that may be burned in this burner is 4,000 green tonnes.
 - 2.1.2. Subject to Section 2.1.4, the characteristics of the air contaminants shall not exceed 20% opacity for more than three (3) minutes in any thirty (30) minute period.
 - 2.1.3. Subject to Section 2.1.4, the temperature of the burner shall not drop below the correlation temperature for more than 20% of the total daily operating time of the burner.
 - 2.1.4. The requirements of Section 2.1.2 and Section 2.1.3 do not apply for the first sixty (60) minutes after cold start-up, during a fuel feed interruption, or for the first thirty (30) minutes after a warm start-up.

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- 2.1.5. The wood residue burner shall not be used for the incineration of any substances other than wood residues without the written consent of the Regional Waste Manager. Wood residues treated or mixed with any other wastes, including but not limited to antiseptics, chemicals, creosote, arsenicals or naphthenates shall not be burned without the written consent of the Regional Waste Manager.
- 2.1.6. The authorized works are one (1) wood residue burner equipped with forced underfire air draft, forced overfire air draft, temperature recording system, temperature controlled dampers, and related appurtenances approximately located as shown on attached Site Plan A.
- 2.1.7. The location of the facilities from which the discharge originates is District Lot 12571, Cariboo Land District, British Columbia.
- 2.1.8. The location of the point of discharge is District Lot 12571, Cariboo Land District, British Columbia.
- 2.2. This subsection applies to the discharge of air contaminants from **four lumber dry kilns**. The site reference number for this discharge is E211696.
- 2.2.1. The maximum authorized rate of the total discharge from the four (4) kilns is 5.0 m³/s. The maximum authorized discharge period is 24 hours/day, 7 days/week.
- 2.2.2. The characteristics of the contaminants are of the nature originating from lumber dry kilns.
- 2.2.3. The authorized works are four natural gas fired lumber dry kilns and related appurtenances.
- 2.2.4. 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 2.1.8.
- 2.3. This subsection applies to the discharge of air contaminants from **five cyclones**. The site reference number for this discharge is E211698.
- 2.3.1. The maximum combined authorized rate of discharge from the cyclones is 54.3 m³/s. The maximum authorized discharge period is 24 hours a day for 5 days a week, and 12 hours a day on the sixth day of the week.
- 2.3.2. The characteristics of the contaminants shall not exceed 230 mg/m³ of particulate matter from each cyclone.

2.3.3. The works authorized are one (1) high pressure line shavings cyclone, one (1) chip cyclone, one (1) fine dust cyclone, one (1) planer shavings cyclone and one (1) hog bin planer shavings cyclone that acts as a backup for the planer shavings cyclone, ducting, fans and related appurtenances approximately located as shown on attached Site Plan A. Note that at any given time only the planer shavings cyclone or the hog bin planer shavings cyclone shall operate, and they shall not operate simultaneously since the later is a backup for the other.

2.3.4. 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 2.1.8.

2.4. This subsection applies to the discharge of air contaminants from **miscellaneous sources**. The site reference number for this discharge is E246960.

2.4.1. The maximum authorized rate of the total discharge from all miscellaneous sources is undetermined. The maximum authorized discharge period is 24 hours/day, 7 days/week.

2.4.2. The characteristics of the contaminants are typical fugitive emissions and emissions of dust/fume vents.

2.4.3. The authorized works are 1 filing room vent in the sawmill, 2 millwright shop dust/fume vents in the sawmill, 1 planermen's room vent in the planer, 1 fume vent in the mobile shop, 1 fume vent located in the cable repair building, miscellaneous ventilation vents and related appurtenances approximately located as identified in Site Plan A.

2.4.4. 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 2.1.8.

3. **GENERAL REQUIREMENTS THAT APPLY TO ALL OF THE AUTHORIZED DISCHARGES**

All gaseous volumes are at standard conditions which are: temperature = 293.15 K; pressure = 101.325 kPa; water vapour = zero.

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Del Reinheimer, P.Eng.
Assistant Regional Waste Manager

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4. MEASUREMENT OF OPACITY

- 4.1. The Permittee shall maintain at least one (1) opacity reader on site, or available on site within one hour, for all daylight hours during the total daily operating time of the burner.
- 4.2. The Permittee shall submit to the Regional Pollution Prevention office, within 60 days of the course date, proof that the opacity reader(s) holds a valid certificate to measure the opacity of air contaminants.
- 4.3. The opacity of air contaminants as specified in Sections 2 and 10 of this permit shall be determined by an opacity reader.

5. BYPASSES

The discharge of air contaminants which has bypassed the authorized works is prohibited unless the consent of the Regional Waste Manager is obtained and confirmed in writing.

6. MAINTENANCE OF AUTHORIZED WORKS

The Permittee shall inspect the authorized works regularly and maintain them in good working order. Maintenance activities shall be documented as specified in Section 10 of this permit.

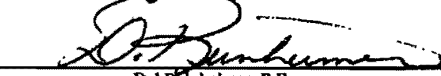
In the event of a malfunction of the authorized works, the Permittee shall take immediate remedial action. The Permittee shall notify the Regional Pollution Prevention office by telephone or facsimile transmission within 60 hours of the detection of the malfunction. Written documentation of the malfunction shall be submitted with the next monthly report.

In the event of a malfunction of the wood residue burner temperature recording system, the Permittee shall maintain the continuity of monitoring data as specified in Section 10.1.1 of this permit.

7. FUGITIVE DUST CONTROL

The Permittee shall suppress fugitive dust created within the location of the facilities. Dustfall (combustible particulate) will be compared to the Ministry Objective value of 2.90 milligrams per square decimeter per day. If the measured ambient air quality compares unfavourably to the Objective value, the Regional Waste Manager may require the Permittee to implement additional works to control fugitive dust.

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Assistant Regional Waste Manager

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8. **DISPOSAL OF COMBUSTION RESIDUE**

Combustion residue generated by the wood residue burner shall be removed from the authorized works regularly. Combustion residue shall be disposed of at the landfill site authorized in Permit No. PR-06207. Other methods of disposal require written authorization by the Regional Waste Manager. The combustion residue shall be covered only after all fire is completely extinguished, and the combustion residue is cold.

9. **OPERATIONAL REQUIREMENTS**

9.1. **Wood Residue Burner Discharges** (as authorized in Section 2.1)

The Permittee shall maintain a temperature recording system that shall make a permanent, continuous and legible record of the exit gas temperature from the burner whenever the burner is operating which includes the daily start and ignition of fuel feed to the burner. The record shall also be maintained for the 48 hour period following fuel feed shutdown at the end of the day's production.

9.2. **Prohibition of Open Burning**

This permit does not authorize any open burning at the site.

10. **MONITORING AND REPORTING REQUIREMENTS**

The Regional Waste Manager may, in writing, change the monitoring and reporting requirements outlined below.

10.1. **Wood Residue Burner Discharges** (as authorized in Section 2.1)

10.1.1. Until a correlation temperature has been determined and whenever the temperature recording system malfunctions, the Permittee shall measure and record the opacity of the wood residue burner's air contaminants for three (3) consecutive minutes at fifteen (15) second intervals once each hour during the daylight hours for the total daily operating time of the burner. For monitoring purposes the average of this three (3) minute period shall be reported as the opacity of the air contaminants from the burner for the one hour period in which the readings were completed.

10.1.2. In order to determine a correlation temperature, the Permittee shall submit to the Regional Pollution Prevention office a minimum of fifty (50) opacity readings of the air contaminants with the corresponding exit gas temperatures.

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Assistant Regional Waste Manager

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10.1.2.1. The Permittee shall update the data used to determine a correlation temperature at a minimum frequency of once every two (2) years, or following upgrading of the burner, or at the request of the Regional Waste Manager.

10.1.3. The Regional Waste Manager will establish a correlation temperature based on the information provided in Section 10.1.2.

10.1.4. Subject to Section 10.1.5, the record of exit gas temperatures will be accepted for monitoring purposes alone as representing the opacity of the burner at the time the temperatures were recorded.

10.1.5. Visual opacity readings, where available, shall override the record of exit gas temperatures for evaluating permit compliance.

10.2. Total Mill Particulate

At locations and on a frequency specified by the Regional Waste Manager, the Permittee shall measure the average combustible material, as dustfall (combustible particulate), over a two week period and record the results as milligrams per square decimeter per day.

The Permittee shall measure the average combustible material, as dustfall, for a two week period each quarter at five locations. Dustfall shall be recorded as milligrams per square decimeter per day. The combustible fraction of the dust fall shall be analyzed on each sample in addition to the measurement of total mass.

Sampling is to be carried out in accordance with procedures described in the latest version of "British Columbia Field Sampling Manual for Continuous Monitoring plus the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples", or by suitable alternative procedures as authorized by the Regional Waste Manager. All aspects of these procedures including, but not limited to, sampling facilities, location, technique, analyses and reporting shall be adhered to. Any deviation from the referenced methods requires the approval of the Regional Waste Manager. A copy of the above manual may be purchased from Queen's Printer Publications Centre, P.O. Box 9452, Stn. Prov. Govt. Victoria, British Columbia, V8W 9V7 (1-800-663-6105 or 250-387-4609). A copy of the manual is also available for reference at all Pollution Prevention offices.

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Del Reinheimer, P.Eng.
Assistant Regional Waste Manager

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10.3. Source Monitoring

Visual monitoring of the discharges authorized in Section 2 above will be carried out by Pollution Prevention staff as part of an ambient monitoring program for the entire mill operation. Based on these monitoring results, the Permittee may be required to undertake source monitoring.

10.4. Additional Monitoring and Additional Controls

Inspections of the discharges will be carried out by Pollution Prevention personnel as part of a routine permit inspection procedure. Based on these inspections and any other information available to the Regional Waste Manager on the effect of the discharge on the receiving environment, the Permittee may be required to:

- undertake additional monitoring, and/or
- install additional pollution control works, and/or
- change the quantity of waste discharged, stored, treated, handled or transported, and/or
- change the method of discharging, storing, treating, handling or transporting the waste.

10.5. Reporting

A record of the opacity readings suitably tabulated, and the burner temperature charts as specified in Sections 10.1 and 10.2 shall be available for inspection and shall be submitted to the regional Pollution Prevention office within 30 days of the month end in which the readings were taken. The following information shall also be included for the wood residue burner authorized in subsection 2.1:

- a) Total daily operating time of the burner in hours;
- b) Total daily non-compliance time, which is the sum of the duration, in hours, during which the exit gas temperature is below the correlation temperature for the total daily operating time of the burner;
- c) Total daily non-compliance time as a percentage of the total daily operating time of the burner; and
- d) If for more than 20% of the total daily operating time of the burner, the exit gas temperature is below the correlation temperature, or the opacity of the air contaminants exceeds 20% opacity, a written explanation is required.

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Del Reinheimer, P.Eng.
Assistant Regional Waste Manager

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10.6. Monitoring results for total mill particulate must be submitted within 30 days of the end of the monitoring period.

10.7. Record of Fuel Burned in the Wood Residue Burner and Maintenance Records of the Wood Residue Burner

The Permittee shall maintain a record of the type and quantity of refuse disposed of in the wood residue burner. These records shall show the running annual totals of the amount of fuel burned.

The Permittee shall also maintain an inspection record of the burner which includes the type of maintenance performed, the dates of the maintenance activities, dates of routine inspection checks and any other pertinent information.

These records shall be available for inspection by Pollution Prevention personnel. A summary of these records shall be submitted on a monthly basis. This information shall be submitted within 30 days of month end in which the data was collected.

11. FEEES FOR BEEHIVE BURNERS

Despite the *Waste Management Permit Fees Regulation* B.C Reg. 299/92, for the purposes of determining the permit fee payable by the Permittee to operate the beehive burner authorized in Section 2 of this permit, the "Fee Per Tonne Discharged" in Column 2 of Schedule "B" of the *Waste Management Permit Fees Regulation* for Total Particulate has now been revised by Section 2(8) of the *Wood Residue Burner and Incinerator Regulation*.

For the purposes of determining the fee for Total Particulate and other contaminants for the beehive burners, the fee shall be calculated using the authorized discharges as specified in Section 2 of this permit. All other fees for other discharges authorized in the permit shall be paid by the Permittee as set out in the *Waste Management Fee Regulation*, B.C. Reg. 299/92.

12. REPORTING FORMAT

The monitoring data required in Section 10 of this permit is to be suitably tabulated and submitted on paper or electronically using a computer program format that is acceptable to the Regional Waste Manager.

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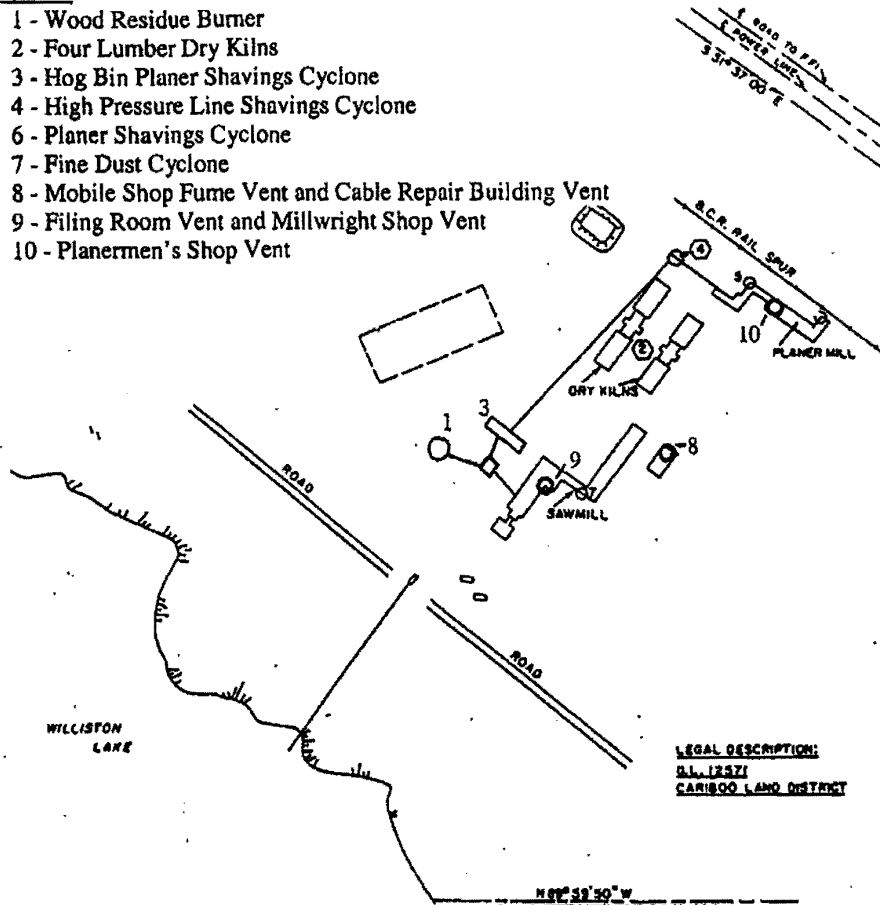
Del Reinheimer, P.Eng.
Assistant Regional Waste Manager

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SITE PLAN A

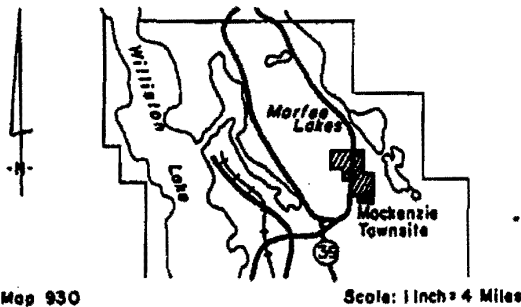
LEGEND:

- 1 - Wood Residue Burner
- 2 - Four Lumber Dry Kilns
- 3 - Hog Bin Planer Shavings Cyclone
- 4 - High Pressure Line Shavings Cyclone
- 6 - Planer Shavings Cyclone
- 7 - Fine Dust Cyclone
- 8 - Mobile Shop Fume Vent and Cable Repair Building Vent
- 9 - Filing Room Vent and Millwright Shop Vent
- 10 - Planermen's Shop Vent



LEGAL DESCRIPTION:
S.L. 12571
CARIBOO LAND DISTRICT

Location Map



Scale: Not to Scale

Permit: PA-01722

Date: DEC 05 2001

Del Reinheimer

Del Reinheimer, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region



Date: DEC 05 2001

File: PA-01722

REGISTERED MAIL

Compagnie Abitibi-Consolidated du Canada - Abitibi-Consolidated Company of Canada
P.O. Box 250
Mackenzie British Columbia V0J 2C0

Attention: Les Skaalid

Dear Permittee:

Enclosed is Permit PA-01722 issued under the provisions of the *Waste Management Act*. Your attention is respectfully directed to the terms and conditions outlined in the permit. An annual permit fee will be determined according to the *Waste Management Permit Fees Regulation*.

This permit does not authorise entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorised by the owner of such lands or works. The responsibility for obtaining such authority shall rest with the Permittee. This permit is issued pursuant to the provisions of the *Waste Management Act* to ensure compliance with Section 54(3) of that statute, which makes it an offence to discharge waste without proper authorisation. It is also the responsibility of the Permittee to ensure that all activities conducted under this authorisation are carried out with regard to the rights of third parties, and comply with other applicable legislation that may be in force.

For the past number of years each year, based on a request by the Permittee, the Ministry has extended the authorization to operate the wood residue burner at your site by one additional year. In August 2001, you once again requested a one year extension to operate the wood residue burner. As I understand, although you have requested a one year extension, at this time you still have no permanent long term solution to the balance of the wood residue burned in the burner. I have removed the expiry date **December 15, 2001** from the permit, given:

- Abitibi-Consolidated Company of Canada is not listed on Schedule 1 or 3 of the *Wood Residue Burner and Incinerator Regulation*,
- Abitibi-Consolidated Company of Canada is authorized to burn a relatively minimal amount of wood residue in the beehive burner on an annual basis,
- In the past year the burner has been used on a very infrequent basis, and
- Abitibi-Consolidated Company of Canada must meet a 20% opacity limit from the burner (Level A).

To ensure that the Permittee is able to minimize the emissions coming from the wood residue burner, in addition to the conditions imposed by permit PA-01722 in the past, Section 10.7 of PA-01722 has been amended to include documentation and monthly submission of maintenance records associated with the burner. At this time, no expiry date is specifically listed in permit PA-01722. The Ministry is still

**Ministry of
Water, Land and
Air Protection**

Pollution Prevention
Environment and Lands
Omineca-Peace Region

Mailing Address:
1011 - 4th Avenue
Prince George, BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629

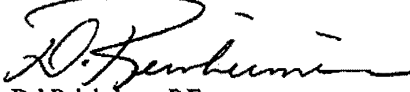
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committed to the elimination of beehive burners and encourages alternative energy recovery from resources wherever possible. The Ministry would appreciate your continued efforts to this end.

All other changes as requested by you have been included with this amendment including a change in name. These decisions may be appealed to the Environmental Appeal Board. Notice of the appeal must be:

- (1) in writing,
- (2) include the grounds for appeal,
- (3) directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria, B.C., V8V 1X5,
- (4) delivered within 30 days from the date notice of the decision is given, and
- (5) accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Administration of this permit will be carried out by staff from our Regional Office located at 3rd Floor, 1011 Fourth Avenue, Prince George, British Columbia, V2L 3H9. Plans, data and reports pertinent to the permit are to be submitted to the office at this address.

Yours truly,



Del Reinheimer, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

enclosure

**Ministry of
Water, Land and
Air Protection**

Pollution Prevention
Environment and Lands
Omineca-Peace Region

Mailing Address:
1011 - 4th Avenue
Prince George, BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629



FAX TO: 250-997-2707

13
FAXED

October 31, 2002

File: PA-01722

Abitibi-Consolidated Company of Canada
P.O. Box 250
Mackenzie British Columbia V0J 2C0

Attention: Jeff Katuski, RPF

Dear Jeff:

RE: Dustfall Monitoring Locations

At your request dated October 31, 2002 and as per Section 10.2 of permit PA-01722, I hereby approve the location of the dustfall canisters identified as B1 - B5 as shown on the attached Site Plan B. For future reference you may want to ~~attach~~ this letter to your current permit dated December 5, 2001.

Please keep in mind that the top of the dustfall canister must be at least 8 feet and no more than 50 feet above the ground, and at least 4 feet above any other surfaces such as a roof. Higher objects such as trees, signs, buildings must not be more than 30° above the horizontal as viewed from the site location.

If you have any questions, please do not hesitate to contact me 250-565-6459.

Yours truly,

A handwritten signature in black ink, appearing to read "D. Reinheimer".

Del Reinheimer, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

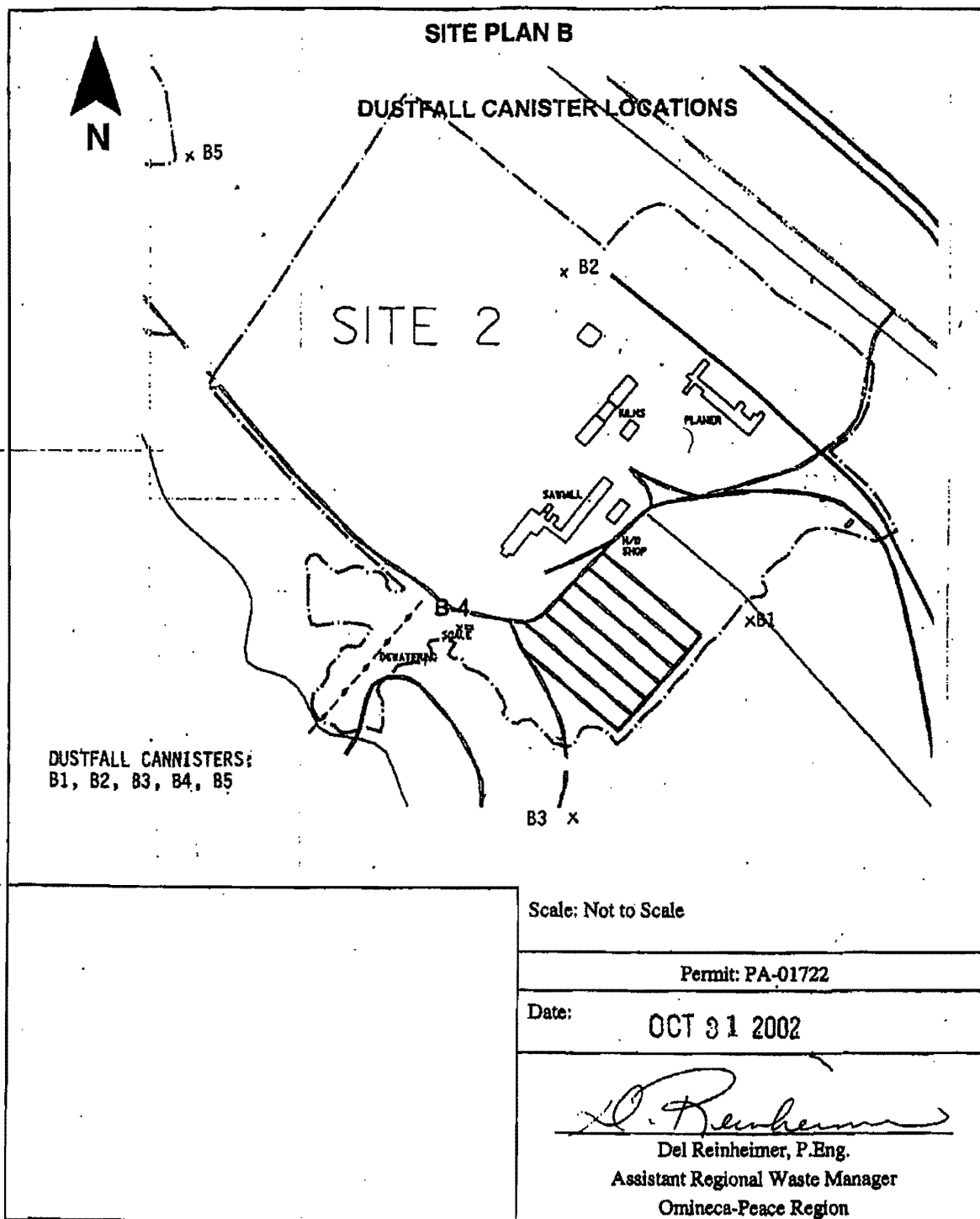
:msb

**Ministry of Water,
Land and Air
Protection**

Pollution Prevention
Environment and Lands
Omineca-Peace Region

Mailing Address:
1011 - 4th Avenue
Prince George, BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629



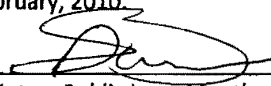
This is Exhibit "5"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 5



Environmental Protection
1011 Fourth Avenue
Prince George
British Columbia V2L 3H9
Telephone: (250) 565-6155
Fax: (250) 565-6629

MINISTRY OF WATER, LAND
AND AIR PROTECTION

PERMIT
PR-06207

Under the Provisions of the Waste Management Act

Compagnie Abitibi-Consolidated du Canada

Abitibi-Consolidated Company of Canada

P.O. Box 250

Mackenzie British Columbia

V0J 2C0

is authorised to discharge refuse to the land from a sawmill and planer mill complex identified as **Site II** located near **Mackenzie, 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.

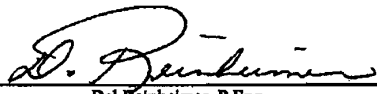
This permit supersedes and amends all previous versions of Permit PR-06207, issued under Part 2, Section 10 of the *Waste Management Act*.

1. AUTHORISED DISCHARGES

- 1.1 This subsection applies to the discharge of refuse from a sawmill and planer mill operation. The site reference number for this discharge is E210995.
 - 1.1.1 The maximum authorised rate of discharge is 10,000 tonnes/year.
 - 1.1.2 The components of the refuse which may be discharged are logyard debris including dirt, bark, wood residue which is no greater than one (1) metre in length, and combustion residue from the incineration of wood waste.
 - 1.1.3 The authorised works are a landfill approximately located as shown on attached Site Plan A.
 - 1.1.4 The location of the facilities from which the discharge originates and the location of the point of discharge is District Lot 12571, Cariboo Land District, British Columbia.

Date Issued: October 16, 1981
Date Amended:
(most recent)
Page: 1 of 5

JUN 30 2004


Del Reinheimer, P.Eng.
Assistant Regional Waste Manager

PERMIT: PR-06207

2

2. GENERAL REQUIREMENTS

2.1. 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, including but not limited to an unauthorized fire arising from spontaneous combustion or other causes, or the detection of leachate on the property, the Permittee shall notify the Regional Environmental Protection office within 60 hours and take appropriate remedial action.

The Permittee shall submit written documentation of any malfunction or emergency or fire that occurs at the site to the Environmental Protection office within 30 days of the occurrence of the incident.

2.2. Bypasses

The discharge of refuse which has bypassed the authorized works is prohibited unless the approval of the Regional Waste Manager is obtained and confirmed in writing.

2.3. Cover Material Application

The Permittee shall compact the refuse and apply cover material at least twice per year. A compacted lift of refuse shall not exceed a depth of 3 metres prior to application of intermediate or final cover. The site shall be maintained in such a way so as to prevent pooling of surface water and minimize edge erosion. Material used for cover shall be to satisfaction of the Regional Waste Manager.

2.4. Combustion Residue

The Permittee shall allow the combustion residue to cool in a separate area of the site prior to landfilling.

2.5. Additional Restrictions

2.5.1. Open burning is prohibited.

2.5.2. The discharge of refuse material into free standing water is prohibited.

2.5.3. The discharge of domestic or putrescible waste is prohibited.

JUN 30 2004


Del Reinheimer, P.Eng.
Assistant Regional Waste Manager

2.5.4. The Permittee shall ensure that the waste is separated from the groundwater by a minimum of 1.25 metres of soil.

2.6. Site Preparation and Restoration

Provisions 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.

2.7. Special Waste Regulation Requirements

The Permittee shall comply with all applicable provisions of the Special Waste Regulation of the Waste Management Act (B.C. Reg. 63/88). If information or data indicates that a waste specifically authorized for landfill may be designated as a Special Waste, discharge of that waste shall cease immediately; the waste shall be managed in accordance with the Special Waste Regulation; and the Environmental Protection office shall be notified within five (5) working days. Where a conflict exists between this Permit and the Special Waste Regulation, the latter shall take precedence.

2.8. Prohibition of Discharges

Only waste materials authorized in Section 1 above shall be buried in the authorized landfill areas unless the Regional Waste Manager grants prior consent and approval in writing.

2.9. Upgrading of Authorized Works

The Regional Waste Manager may require upgrading of the authorized works if based upon data and information received, it is apparent that such improvements are necessary to protect the environment. The Permittee may be required to undertake additional studies to monitor and to determine the environmental impact associated with the landfill operation.

3. MONITORING AND REPORTING

The Regional Waste Manager may, in writing, modify the monitoring and reporting requirements.

3.1. Environmental Monitoring and Assessment

The Permittee may be required to conduct monitoring and environmental impact assessment based on the results of visual monitoring as well as any other information collected by the Environmental Protection staff in connection with the discharges.

3.2. Groundwater Monitoring

The Permittee shall maintain a groundwater monitoring program that is acceptable to the Regional Waste Manager. The number, frequency, location and design details of the facilities and program shall be acceptable to the Regional Waste Manager.

3.3. Monitoring Procedures

Analysis 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.

A copy of the above manual may be purchased from the Queen's Printer Publication Center, 2nd Floor, 563 Superior Street, Victoria, British Columbia, V8V 4R6, (1-800-663-6105). The manual is also available for review at any Environmental Protection office.

3.4. Reporting Requirements

The Permittee shall maintain a record of the type, quantity and source of refuse discharged to the landfill site on a daily basis. Daily, monthly and annual totals shall also be recorded. The Permittee shall make these records available for inspection by Environmental Protection personnel. The Permittee shall compile and submit the data collected during the preceding calendar year to the Regional Environmental Protection office by January 31st of each year.

Included in the above submission, the Permittee shall also provide a discussion of site maintenance conducted during the year, and shall include but is not limited to:

- Approximate dates of site compaction and intermittent soil cover.

4. LANDFILL SITE RESTORATION PLAN

The Permittee prepared a landfill site restoration plan on February 28, 2003 which was subsequently approved by the Regional Waste Manager on June 30, 2004 subject to a number of conditions identified in a separate letter.

JUN 30 2004

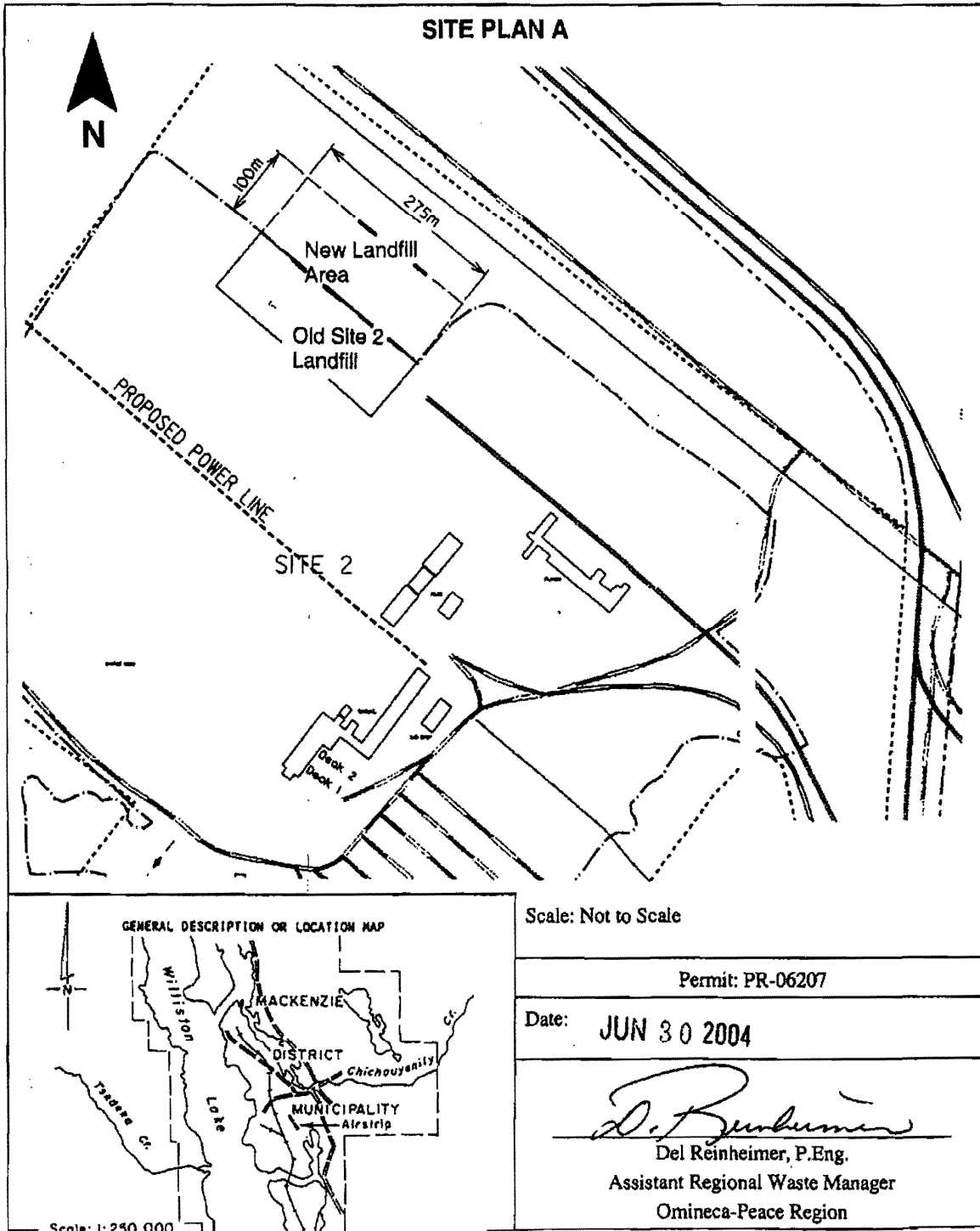


Del Reinheimer, P.Eng.
Assistant Regional Waste Manager

The Permittee shall maintain on file a copy of the current site restoration plan and shall submit an update to the Regional Environmental Protection office by **January 31st of each year**, or as otherwise directed by the Regional Waste Manager.

The restoration plan shall include and subsequent revisions of the plan any changes to the following:

- 4.1. A site plan showing the areas of the refuse site which will be closed within the next year and a proposed closure plan for the other active portions of the site. The plan shall include, but is not limited to:
 - the design of the final cover material including thickness and permeability of barrier layers,
 - site drainage,
 - vegetative cover and
 - erosion prevention controls.
- 4.2. The plan shall include measures to prevent leachate generation at the site and a schedule of implementation.





File: PR-06207

Date: JUN 30 2004

REGISTERED MAIL

Compagnie Abitibi-Consolidated du Canada
Abitibi-Consolidated Company of Canada
PO Box 250
Mackenzie British Columbia V0J 2C0

Attention: Les Skaalid

Dear Sir:

Enclosed is amended permit **PR-06207** issued under the provisions of the *Waste 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 *Waste Management Act* to ensure compliance with Section 54(3) of that statute, which makes it an offence to discharge waste 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.

At your request the proposed expansion of the landfill area has been granted and the maximum authorized rate of discharged has been reduced to 10,000 wet tonnes / year. A clause requiring the monitoring of groundwater has been included with this permit amendment; the details of the program will be established in a separate letter.

The decisions in the permit may be appealed to the Environmental Appeal Board in accordance with Part 7 of the *Waste Management Act*. An appeal must be delivered within 30 days from the date that notice of this decision is given, in accordance with the practices, procedures and forms

Ministry of Water, Land
and Air Protection

Environmental Protection
Omineca & Peace Regions

Mailing/Location Address:
325 - 1011 Fourth Ave
Prince George BC V2L 3H9

Telephone: (250) 565-6135
Facsimile: (250) 565-6629
<http://www.gov.bc.ca/>
<http://www.gov.bc.ca/wlap/>

prescribed by regulation under the *Environment Management Act*. 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 Prince George Regional office. Plans, data and reports pertinent to the permit are to be submitted to the Regional Waste Manager, Ministry of Water, Land and Air Protection, Omineca & Peace Regions at 325 - 1011 Fourth Avenue, Prince George, British Columbia, V2L 3H9.

Yours truly,



Del Reinheimer, P.Eng.,
Assistant Regional Waste Manager
Environmental Protection
Omineca & Peace Regions

Enclosure: (Copy of signed legal permit)

cc: Environment Canada



FAXED

9

File: PR-06207

SENT BY FAX TO: 250-997-2709

June 30, 2004

Abitibi-Consolidated Company of Canada
PO Box 250
Mackenzie BC V0J 2C0

Attention: Les Skaalid

Dear Les,

Re: Site Closure Plan for Wood Waste Landfill (PR-06207)

As per Section 4 of permit PR-06207, I hereby approve the closure plan dated February 28, 2003 for the wood waste landfill and the use of sludge as a final barrier cover for the wood waste landfill authorized by permit PR-06207. This approval, however, is provisional based on the following conditions:

- Intermediate cover of clean soil will provide cover for the closed portions of wood waste landfill until the evaluation of the barrier performance comparison test is complete;
- The understanding that if results of the barrier performance comparison test being performed by Abitibi Consolidated - Paper Mill indicate that the compacted sludge layer is not suitable as a barrier system for final cover for a landfill, or should other information indicate that the sludge layer is unsuitable, the Permittee will make the necessary changes to ensure that the groundwater and surface water is adequately protected and a contingency cover system will be installed for the site authorized by permit PR-06207;
- A groundwater monitoring program shall be established until otherwise specified in writing by the Regional Waste Manager. The program shall consist of at least two groundwater monitoring wells:
 - one in the immediate vicinity of the landfill and downstream of the receptor, and
 - one other well to be established as a control well.
- Sampling and analysis for all parameters, except for depth of water in the well which shall be measured quarterly for the first year, shall occur once per year. The first sampling year for the groundwater wells will be 2004 with the results reported by January 31, 2005. The minimum parameters to be tested include:
 - Elevations of water in well (depth of water in well) – quarterly monitoring for the first year, and then annually thereafter.
 - Elevations of wells above sea level
 - pH
 - conductivity
 - resin and fatty acids
 - dissolved metals
 - total phenols
 - a determination of groundwater velocity at landfill site
- Well construction and subsurface water sampling shall be supervised by an experienced qualified professional. Details of well construction and field sampling procedures should be made available to Environmental Protection personnel upon request;

Ministry of
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Mailing Address:
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PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6029

- Along with the annual report submitted January 31 of each year, the Permittee shall submit to the regional Environmental Protection office a summary of groundwater data including QA/QC data. The results should be compared to the generic numerical water standards for the appropriate water usage specified in the *Contaminated Site Regulation* and the provincial water quality criteria. The annual report shall indicate if any tested parameters exceed the guideline values;
- The results must be supported with an appropriate quality assurance / quality control program consisting of duplicate and blank samples in the field and in the laboratory;
- Once each three years, with the first report due January 31, 2007, the Permittee shall include a discussion of results, trends, an assessment of the receiving environment and recommendations if further action is necessary to protect the environment.

Details associated with monitoring landfill gas, inspections, erosion control, and vegetative regrowth are as outlined in Morrow's report dated February 28, 2003.

This plan shall be updated annually on January 31 each year as specified in Section 4 of PR-06207 unless otherwise directed.

Please keep in mind that regular site maintenance and proper planning will minimize long term impacts associated with landfill practices. If you have any further questions, please feel free to contact me or Maureen Blawchuk.

Yours truly,



Del Reinheimer, P.Eng.
Assistant Regional Waste Manager
Omineca & Peace Regions

:msb

Ministry of
Water, Land and Air
Protection

Environmental Protection
Omineca & Peace
Regions

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6829

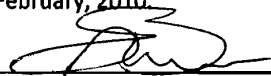
This is Exhibit "b"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 6



MINISTRY OF ENVIRONMENT,
LANDS AND PARKS

PERMIT
PE-01174

Under the Provisions of the Waste Management Act

Finlay Forest Industries Inc.
P.O. Box 250
Mackenzie, British Columbia
VOJ 2C0

is authorized to discharge effluent to Williston Lake from an integrated thermomechanical/chemical thermomechanical pulp and paper mill complex located at Mackenzie, 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 revokes and replaces all previously issued permits under the number PE-01174 issued under Part 2, Section 8 of the Waste Management Act.

1. **DEFINITIONS**

For the purpose of this permit:

- 1.1 "ADt" means an air dry tonne of paper product where the weight is corrected to reflect the weight that the product would be if composed of 10% water and 90% fibre.
- 1.2 "Freeboard" means the difference between the surface elevation of the contained effluent and the elevation of the lowest point of the upper edge of the containment structure.

2. **AUTHORIZED DISCHARGES**

- 2.1 This subsection applies to the discharge of effluent which has been treated by the pulp and paper mill effluent treatment system. The site reference number for this discharge is E104333.

Date issued: February 4, 1972
Amendment Date: "JUN 27 1996"
(most recent)
Page: 1 of 7

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

PERMIT NO. : PE-01174

2

2.1.1 The maximum authorized rate of discharge is 18,760 m³/day, continuously.

2.1.2 The characteristics of the discharge shall be as follows:

- (1) the rainbow trout 96 hour LC₅₀ shall not be less than 100%,
- (2) the daily discharge of five day biochemical oxygen demand (BOD₅) shall not exceed 4,060 kg/day,
- (3) the daily discharge of total suspended solids (TSS) shall not exceed 11,360 kg/day,
- (4) the average daily discharge of total suspended solids (TSS) based on a one month averaging period shall not exceed 6,820 kg/day,
- (5) the temperature must not exceed 35°C, and
- (6) the pH must be between 6.5 and 8.5 (pH units).

2.1.3 The authorized works are in-plant controls, inclined screens, effluent splitter box, two (2) primary clarifiers, one (1) settling/spill pond, one (1) cooling basin, one (1) activated sludge treatment biobasin, one (1) secondary clarifier, one (1) aerated lagoon, one (1) standby aerated lagoon, one (1) polishing pond, a sludge dewatering system, lift station, submerged outfall and diffuser pipe, and related appurtenances approximately located as shown on Site Plan A.

2.1.4 The location of the facilities from which the discharge originates is District Lot 12572, Cariboo Land District, Mackenzie, British Columbia.

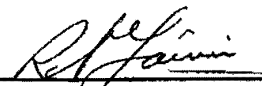
2.1.5 The location of the point of discharge is approximately 91 metres west and 15 metres north of the northwest leg of the Colby Crane situated at the dewatering facility at Site I of Finlay Forest Industries Inc. Latitude: North 55° 20.33', Longitude: West 123° 11.63'.

3. GENERAL REQUIREMENTS

3.1 Treatment/Dump Pond Clean Out

Sludge and dregs removed from the effluent and water treatment lagoons shall be disposed of at the landfill site authorized in Permit No. PR-4133 or in the on-site power boiler. These disposal methods are not authorized if the sludge and dregs are defined as 'special wastes' under the *Special Waste Regulation*. Other disposal methods require prior authorization by the Regional Waste Manager.

Date issued: February 4, 1972
Amendment Date: JUN 27 1996
(most recent)
Page: 2 of 7


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

PERMIT NO.: PE-01174

3.2 Freeboard

3.2.1 There shall be no overflow from any pond or lagoon to the receiving environment other than through the authorized outfall identified in Section 2.1.5 of this permit.

3.2.2 A minimum freeboard of 0.3 metres shall be maintained on all ponds and lagoons.

3.3 Foam

Should an objectionable amount of foam, attributable to the effluent, occur on any section of Williston Lake, the Regional Waste Manager may require additional treatment to either remove the foam or eliminate the cause of the foam.

3.4 Colour

Should colour, attributable to the effluent, become an objectionable feature in any section of Williston Lake, the Regional Waste Manager may require additional treatment to remove colour forming constituents from the effluent prior to discharge.

3.5 Taste and Odour

Should fish tainting or odours in Williston Lake become objectionable, the Regional Waste Manager may require additional works to reduce the responsible constituents.

3.6 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.

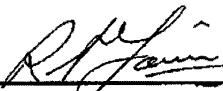
3.7 Maintenance of Works and Emergency Procedures

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 continuing operation of the authorized works, the Permittee shall immediately notify the Regional Waste Manager and take appropriate remedial action.

Date issued: February 4, 1972

Amendment Date: JUN 27 1996
(most recent)

Page: 3 of 7



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

PERMIT NO.: PE-01174

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3.8 Bypasses

The discharge of effluent which has bypassed the authorized works is prohibited unless the consent of the Regional Waste Manager is obtained and confirmed in writing.

3.9 Modifications to Processes and Authorized Works

The Permittee shall notify the Regional Waste Manager prior to implementing changes to any process or authorized works that may affect the quality and/or quantity of the discharge. Temporary changes to the process shall be subject to authorization by the Regional Waste Manager

3.10 Compliance with Federal Pulp and Paper Effluent Regulations

Notwithstanding the requirements in this permit, the Permittee is required to adhere to all applicable legislation including the federal *Pulp and Paper Effluent Regulations (Canada Gazette, Part II, May 20, 1992)*. Where there is an apparent conflict between the federal and provincial requirements, the more stringent requirements will apply.

Sampling and analysis data performed in compliance with federal legislation shall be submitted to the regional Environmental Protection office.

4. MONITORING AND REPORTING REQUIREMENTS

The Regional Waste Manager may alter the monitoring program as needed. Changes to the program will be based upon the results submitted as well as any other information obtained by Environment Protection in connection with the discharges.

4.1 Discharge Monitoring

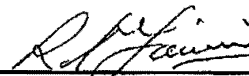
- 4.1.1 Record the daily production of newsprint and the daily effluent flow rate. On a monthly basis, the Permittee shall determine the 90th percentile production rate (ADt/day) of newsprint and the 90th percentile effluent flow rate (m³/day). The 90th percentile figures shall be determined from 100 consecutive days of operation immediately prior to the month in which sampling occurs.

Date issued: February 4, 1972

Amendment Date: JUN 27 1996

(most recent)

Page: 4 of 7



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

PERMIT NO.: PE-01174

- 4.1.2 For the effluent discharge to Williston Lake provide a suitable sampling facility immediately before the pump and discharge pipe, and analyze the effluent for the following:

PARAMETER	SAMPLE TYPE	FREQUENCY
BOD ₅	24 hr composite	Three times/week
TSS	24 hr composite	Once/day
TOXICITY (Rainbow Trout 96 hr LC ₅₀) (Daphnia magna 48 hr LC ₅₀)	Grab Grab	Once/month Once/week
TEMPERATURE	Grab	Once/day
FLOW	Flow meter	Continuous
CONDUCTIVITY (μ S/cm)	Conductivity meter	Continuous
pH	pH meter	Continuous
DISSOLVED OXYGEN	Grab	Three times/week
RESIN ACIDS	Grab	Once/week
COLOUR	Grab	Once/month
KJELDAHL NITROGEN	24 hour composite	Once/year
TOTAL PHOSPHORUS	24 hour composite	Once/year
FECAL COLIFORM	Grab	Quarterly - until July 1996

4.1.3 Ground Water Monitoring

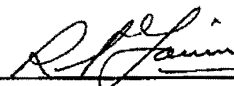
- 4.1.3.1 The Permittee shall maintain four (4) ground water monitoring wells in the vicinity of the lagoons located approximately as shown on Site Plan A.

- 4.1.3.2 Quarterly, the Permittee shall grab sample the wells and determine by analysis the total resin acid concentration in the ground water.

- 4.1.4 In a legal investigation, grab samples may be used to determine compliance with the requirements for biochemical oxygen demand, total suspended solids, and pH as found in subsections 2.1.2 (2), 2.1.2 (3), and 2.1.2 (6), respectively.

Date issued: February 4, 1972
Amendment Date: (most recent)
Page: 5 of 7

JUN 27 1996



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

PERMIT NO.: PE-01174

4.2 Receiving Environment Monitoring

The Permittee shall monitor the receiving water quality and carry out chemical, physical, and biological studies on the receiving environment for the protection of the environment as required by the Regional Waste Manager. 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 effects on the receiving waters and environment, shall be submitted as scheduled by the Regional Waste Manager in a form which is suitable for release to the public. The data from the program will also be reviewed periodically by the Regional Waste Manager to determine cause and effect relationships and to facilitate modifications to the program as indicated by the data collected.

4.3 Analyses

4.3.1 BOD₅, TSS, pH, Conductivity, Dissolved Oxygen, Resin Acids, Colour, Kjeldahl Nitrogen, Total Phosphorus, Toxicity.

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.

A copy of the above manual may be purchased from the Queen's Printer Publication Centre, 2nd Floor, 563 Superior Street, Victoria, British Columbia, V8V 4R6, (1-800-663-6105). The manual is also available for review at any Environmental Protection Program Office.

4.4 Quality Assurance Program

In order to monitor the quality of effluent and receiving water data, an ongoing data quality program shall be conducted in accordance with the Quality Assurance/Quality Control Procedures, dated August 18, 1993 (revised December 22, 1993), and in accordance with other revisions to these procedures as requested by and as authorized by the Regional Waste Manager.

The Permittee shall submit QA/QC data with each data submission. The Permittee shall also submit a written summary of any problems or inconsistencies in the data,

JUN 27 1996

7

and shall also include the preventative or remedial measures taken to improve data quality.

4.5 Reporting

4.5.1 The data and monitoring results from subsections 3.10, 4.1 and 4.4 shall be suitably tabulated and submitted to the Regional Waste Manager on a monthly basis within 30 days of the end of the month in which the data is collected.

For conductivity, the monthly maximum and average readings shall be reported.

For pH, the monthly maximum, minimum, and average readings shall be reported.

The Permittee shall submit electronically all data in a suitable format into the Ministry's computer storage system.

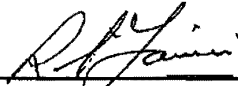
4.5.2 In the event of a failure of any 96 hour LC₅₀ toxicity test, the Permittee shall immediately notify the Regional Waste Manager.

Date Issued: February 4, 1972

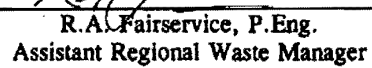
Amendment Date:
(most recent)

Page: 7 of 7

JUN 27 1996


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

PERMIT NO.: PE-01174





Province of
British Columbia

MINISTRY OF
ENVIRONMENT,
LANDS AND PARKS

BC
Environment

Environmental Protection
1011 4th Avenue
Prince George, British Columbia
V2L 3H9
Telephone: (604) 565-6155
Fax: (604) 565-6629

Date: JUN 27 1996

REGISTERED MAIL

File: PE-01174

Finlay Forest Industries Inc.
P.O. Box 250
Mackenzie, British Columbia, V0J 2C0

Attention: Lorena Mueller

Dear Permittee:

Enclosed is Permit PE-01174 issued under the provisions of the Waste Management Act. Your attention is respectfully directed to the conditions outlined in the Permit. An annual permit 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 shall rest with the Permittee. The Permittee shall ensure that any discharge under this Permit meets the requirements of other regulatory agencies including, but not restricted to, Environment Canada and the Department of Fisheries and Oceans (Canada).

The administration of this Permit will be carried out by staff from our Regional Office located in Prince George, (telephone 565-6155). Plans, data and reports pertinent to the Permit are to be submitted to the Environmental Protection office, 3rd Floor, 1011 Fourth Avenue, Prince George, British Columbia, V2L 3H9.

This decision may be appealed in accordance with Section 27 of the Waste Management Act by giving written notice to me within 21 days of this notification.

Yours truly,


R.A. Fairservice P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

enclosure

cc: Michael Baxter, Agra Earth & Environmental Limited, 610 Richard Road, Prince George, British Columbia, V2K 4L3.



10
File: PE-01174

REGISTERED MAIL

December 6, 1999

Finlay Forest Industries Inc.
PO Bag 2800
Mackenzie BC V0J 2C0

Attention: Victor Kumpere

Dear Permittee,

Re: Permit Amendment for PE-01174

As per the request dated October 27, 1999 by Ladner Downs Barristers & Solicitors, and in accordance with Section 13 of the Waste Management Act, Permit PE-01174 (dated February 4, 1972 with an amendment date of June 27, 1996) is hereby amended so that the Permit Holder for this permit is now:

Produits Forestiers Donohue Inc. - Donohue Forest Products Inc.
PO Bag 2800
Mackenzie BC V0J 2C0

This decision may be appealed to the Environmental Appeal Board. Notice of the appeal must: (1) be in writing, (2) include the grounds for the appeal, (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal board, 4th Floor 836 Yates Street, Victoria, BC, V8V 1X5, (4) be delivered within 21 days from the date notice of the decision is given, and (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Yours truly,

R.A. Fairservice, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

:msb/ cc. Original to be sent to Robert Owen, Ladner Downs Barristers & Solicitors, 1200 Waterfront Centre, 200 Burrard Street, PO Box 48600, Vancouver, BC, V7X 1T2.
cc. Huges Simon, Comptroller, Donohue Forest Products Inc., PO Box 250, Mackenzie, V0J 2C0.

**Ministry of
Environment,
Lands and Parks**

Pollution Prevention
Environment and Lands
Omineca-Peace
Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629



File: PE-01174

REGISTERED MAIL

January 7, 2002

Products Forestiers Donohue Inc. – Donohue Forest Products Inc.
PO Bag 2800
Mackenzie BC V0J 2C0

Attention: Sophie Mullen
Environmental Coordinator

Dear Sophie,

Re: PERMIT AMENDMENT FOR PE-01174

Further to and as per the request dated December 11, 2001 by McCarthy Tetrault LLP, and in accordance with Section 13 of the *Waste Management Act*, Permit PE-01174 (dated February 4, 1972 and last amended December 6, 1999), is hereby amended so the Permit Holder for this permit is now:

**Compagnie Abitibi-Consolidated du Canada – Abitibi-Consolidated
Company of Canada
PO Bag 2800
Mackenzie BC V0J 2C0**

This decision may be appealed to the Environmental Appeal Board. Notice of the appeal must:

- (1) be in writing,
- (2) include the grounds for appeal,
- (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria B.C., V8V 1X5
- (4) be delivered within 21 days from the date notice of the decision is given, and
- (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Please attach this letter to the original permit. If you have any questions, please feel free to contact Maureen Bilawchuk at 250-585-8459.

Yours truly,

Del Reinheimer, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

:msb / cc. Jim Titerle, McCarthy Tetrault LLP, PO Box 10424, Pacific Centre, Suite 1300, 777
Dunsmuir Street, Vancouver, BC, V7Y 1K2.

**Ministry of Water,
Land and Air
Protection**

Pollution Prevention
Environment and Lands
Omineca-Peace Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 585-8155
Facsimile: (250) 585-8829



12
FAXED

File: PE-01174

REGISTERED MAIL

September 19, 2003

Compagnie Abitibi-Consolidated du Canada – Abitibi-Consolidated Company of Canada
PO Bag 2800
Mackenzie BC V0J 2C0

Attention: Kurtis Calder
Environmental Coordinator

Dear Kurtis,

Re: PERMIT AMENDMENT FOR PE-01174

As per your request by email dated September 18, 2003 and further to a previous amendment dated April 20, 1995, in accordance with Section 13 of the *Waste Management Act*, Permit PE-01174 (dated February 4, 1972 and last amended January 7, 2002), is hereby amended to include the treatment of sewage effluent in the paper mill treatment system, so Section 2.1 now reads:

This subsection applies to the combined discharge of process effluent and domestic sewage effluent from the mill and AST buildings which has been treated by the pulp and paper mill effluent treatment system. The site reference number for this discharge is E104333.

This decision may be appealed to the Environmental Appeal Board. Notice of the appeal must:

- (1) be in writing,
- (2) include the grounds for appeal,
- (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria B.C., V8V 1X5
- (4) be delivered within 21 days from the date notice of the decision is given, and
- (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

The Permittee shall ensure that any discharge under this Permit meets the requirements of other regulatory agencies including, but not restricted to, Environment Canada and the Department of Fisheries and Oceans (Canada). Please attach this letter to the original permit. If you have any questions, please feel free to contact Maureen Bilawchuk at 250-585-6459.

Yours truly,

Del Reinhermer, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

**Ministry of Water,
Land and Air
Protection**

Pollution Prevention
Environment and Lands
Omineca-Peace Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 585-6155
Facsimile: (250) 585-6629



File: PE-01174

July 30, 2008

REGISTERED MAIL

Abitibi-Consolidated Company of Canada
PO Box 2800
Mackenzie BC V0J 2C0

Attention: Sophie Mullen

Dear Sophie:

Re: Temporary Permit Amendment to Permit PE-01174

Thank you for your requests, dated January 30, 2008, May 22, 2008, and June 6, 2008 to temporarily reduce the Biochemical Oxygen Demand (BODs) and Total Suspended Solids (TSS) characteristics of the authorized discharge from the Abitibi-Consolidated Paper Mill in Mackenzie, BC. This contaminant reduction is due to the indefinite idling of the paper mill effective January 21, 2008 which has reduced the quantity of the discharge thereby increasing the treatment time of the effluent and reducing the contaminant concentrations.

Your request also included a change in the authorized works due to the significant reduction in flow from the mill. To ensure adequate effluent treatment and reduce wear and tear on equipment I understand that the following authorized works have been bypassed:

- two (2) primary clarifiers
- one (1) spill basin
- one (1) secondary clarifier
- the dewatering system

Given that the paper mill is not expected to restart production until December 31, 2010, and the only influent to the Treatment System will be spring runoff water and other precipitation, the reduction of the discharged effluent contaminants is authorized until December 31, 2010. If Abitibi decides to restart the paper mill before December 31, 2010, the company must contact the Director, Environmental Protection Division to request an increase in contaminant concentrations, back to the original permit levels.

As per your request, Section 2.1.2 of PE-01174 is hereby amended, effective immediately, and now reads:

2.1.2 The characteristics of the discharge shall be as follows:

Ministry of Environment	Environmental Protection Division Regional Operations Branch Omineca and Peace Regions	Mailing Address: 325 - 1011 Fourth Avenue PRINCE GEORGE BC V2L 3H9	Telephone: (250) 566-6135 Facsimile: (250) 566-6629 Website: www.gov.bc.ca/env
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- (1) the rainbow trout 96 hour LC₅₀ shall not be less than 100%,
- (2) the daily maximum discharge of five day biochemical oxygen demand (BOD₅) shall not exceed 500 kg/day,
- (3) the average daily discharge of day biochemical oxygen demand (BOD₅) based on a one month averaging period shall not exceed 250 kg/day,
- (4) the daily maximum discharge of total suspended solids (TSS) shall not exceed 2,000 kg/day,
- (5) the average daily discharge of total suspended solids (TSS) based on a one month averaging period shall not exceed 1,000 kg/day,
- (6) the temperature must not exceed 35°C, and
- (7) the pH must be between 6.5 and 8.5 (pH units).

Further to your request, Section 2.1.3 of PE-01174 is hereby amended, effective immediately, and now reads:

- 2.1.3 The authorized works are in-plant controls, inclined screens, effluent splitter box, one (1) cooling basin, one (1) activated sludge treatment biobasin, one (1) aerated lagoon, one (1) standby aerated lagoon, one (1) polishing pond, lift station, submerged outfall and diffuser pipe, and related appurtenances approximately located as shown on Site Plan A.

Please note, although discharge from the effluent treatment system has not occurred since May 8, 2008, when the need to discharge from this system arises effluent monitoring, sampling and testing shall proceed as required by section 4 of permit PE-01174.

All other terms and conditions of PE-01174 remain in full force and effect.

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.

Should you have any questions or concerns, please do not hesitate to contact Peter Lawrie at (250) 565-4394.

Yours truly,

Maureen Bilawchuk

Maureen Bilawchuk, P.Ag.
for Director, Environmental Management Act
Omineca and Peace Regions

:lab

cc: Brian Richman, Site Coordinator, Mackenzie Paper Division
Nicole Roy, Manager, Environment, Abitibi-Consolidated Company of Canada, Montreal
Environment Canada, Bryce Miller, PG office

**Ministry of
Environment**

Environmental Protection Division
Regional Operations Branch
Omineca and Peace Regions

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6135
Facsimile: (250) 565-6629
Website: www.gov.bc.ca/env



File: PE-01174

February 4, 2009

REGISTERED MAIL

Abitibi-Consolidated Company of Canada
PO Box 2800
Mackenzie BC V0J 2C0

Attention: Sophie Mullen

Dear Sophie:

Re: Temporary Permit Amendment to Permit PE-01174

Thank you for your permit amendment request, dated February 2, 2009, to temporarily reduce the daily authorized discharge rate, daily maximum BOD, and TSS of treated effluent from an integrated thermomechanical/chemical thermomechanical pulp and paper mill as listed in permit PE-01174. This discharge reduction is due to the indefinite idling of the mill which has been ongoing since January 21, 2008. This indefinite idling of the mill has now reduced the quantity of the effluent discharge to zero.

Given that the mill is not expected to restart production until February 4, 2010, the only influent to the Treatment System will be spring runoff water and other precipitation, the reduction of the discharge to 0 (zero) m³/day is authorized until February 4, 2010. After this period the authorized discharge rates and conditions specified in the permit last amended on July 30, 2008 will apply. If Abitibi decides to restart the paper mill before February 4, 2010, the company must contact the Director, Environmental Protection Division to request an increase in discharge rate.

As per your request, Section 2.1.1 of PE-01174 is hereby amended, effective immediately, and now reads:

2.1.1 The maximum rate of discharge is 0.0 m³/day, 24 hours/day, 7 days/week.

Your attention is respectfully directed to the conditions of the permit. All other terms and conditions of the permit remain in full force. In particular, the ground water monitoring specified in Section 4.1.3, and the related reporting requirements specified in Section 4.5, remain unchanged and in effect.

An annual fee for the permit will be determined in accordance with the Permit Fees Regulation. A copy of the permit is enclosed for your records.

Ministry of Environment	Environmental Protection Division Regional Operations Branch Omineca and Peace Regions	Mailing Address: 325 - 1011 Fourth Avenue PRINCE GEORGE BC V2L 5H9	Telephone: (250) 565-6135 Facsimile: (250) 565-6629 Website: www.gov.bc.ca/env
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Since the last temporary permit amendment, granted July 30, 2008, there has been no discharge of effluent from this treatment system. If the need to discharge from this system arises, authorization is required from the Director for re-instatement of all the requirements of permit PE-01174, dated June 27, 1996, and as amended thereafter.

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.

Should you have any questions or concerns, please do not hesitate to contact Peter Lawrie at (250) 565-4394.

Yours truly,



Del Reinheimer, P.Eng.
for Director, Environmental Management Act
Omineca and Peace Regions

lab

cc: Wayne Lewis, Site Coordinator, Mackenzie Paper Division
Nicole Roy, Manager, Environment, Abitibi-Consolidated Company of Canada, Montreal
Environment Canada, Bryce Miller, PG office

Ministry of
Environment

Environmental Protection Division
Regional Operations Branch
Omineca and Peace Regions

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H0

Telephone: (250) 565-8135
Facsimile: (250) 565-5829
Website: www.gov.bc.ca/enr

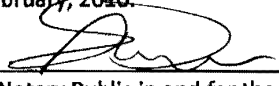
This is Exhibit 117
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
~~February, 2010.~~

A Notary Public in and for the Province of
British Columbia

Exhibit 7



MINISTRY OF WATER, LAND,
AND AIR PROTECTION

Environmental Protection

PERMIT
PA-03647

Under the Provisions of the Environmental Management Act

Compagnie Abitibi-Consolidated du Canada
Abitibi-Consolidated Company of Canada
Bag 2800
Mackenzie, British Columbia
V0J 2C0

is authorized to discharge contaminants to the air from an integrated pulp and paper mill located near Mackenzie, 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.

1. AUTHORIZED DISCHARGES

- 1.1 This subsection applies to the discharge of air contaminants from two chip feed cyclones. The site reference number for this discharge is E211052.
 - 1.1.1 The maximum authorized total rate of discharge is 4.3 m³/s, intermittent and infrequent use.
 - 1.1.2 The characteristics of the discharge shall not exceed a total particulate concentration of 116 mg/m³.
 - 1.1.3 The authorized works are one chip cyclone (identified as 1 in Site Plan A) located between the chip blower and the TMP chip transfer belt conveyor no.3, one No.3 side RMP chip cyclone (identified as 37 on Site Plan A), and related appurtenances. The authorized works must be complete and in operation.
 - 1.1.4 The location of the facilities from which the discharge originates is District Lot 12572, Municipality of Mackenzie, British Columbia.
 - 1.1.5 The location of the point of discharge is District Lot 12572, Municipality of Mackenzie, British Columbia.

Date issued: November 25, 1974
Date amended:
(most recent) **NOV 01 2004**


Del Reinheimer, P.Eng.
for Director, *Environmental Management Act*
Omineca and Peace Regions

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- 1.2 This subsection applies to the discharge of air contaminants from one chip washer exhaust fan, one chip wash water tank vent, and one scrubber cyclone. The site reference number for this discharge is E222801.
- 1.2.1 The maximum authorized total rate of discharge is 97.53 m³/s, continuously.
- 1.2.2 The characteristics of the discharge are typically air and water vapour.
- 1.2.3 The authorized works are vents and related appurtenances associated with one chip washer exhaust fan (identified as 2 on Site Plan A), one chip wash water tank (identified as 3 on Site Plan A), three (3) APS vessels (identified as 4, 5, and 6 on Site Plan A), two (2) chip pre-heaters and two (2) primary refiners and two (2) secondary refiners feeding into one scrubber cyclone (identified as 12 on Site Plan A). The authorized works must be complete and in operation.
- 1.2.4 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 1.1.4 and 1.1.5.
- 1.3 This subsection applies to the discharge of air contaminants from one glycol heat recovery unit exhaust fan. The site reference number for this discharge is E222802.
- 1.3.1 The maximum authorized rate of discharge is 8.73 m³/s, continuously.
- 1.3.2 The characteristics of the discharge are typically air and water vapour.
- 1.3.3 The authorized works are one (1) exhaust fan (identified as 7 on Site Plan A), and related appurtenances associated with one (1) glycol heat recovery unit. The authorized works must be complete and in operation.
- 1.3.4 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 1.1.4 and 1.1.5.

Date Issued: November 25, 1974

Date Amended:
(most recent)

NOV 01 2004

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Del Reinheimer, P.Eng.
for Director, Environmental Management Act
Omineca and Peace Regions

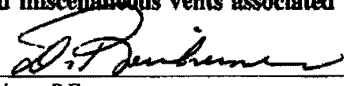
Permit Number: PA-03647

- 1.4 This subsection applies to the discharge of air contaminants from **two latency chest exhaust fans, and disc filter white water vents**. The site reference number for this discharge is E222803.
 - 1.4.1 The maximum authorized total rate of discharge is 16.98 m³/s, continuously.
 - 1.4.2 The characteristics of the discharge are typically air and water vapour.
 - 1.4.3 The authorized works are vents, and related appurtenances associated with two (2) latency chest exhaust fans (identified as 8 and 9 on Site Plan A), one (1) cloudy white water chest (identified as 15 on Site Plan A). The authorized works must be complete and in operation.
 - 1.4.4 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 1.1.4 and 1.1.5.
- 1.5 This subsection applies to the discharge of air contaminants from **one TMP disc filter exhaust fan**. The site reference number for this discharge is E222804.
 - 1.5.1 The maximum authorized total rate of discharge is 2.12 m³/s, continuously.
 - 1.5.2 The characteristics of the discharge are typically air and water vapour.
 - 1.5.3 The authorized works are one (1) exhaust fan (identified as 10 on Site Plan A), and related appurtenances associated with one (1) TMP disc filter unit. The authorized works must be complete and in operation.
 - 1.5.4 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 1.1.4 and 1.1.5.
- 1.6 This subsection applies to the discharge of air contaminants from the **rejects disc filter exhaust fan, refined rejects chest exhaust fan, rejects decker white water chest vent, thickened rejects chest vent, rejects scrubber cyclone exhaust fan, refiner cyclone pressure relief vent, hog fuel building vent, shop washer vent, borol storage tank vent, BGH degas tank vent, and hydrosulphite storage tank vent and miscellaneous vents associated**

Date Issued: November 25, 1974

Date Amended: **NOV 01 2004**
(most recent)

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Del Reinheimer, P.Eng.
for Director, *Environmental Management Act*
Omineca and Peace Regions

Permit Number: PA-03647

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with the TMP/cTMP process. The site reference number for this discharge is E222805.

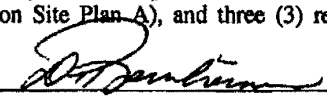
- 1.6.1 The maximum authorized total rate of discharge is $16.75 \text{ m}^3/\text{s}$, continuously.
- 1.6.2 The characteristics of the discharge are typically air and water vapour. Emissions from the BGH Degas tank include up to 8 kg/day of hydrogen gas under system upset conditions.
- 1.6.3 The authorized works are vents, and related appurtenances associated with one rejects disc filter exhaust fan (identified as 13 on Site Plan A), one (1) refined rejects chest exhaust fan (identified as 18 on Site Plan A), rejects decker white water chest vent (identified as 17 on Site Plan A), thickened rejects chest vent (identified as 16 on Site Plan A), one (1) rejects scrubber cyclone exhaust fan (identified as 11 on Site Plan A), refiner cyclone pressure relief vent (identified as 66 on Site Plan A), hog fuel building vent (identified as 64 on Site Plan A), shop washer vent (identified as 65 on Site Plan A), borol storage tank vent, BGH degas tank vent, and hydrosulphite storage tank vent (identified as 66 on Site Plan A) and miscellaneous vents associated with the TMP/cTMP process. The authorized works must be complete and in operation.
- 1.6.4 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 1.1.4 and 1.1.5.
- 1.7 This subsection applies to the discharge of air contaminants from the operation of the RMP 1 line. The site reference number for this discharge is E222806.
 - 1.7.1 The maximum authorized rate of discharge is $15.44 \text{ m}^3/\text{s}$, intermittent and infrequent use.
 - 1.7.2 The characteristics of the discharge shall not exceed a total particulate concentration of $116 \text{ mg}/\text{m}^3$, and is also typically air and water vapour.
 - 1.7.3 The authorized works are vents, and related appurtenances associated with one (1) chip blower which discharges to either the cyclone chip silo (identified as 40 and 41 on Site Plan A), one (1) chip deicer hood exhaust (identified as 43 on Site Plan A), the transfer of chips to the primary refiner chip screws, one (1) chip surge bin (identified as 42 on Site Plan A), and three (3) refiner

Date Issued: November 25, 1974

Date Amended:
(most recent)

NOV 01 2004

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Del Reinheimer, P.Eng.
for Director, Environmental Management Act
Omineca and Peace Regions

Permit Number: PA-03647

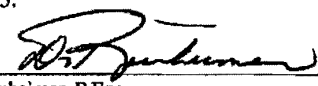
exhausts (identified as 44, 45, and 46 on Site Plan A). The authorized works must be complete and in operation.

- 1.7.4 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 1.1.4 and 1.1.5.
- 1.8 This subsection applies to the discharge of air contaminants from the operation of the RMP 3 line. The site reference number for this discharge is E222807.
- 1.8.1 The maximum authorized rate of discharge is $8.88 \text{ m}^3/\text{s}$, intermittent and infrequent use.
- 1.8.2 The characteristics of the discharge are typically air and water vapour.
- 1.8.3 The authorized works are vents, and related appurtenances associated with one (1) stock cyclone (identified as 38 on Site Plan A), and one (1) heat recovery exhaust fan (identified as 36 on Site Plan A). The authorized works must be complete and in operation.
- 1.8.4 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 1.1.4 and 1.1.5.
- 1.9 This subsection applies to the discharge of air contaminants from the purchased fibre repulper and associated tanks. The site reference number for this discharge is E211054.
- 1.9.1 The maximum authorized rate of discharge is $2.4 \text{ m}^3/\text{s}$, intermittent and infrequent use.
- 1.9.2 The characteristics of the discharge are typically air and water vapour.
- 1.9.3 The authorized works are vents, and related appurtenances associated with one (1) purchased fibre repulper and associated tanks (identified as 20, 21, and 22 on Site Plan A). The authorized works must be complete and in operation.
- 1.9.4 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 1.1.4 and 1.1.5.

Date Issued: November 25, 1974

Date Amended: NOV 01 2004
(most recent)

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Del Reinheimer, P.Eng.
for Director, Environmental Management Act
Omineca and Peace Regions

Permit Number: PA-03647

6

1.10 This subsection applies to the discharge of air contaminants from the **paper forming section of the paper machine**. The site reference number for this discharge is E215763.

1.10.1 The maximum authorized rate of discharge is 87.9 m³/s, continuously.

1.10.2 The characteristics of the discharge are of the nature originating from the paper forming section of the paper machine.

1.10.3 The authorized works are vents, and related appurtenances associated with the paper forming section of the paper machine (identified as 25, 26, 27, 28, 29, and 30 on Site Plan A). The authorized works must be complete and in operation.

1.10.4 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 1.1.4 and 1.1.5.

1.11 This subsection applies to the discharge of air contaminants from the **paper drying section of the paper machine**. The site reference number for this discharge is E215764.

1.11.1 The maximum authorized rate of discharge is 68.1 m³/s, continuously.

1.11.2 The characteristics of the discharge are of the nature originating from the paper drying section of the paper machine.

1.11.3 The authorized works are vents, and related appurtenances associated with the paper drying section of the paper machine (identified as 31, 32, 33, and 34 on Site Plan A). The authorized works must be complete and in operation.

1.11.4 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 1.1.4 and 1.1.5.

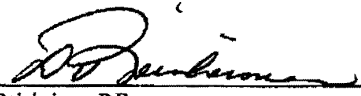
1.12 This subsection applies to the discharge of air contaminants from a **power boiler**. The site reference number for this discharge is E222808.

1.12.1 The maximum authorized rate of discharge is 84.5 m³/s, continuously.

Date Issued: November 25, 1974

Date Amended: **NOV 01 2004**
(most recent)

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Del Reinheimer, P.Eng.
for Director, *Environmental Management Act*
Omineca and Peace Regions

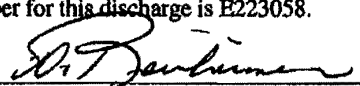
Permit Number: PA-03647

- 1.12.2 The characteristics of the discharge shall not exceed:
- 50 mg/m³ at 8% O₂ by volume for total particulate,
- 10% opacity
- 1.12.3 The power boiler is authorized to burn natural gas, hog fuel (wood residue), primary and secondary clarifier sludges, absorbent containing waste oil, and cardboard. Other wastes, not listed in this section, shall not be burned in the power boiler without the Permittee receiving prior written authorization from the Director.
- 1.12.4 The authorized works are one (1) ABB MU-FB bubbling bed boiler (identified as 53 on Site Plan A), one (1) dry electrostatic precipitator, ash conveying system, opacity meter, and related appurtenances (identified as 47, 48, 49, 50, 51, and 52 on Site Plan A). The authorized works must be complete and in operation.
- 1.12.5 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 1.1.4 and 1.1.5.
- 1.13 This subsection applies to the discharge of air contaminants from a **standby natural gas fired boiler**. The site reference number for this discharge is E215762.
- 1.13.1 The maximum authorized rate of discharge is 27.7 m³/s, as required. This boiler is authorized to operate as a back-up to the boiler described in subsection 1.12.
- 1.13.2 The characteristics of the discharge shall be of the nature originating from a natural gas fired boiler, including sulphur oxides, nitrogen oxides, carbon monoxides, particulate matter, and VOCs.
- 1.13.3 The authorized works are stack (identified as 60 on Site Plan A), and related appurtenances associated with a natural gas fired boiler (identified as 54, 55, 56, 57, 58, and 59 on Site Plan A). The authorized works must be complete and in operation.
- 1.13.4 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 1.1.4 and 1.1.5.
- 1.14 This subsection applies to the discharge of air contaminants from a **standby volcano boiler**. The site reference number for this discharge is E223058.

Date Issued: November 25, 1974

Date Amended: **NOV 01 2004**
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for Director, *Environmental Management Act*
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- 1.14.1 The maximum authorized rate of discharge is $2.1 \text{ m}^3/\text{s}$, as required. This volcano boiler is authorized to operate as a back-up to the natural gas boiler described in subsection 1.13.
 - 1.14.2 The characteristics of the discharge shall be of the nature originating from a natural gas fired boiler, including sulphur oxides, nitrogen oxides, carbon monoxides, particulate matter and VOCs.
 - 1.14.3 The authorized works are stack, and related appurtenances associated with a volcano boiler (identified as 61 and 62 on Site Plan A). The authorized works must be complete and in operation.
 - 1.14.4 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 1.1.4 and 1.1.5.
- 1.15 This subsection applies to the discharge of air contaminants from an **activated sludge treatment system (AST) boiler**. The site reference number for this discharge is E222809.
- 1.15.1 The maximum authorized rate of discharge is $0.34 \text{ m}^3/\text{s}$, continuously.
 - 1.15.2 The characteristics of the discharge shall be of the nature originating from a natural gas fired boiler, including sulphur oxides, nitrogen oxides, carbon monoxides, particulate matter and VOCs.
 - 1.15.3 The authorized works are stack, and related appurtenances associated with a natural gas fired boiler (identified as boiler tank on Site Plan B). The authorized works must be complete and in operation.
 - 1.15.4 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 1.1.4 and 1.1.5.

2. GENERAL REQUIREMENTS

2.1 General Requirements that Apply to all of the Authorized Discharges

All gaseous volumes are at standard conditions which are: standard temperature = 293.15 K; standard pressure = 101.315 KPa; water vapour = zero.

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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 continuing operation of the authorized works, the Permittee shall immediately notify the Regional Manager, Environmental Protection, and take appropriate remedial action.

2.3 Bypasses

The discharge of contaminants which has bypassed the authorized works is prohibited unless the consent of the Director is obtained and confirmed in writing.

2.4 Burning of Waste Oil in Power Boiler (authorized in subsection 1.12)

2.4.1 Burning of waste oil shall take place only after analyses have been conducted on each batch of waste oil to be burned and the results of the analyses received by the Permittee. The waste oil shall not be burned unless the analyses satisfy the requirements of the Hazardous Waste Regulation.

2.4.2 If waste oil is burned in the power boiler (authorized in subsection 1.12), the Permittee shall maintain records of all analyses of each batch of waste oil burned in the power boiler. The records shall be maintained for inspection by Environmental Protection staff and reported quarterly.

2.5 Burning of Absorbent Materials Contaminated with Waste Oil

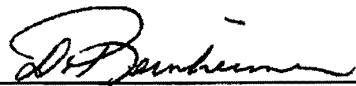
Material Safety Data Sheets for each type of absorbent material used and then burned in the power boiler (authorized in subsection 1.12) shall be submitted to the Regional Environmental Protection Office with the quarterly monitoring report. Absorbent materials contaminated with waste oil shall be burned in the power boiler in accordance with the Material Safety Data Sheet(s) and the Hazardous Waste Regulation.

2.6 Disposal of Ash

The residue of combustion shall be removed from the power boiler regularly and shall be disposed of in an authorized landfill in a manner acceptable to the Director.

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Omineca and Peace Regions

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2.7 General

All aspects of the operation shall be to the satisfaction of the Director. Additional requirements may be established at the Director's discretion.

3. MONITORING AND REPORTING REQUIREMENTS

The Director may, in writing, change the monitoring and reporting requirements outlined below.

3.1 The Permittee shall monitor for the specified parameters at the corresponding frequencies as follows:

Authorized Source of Discharge	Parameter	Sampling Frequency, Sample Type
Power Boiler * (Permit subsection 1.12)	Discharge rate	quarterly, grab
	Particulate Matter	quarterly, grab
	Opacity	quarterly, grab
	Nitrogen Oxides	quarterly, grab
	Carbon Monoxides	quarterly, grab

* Monitoring data shall be accompanied by process data relevant to the operation of the source of the emissions and to the performance of the pollution abatement equipment involved in the testing. The Permittee shall include in the quarterly report the type and rate of fuel feed sent to the power boiler at the time the samples are obtained.

3.2 Sampling Under "Normal" Conditions

Sampling shall occur under "normal" operating conditions. "Normal" operating conditions are defined as those that are as close as reasonably practical to the 90th percentile operating conditions for the 100 days prior to the date of sampling. The Permittee shall report the operating conditions of the boiler in terms of steam load (kg/h) and hog fuel content fired (expressed as the ratio of steam produced by hog fuel to total steam) for both the sampling period and the 100 day period prior to the sampling event.

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3.4 Source Testing Procedures

Sampling is to be carried out in accordance with procedures described in the latest version of "British Columbia Field Sampling Manual for Continuous Monitoring plus the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment and Biological Samples". All aspects of these procedures including, but not limited to sampling facilities, location, technique, analysis and reporting shall be adhered to. Any deviation from the referenced methods requires the approval of the Director. A copy of the above manual may be purchased from the Queen's Printer Publication Centre, P.O. Box 9452, Stn. Prov. Govt., Victoria, British Columbia, V8W 9V7 (1-800-663-6105 or (250) 387-4609). A copy of the manual is also available for review at all Environmental Protection offices.

3.4.1 Opacity

For the purposes of this permit, the term "opacity reader" means a person who holds a valid certificate to measure the opacity of air contaminants. Certification includes successfully completing the requirements of an Opacity Reading Course which satisfies the requirements of the Ministry of Water, Land and Air Protection.

The opacity of air contaminants as specified in Section 3 of this permit shall be determined by an opacity reader.

The measurement of opacity of emissions from the wood residue power boiler shall be conducted in accordance with procedures described in US EPA Method 9.

The determination of opacity from air contaminants as specified in Section 3.1 of this permit shall be determined by an opacity reader. For monitoring purposes, the average of this six (6) minute interval shall be reported as the opacity of the air contaminants from the boiler for the one hour period in which the readings were completed. For monitoring purposes, the opacity shall be measured at some point during the same period when the particulate matter is measured.

For monitoring and legal purposes, visual opacity readings shall take precedence over opacity reading taken by a continuous emission monitor.

3.5 Other Contaminant Emissions

Visual monitoring will be carried out by Environmental Protection staff as part of an ambient monitoring program for the entire mill operation. Based on

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for Director, *Environmental Management Act*
Omineca and Peace Regions

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these monitoring results or other pertinent information, the Permittee may be required to undertake source monitoring.

3.6 Ambient Air Monitoring Program

The Permittee may be required by the Director to conduct or participate in an ambient air monitoring program.

3.7 Reporting

The monitoring results collected and compiled quarterly as required by subsection 2.4, 2.5, and 3 shall be submitted to the Regional Environmental Protection office within 30 days of the end of the monitoring period.

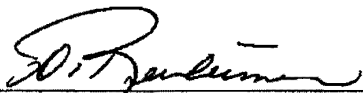
3.7.1 Reporting Format

The monitoring results required by subsection 2.4, 2.5, and 3 shall be suitably tabulated and submitted on paper or electronically using a computer format that is acceptable to the Director.

Date Issued: November 25, 1974

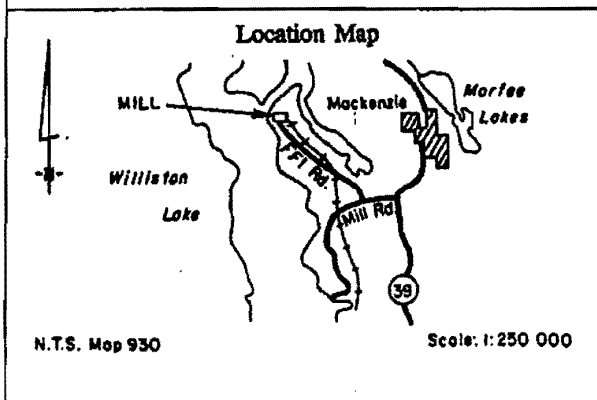
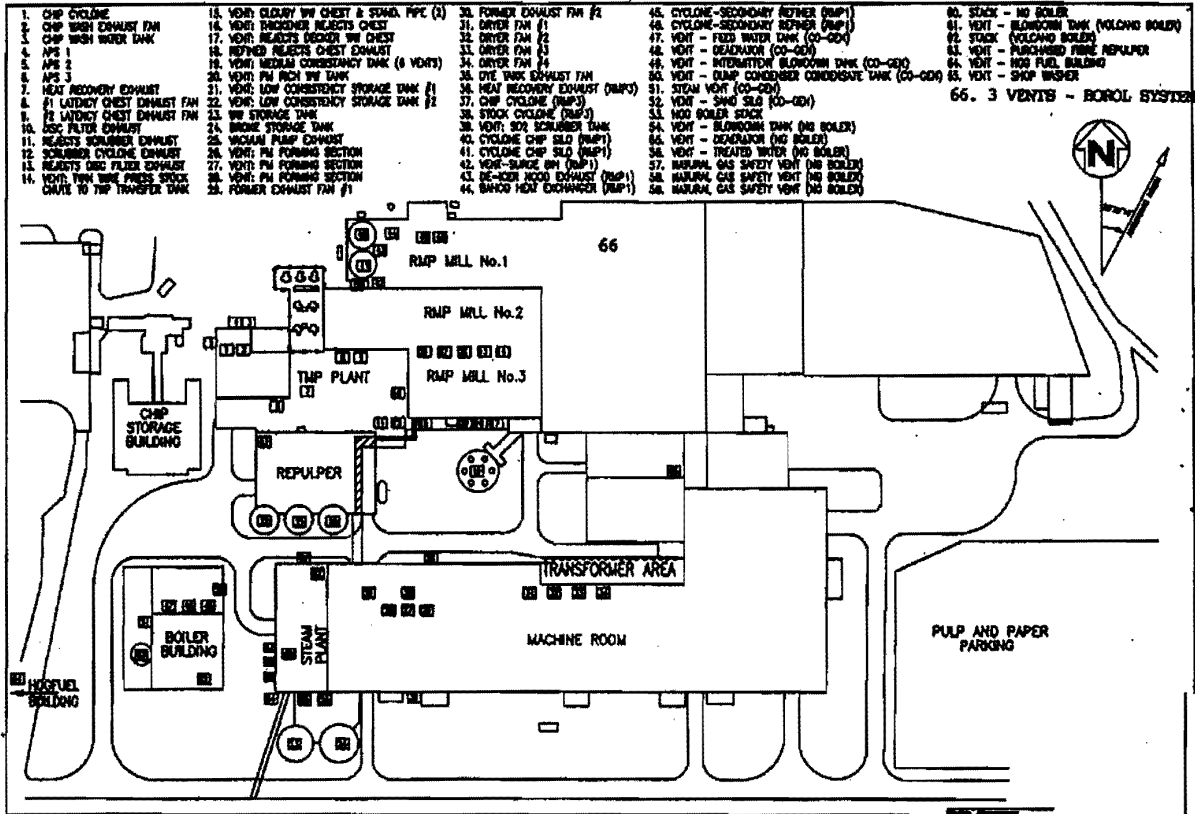
Date Amended:
(most recent) **NOV 01 2004**

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for Director, *Environmental Management Act*
Omineca and Peace Regions

Permit Number: PA-03647

SITE PLAN A



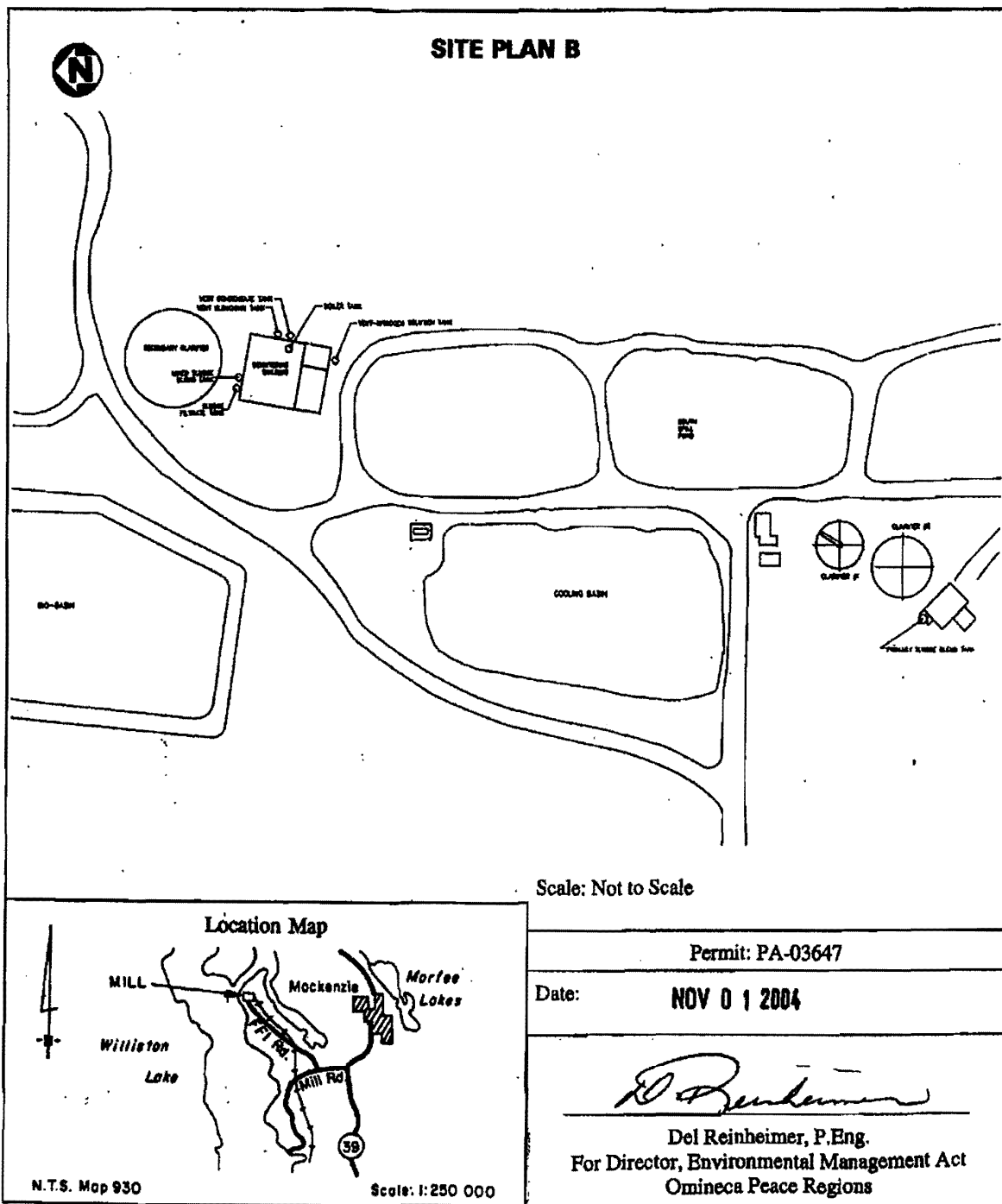
Scale: Not to Scale

Permit: PA-03647

Date: NOV 01 2004

Del Reinheimer
Del Reinheimer, P.Eng.
For Director, Environmental Management Act
Omineca Peace Regions

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File: PA-03647

Date: **NOV 01 2004**
REGISTERED MAIL

Compagnie Abitibi-Consolidated du Canada
Abitibi-Consolidated Company of Canada
Bag 2800
Mackenzie British Columbia V0J 2C0

Attention: Dale Holloway, Technical Manager

Dear Permittee:

Enclosed is Permit PA-03647 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 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.

Although the requirement to submit the results from the continuous opacity monitor has been eliminated from the permit, please keep in mind that an operational opacity meter is still required for the power boiler. The opacity meter is one method of assessing the trends in particulate concentrations from the power boiler. Effective today, quarterly opacity measurements from the power boiler are required as part of the monitoring report. Depending on the boiler performance, environmental impact and any other information, this decision may be changed in the future.

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.

Ministry of Water, Land
and Air Protection

Regional Operations
Omineca and Peace Regions

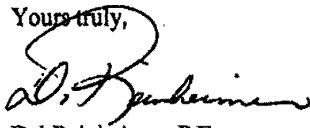
Mailing/Location Address
325 - 1011 Fourth Ave.
Prince George, V2L 3H9

Telephone: (250) 565-6135
Facsimile: (250) 565-6629
<http://www.gov.bc.ca/>
<http://www.gov.bc.ca/wlap>

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Administration of this permit will be carried out by staff from the Omineca and Peace 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, Omineca and Peace Regions, 325 - 1011 Fourth Ave., Prince George, V2L 3H9.

Yours truly,



Del Reinheimer, P.Eng.
for Director, *Environmental Management Act*
Omineca and Peace Regions

Enclosure

cc: Environment Canada



HAND DELIVERED

File: PA-03647

November 23, 2006

Abitibi-Consolidated Company of Canada
PO Box 2800
Mackenzie BC V0J 2C0

Attention: Sophie Mullen, Environmental Coordinator

Dear Sophie,

Re: Power Boiler stack sampling – Permit Amendment

After reviewing the most recent stack sampling results and reviewing the compliance history with regard to permit PA-03647, I noticed that there has been compliance issues with this permit since late 2004. The last stack sample, taken September 29, 2006 resulted in a failure to meet the permit requirements.

Based on this information and in accordance with Section 16(1) of the *Environmental Management Act*, I hereby amend permit PA-03647. Section 3.1 of PA-03647 now reads:

Authorized Source of Discharge	Parameter	Sampling Frequency, Sample Type
Power Boiler (Permit subsection 1.12)	Discharge Rate	Monthly, grab
	Particulate Matter	Monthly, grab
	Opacity	Monthly, grab
	Nitrogen Oxides	Monthly, grab
	Carbon Monoxides	Monthly, grab

If the power boiler is sampled on a more frequent basis for whatever reason, whether for compliance testing, maintenance or operational purposes, all testing data and operating conditions for the power boiler shall be reported within 30 days of the month end in which the sampling occurred.

In addition, the following information should be submitted:

- fuel type (hog/sludge/natural gas split),
- sampling dates and particulate concentration (mg/m3),
- total steam load (kg/h) during the stack testing period,
- the percentage of steam generated from hog/sludge fuel during the stack testing period,
- the total steam generated from hog/sludge fuel (kg/h) during the stack testing period,
- the average steam load (kg/h) for the month,
- the 90th percentile of total steam load (kg/h) for the 100 days prior to the date of sampling,

Ministry of
Environment

Environmental Protection Division
Regional Operations Branch
Omineca and Peace Regions

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629

- the 90th percentile of the percentage of steam from hog/sludge fuel for the 100 days prior to the date of sampling, and,
- average of steam generated from hog/sludge fuel during the month,
- a report in writing, submitted by Dec. 31, 2006 providing reasons for the elevated particulate levels and measures taken to ensure compliance with permit levels.

The monthly testing requirement remains in effect until 3 consecutive stack tests pass, at which time section 3.1 (stack sampling) of permit PA-0347 shall revert back to the previous quarterly testing schedule. Please be aware that permit compliance is expected at all times.

All other conditions of permit PA-03647 remain in full force and effect. This letter does not constitute approval by any other agency with jurisdiction over this matter. It is expected that Abitibi-Consolidated Company of Canada will comply with all conditions of their permits. Violation of a waste management permit is a violation under the *Environmental Management Act*.

This decision may be appealed to the Environmental Appeal Board. Notice of the appeal must:

- 1) be in writing,
- 2) include the grounds for appeal,
- 3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria B.C., V8V 1X5
- 4) be delivered within 21 days from the date notice of the decision is given, and
- 5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Yours truly,

Maureen Bilawchuk

Maureen Bilawchuk, P.Ag.
for Director, *Environmental Management Act*
Omineca and Peace Regions

:lab

cc: Kerry Morton, Technical Superintendent – Abitibi-Consolidated Mackenzie
Richard MacCallum, SP Assistant Superintendent – Abitibi-Consolidated Mackenzie
Brad Pelley, General Manager – Abitibi-Consolidated Mackenzie
Michael Allen, Maintenance and Utilities Manager – Abitibi-Consolidated Mackenzie
Nicole Roy, Environment Manager, Abitibi-Consolidated, 1155 Rue Metcalf,
Bureau 800, Montreal, Quebec, H3B 5H2

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Facsimile: (250) 565-6629



The Best Place on Earth

Fax to: 250-997-6723

File: PA-03647

February 20, 2008

Abitibi Bowater Inc.
Bag 2800
Mackenzie, B.C.
V0J 2C0

Attention: William Murphy-Environmental Coordinator

Dear Bill,

RE: Bypass of Works PA-03647

In response to your letter dated January 22, 2008, and in accordance with section 3.0 of permit PA-03647 I hereby authorize the following temporary modifications:

The 90th percentile requirements described under section 3.2 Sampling Under "Normal" are suspended for the boiler described in section 1.12 of the permit until June 1, 2008.

- Data is continued to be collected for the establishment of a new 100 day 90th percentile; and
- Steam generation load is not to exceed 50,000 kg/hr.

All other conditions and requirements of the existing permit remain in place unless otherwise authorized by the director.

Please attach this letter to the original permit. If you have any questions, please feel free to contact Peter Lawrie at 250-565-6459.

Yours truly,

Maureen Bilawchuk, P.Ag.
for Director, *Environmental Management Act*
Omineca and Peace Regions

cc: Brock Bailey, Environment Canada
Sophie Mullen-Abitibi Bowater Consultant
Brian Richman, Abitibi Bowater Site Coordinator

Ministry of Environment

Environmental Protection Division
Regional Operations Branch
Omineca and Peace Regions

Mailing Address:

#325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6131

Facsimile: (250) 565-6629

Website: www.gov.bc.ca/env



REGISTERED MAIL

File: PA-03647

October 28, 2008

Abitibi-Consolidated Company of Canada
Bag 2800
Mackenzie, B.C.
V0J 2C0

Attention: Brian Richman-Site Coordinator

Dear Brian,

RE: Amendment to Permit PA-03647

Abitibi-Consolidated Company of Canada's has requested in letters dated April 2, 2008, September 17, 2008, and September 18, 2008 to amend Permit PA-03647 to reflect the idling of the Mackenzie Pulp and Paper Mill.

Based on the information contained within those letters and in accordance with Section 16 (1)(b) I hereby authorize the following temporary modifications to permit PA-03647.

The following subsections of Section 1 AUTHORIZED DISCHARGES now read:

- 1.1.1 The maximum authorized total rate of discharge is zero (0) m³, sec.
- 1.1.2 The characteristics of the discharge shall not exceed a total particulate concentration of zero (0) mg/m³.
- 1.2.1 The maximum authorized total rate of discharge is zero (0) m³, sec.
- 1.3.1 The maximum authorized total rate of discharge is zero (0) m³, sec.
- 1.4.1 The maximum authorized total rate of discharge is zero (0) m³, sec.
- 1.5.1 The maximum authorized total rate of discharge is zero (0) m³, sec.
- 1.6.1 The maximum authorized total rate of discharge is zero (0) m³, sec.
- 1.7.1 The maximum authorized total rate of discharge is zero (0) m³, sec.
- 1.8.1 The maximum authorized total rate of discharge is zero (0) m³, sec.

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Environmental Protection Division
Regional Operations Branch
Omineca and Peace Regions

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325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6135
Facsimile: (250) 565-6629
Website: www.gov.bc.ca/env

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- 1.9.1 The maximum authorized total rate of discharge is zero (0) m³, sec.
- 1.10.1 The maximum authorized total rate of discharge is zero (0) m³, sec.
- 1.11.1 The maximum authorized total rate of discharge is zero (0) m³, sec.
- 1.12.1 The maximum authorized total rate of discharge is zero (0) m³, sec.
- 1.12.2 The characteristics of the discharge shall not exceed zero (0) mg/m³ at 8% O₂ by volume.
- 1.13.1 The maximum authorized total rate of discharge is zero (0) m³, sec.
- 1.14.1 The maximum authorized total rate of discharge is zero (0) m³, sec.
- 1.15.1 The maximum authorized total rate of discharge is zero (0) m³, sec.

Section 3.1 of permit PA-03647 now reads:

3.1 The Permittee shall monitor for the specified parameters at the corresponding frequencies as follows:

Authorized Source of Discharge	Parameter	Sampling Frequency, Sample, Type
Power Boiler (Permit subsection 1.12)	Discharge Rate	Not required.
	Particulate Matter	Not required.
	Opacity	Not required.
	Nitrogen Oxides	Not required.
	Carbon Monoxides	Not required.

Section 3.7 of permit PA-03647 now reads:

3.7 Reporting

A letter confirming the inoperative state of the mill and its related air discharge sources is to be submitted to the Regional Environmental Protection office by November 25th of each year.

These temporary modifications remain in effect until one of the following occurs:

- the permit anniversary date of November 25, 2010; or
- until there is an amendment request by the permittee to resume production or operate any of the permit discharge sources and the amendment has been granted by the Director in writing.

Should no further amendments be granted, the full terms and conditions of Permit PA-03647 dated November 25, 1974 and most recently amended November 23, 2006 apply. All other conditions and requirements of permit PA-3647 remain in full force and effect unless otherwise authorized in writing by the director.

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Further to Section 3.6, The Permittee is required to share all costs (e.g. installing, servicing, calibrating, monitoring, maintenance, auditing, and reporting) associated with the PM 2.5 and PM 10 ambient air monitoring program in Mackenzie as described in the letter from the Director, dated February 13, 2006.

Please note these temporary amendments which limit actual emissions will revert on November 26, 2010 and permit fees will be assigned accordingly.

Please attach this letter to the original permit. If you have any questions, please feel free to contact Peter Lawrie at 250-565-6459.

Yours truly,



Maureen Bilawchuk, P.Ag.
for Director, *Environmental Management Act*
Omineca and Peace Regions

cc: Brock Bailey, Environment Canada
Sophie Mullen-Abitibi Bowater Consultant

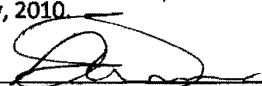
This Is Exhibit 118
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010

A Notary Public in and for the Province of
British Columbia

Exhibit 8



Pollution Prevention
1011 Fourth Avenue
Prince George
British Columbia V2L 3H9
Telephone: (250) 565-6155
Fax: (250) 565-6629

MINISTRY OF ENVIRONMENT,
LANDS AND PARKS

PERMIT
PR-04133

Under the Provisions of the Waste Management Act

Produits Forestiers Donohue Inc. - Donohue Forest Products Inc.

Paper Division - Bag 2800

MACKENZIE BC V0J 2C0

is authorized to discharge refuse to the ground from an integrated thermomechanical / chemical thermomechanical pulp and paper mill located near Mackenzie, 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 revokes and replaces previous versions of PR-4133 and PR-04133 issued under Part 2, Section 10 of the *Waste Management Act*.

1. DEFINITIONS

For the purposes of this permit:

- 1.1. "Leachate" means any liquid and suspended materials that it contains, which has percolated through or drained from the material that has been placed in the landfill facility. Leachate does not include uncontaminated surface water.

2. AUTHORIZED DISCHARGES

- 2.1. This subsection applies to the discharge of refuse from a power boiler. The site reference number for this discharge is E240742.

- 2.1.1. Beginning June 30, 2000 the maximum authorized rate of discharge is 14,000 Bdt/year.

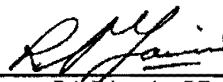
Date Issued: September 16, 1976
Date Amended: **SEP 20 2000**
(most recent)
Page: 1 of 9

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

PERMIT: PR-04133

- 2.1.2. The components of refuse that may be discharged are sand and combustion residue (ash) generated by the power boiler authorized in permit PA-03647.
- 2.1.3. The authorized works include a landfill area, referred to as the "ash landfill", and related appurtenances, are approximately located as shown on the Site Plan A and Site Plan B.
- 2.1.4. The location of the facilities from which the discharge originates and the location of the point of discharge are Lot 12572, Cariboo Land District, British Columbia. The landfill is approximately 600 m SE of the power boiler and 300 m of Dahl Lake. Latitude = 55.3456 degrees; Longitude = 123.1825 degrees.
- 2.2. This subsection applies to the discharge of **sludge from a pulp and paper mill**. The site reference number for this discharge is E211257.
- 2.2.1. The authorized rate of discharge is a maximum of 15430 wet tonnes / year.
- 2.2.2. The components of refuse that may be discharged is sludge from the primary clarifiers, settling ponds and secondary treatment ponds.
- 2.2.3. The authorized works shall include a landfill area, referred to as the "sludge landfill", and related appurtenances, are approximately located as shown on the attached Site Plan A. Native trees on the south and east sides of the landfill are present as a stabilization barrier. The edge of the sludge site on the north and west sides has expanded to the bordering roads. The sludge site does not include the area where PCB Storage Site is located.
- 2.2.4. The location of the facilities from which the discharge originates and the location of the point of discharge are Lot 12572, Cariboo Land District, British Columbia.
- 2.3. This subsection applies to the discharge of **industrial refuse from a pulp and paper mill**. The site reference number for the industrial discharge site is E211258, and the site reference number for the metal discharge site is E211259.
- 2.3.1. The authorized rate of discharge is an average of 0.1 tonnes/day to a maximum of 36 tonnes/year.
- 2.3.2. The components of refuse that may be discharged are metal, wood, plastic and miscellaneous inert industrial waste. After **June 30, 2000**, the

SEP 20 2000



R. G. Fairservice, P.Eng.
Assistant Regional Waste Manager

components of any wood residue discharges shall be limited to that which is less than one (1) meter in length.

- 2.3.3. The authorized works shall include two landfill areas, referred to as the "industrial landfill" and the "metal landfill", and related appurtenances approximately located as shown on the attached Site Plan A.
- 2.3.4. The location of the facilities from which the discharge originates and the location of the point of discharge are Lot 12572, Cariboo Land District, British Columbia.

3. **GENERAL REQUIREMENTS**

3.1. **Maintenance of Authorized 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 including, but not limited to, an unauthorized fire arising from spontaneous combustion or other causes, or the detection of leachate on the property, the Permittee shall notify the Regional Pollution Prevention office forthwith, and take appropriate remedial action.

The Permittee shall submit written documentation of any malfunction or emergency or fire that occurs at the site to the Pollution Prevention office within 30 days of the occurrence of the incident.

3.2. **Prohibition of Discharges**

Only waste materials authorized in Section 2 above shall be buried in the authorized landfill areas unless prior consent and approval in writing is granted by the Regional Waste Manager.

3.3. **Special Waste Regulation Requirements**

The Permittee shall comply with all applicable provisions of the *Special Waste Regulation* of the *Waste Management Act* (B.C. Reg. 63/88). If information or data indicates that a waste specifically authorized for the landfill may be designated as a Special Waste, excluding waste asbestos and waste contaminated with asbestos and power boiler ash, the discharge of the Special Waste shall cease immediately. This waste then shall be managed in accordance with the *Special*

Waste Regulation, and the Pollution Prevention office shall be notified with five (5) working days.

3.4. Bypasses

The discharge of refuse that has bypassed the authorized works is prohibited unless the consent of the Regional Waste Manager is obtained and confirmed in writing.

3.5. Wildlife Nuisance

A nuisance or hazard may be caused by bears or other animals attracted to these sites. Additional works may be required or the Regional Waste Manager may issue other operating instructions if such problems arise.

3.6. Upgrading of Authorized Works

The Regional Waste Manager may require upgrading of the authorized works if, based upon data and information received, it is apparent that such improvements are necessary to protect the environment. The Permittee may be required to undertake additional studies to monitor and to determine the environmental impact associated with the landfill operation.

3.7. Fugitive Dust Control

The Permittee shall suppress fugitive dust created during the transportation of ash to the landfill site, and within the landfill operation area. If airborne dust becomes a problem, in the opinion of the Regional Waste Manager, the Permittee may be required to implement additional control measures on fugitive dust sources.

3.8. Operational Requirements for Landfill Areas

3.8.1. Site Preparation and Restoration

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

3.8.2. Segregation of Metallic Wastes

The Permittee shall segregate metal waste from other types of industrial refuse, and shall maintain two separate landfill areas as authorized in Section 2.3, or as a preferred alternative, metals shall be stockpiled for salvage.

3.8.3. Prohibition of Open Burning

There shall be no open burning at the site.

3.8.4. Compaction, Covering and Grooming

The Permittee shall compact the refuse in **ash landfill** and apply cover material at least once every month.

The Permittee shall compact the refuse in **sludge landfill** at least once per every year. The Regional Waste Manager may require intermediate and final cover material.

The Permittee shall compact the refuse in the **industrial landfill and metal landfill**, and apply cover material at least once every two months.

The Regional Waste Manager may vary the frequency of covering or issue specific operating instructions when circumstances affect normal operation.

A compacted lift of refuse shall not exceed a depth of three (3) metres prior to an application of intermediate cover. Material used for cover shall be to the satisfaction of the Regional Waste Manager. The site shall be maintained in such a way to prevent pooling of surface water and minimize edge erosion.

3.8.5. General Restrictions

- No waste shall be discharged into freestanding water or into a "stream" (as defined in the Water Act). The potential for liquid entering the landfill site shall be minimized. Liquids removed from the landfill sites shall be collected and pumped into the secondary effluent treatment system at the paper mill or disposed of in a manner acceptable to the Regional Waste Manager.
- A minimum distance of 150 m (500 feet) shall be maintained between any discharged refuse and the nearest watercourse.

Date Issued: September 16, 1976
Date Amended: **SEP 20 2000**
(most recent)
Page: 5 of 9


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

PERMIT: PR-04133

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4. MONITORING AND REPORTING REQUIREMENTS

The Regional Waste Manager may in writing, modify the monitoring and reporting requirements.

4.1. Additional Monitoring and Sampling

The Permittee may be required to conduct monitoring and environmental impact assessments based on the results of visual monitoring or other information collected by Pollution Prevention staff in connection with the discharges.

4.2. Groundwater Monitoring

The Permittee shall maintain a ground water monitoring program that is acceptable to the Regional Waste Manager. The numbers, locations and design details of these facilities shall be acceptable to the Regional Waste Manager. The program should include, but is not limited to:

- Five (5) monitoring wells, identified as MW1, MW2, MW3 and two temporary wells TMW1 and TMW2 on the attached Site Plan, shall be sampled according to schedule below. Wells TMW1 and TMW2 are temporary wells and shall be monitored until refuse is added to the respective cells.
- all samples of groundwater shall be analysed for the following parameters.

PARAMETER	SAMPLING FREQUENCY*	MINIMUM DETECTION LEVEL
Total organic carbon	Twice a year	1.0 mg/l
PH	Quarterly	0.01 pH units
Barium	Twice a year	0.01 mg/l
Boron	Twice a year	0.01 mg/l
Cadmium	Twice a year	0.0001 mg/l
Chromium	Twice a year	0.001 mg/l
Lead	Twice a year	0.001 mg/l
Zinc	Twice a year	0.001 mg/l
Electrical conductivity	Quarterly	1 μ S / cm, 20 C.

- * - At least one sample shall follow Spring freshet and another shall be taken once in the fall.

4.3. Ash Monitoring

Once each year, whenever ash is being landfilled, the Permittee shall obtain one composite sample of the ash and the sample shall be analyzed according to the Leachate Extraction Procedure, Schedule IV of the *Special Waste Regulation* for metals and pH. Sample preparation for pH for the ash shall follow Section 3.25 (2) (a) of the *Transportation of Dangerous Goods Regulation* which specifies that the sample be "prepared in a 50 percent by mass mixture or solution with distilled water..."

4.4. Monitoring Procedures

Sampling, monitoring and quality assurance/quality control are to be carried out in accordance with procedures described in the latest version of *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) dated November 1996, or by suitable alternative procedures as authorized by the Regional Waste Manager.

4.5. Analyses

Except where otherwise specified, 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.

A copy of the above manual may be purchased from Queen's 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 review at all Pollution Prevention offices.

4.6. Quality Assurance

4.6.1. The Permittee shall obtain from the analytical laboratory(ies) their precision, accuracy and blank data for each sample set submitted as well as an evaluation of the data acceptability, based on the criteria set by the laboratory.

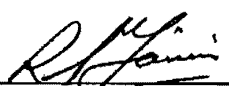
4.6.2. A duplicate sample shall be prepared and submitted for analysis for each parameter sampled during each monitoring period for one of the ground water monitoring sites.

Date Issued: September 16, 1976

Date Amended: **SEP 20 2000**

(most recent)

Page: 7 of 9


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

PERMIT: PR-04133

- 4.6.3. The analytical laboratory(ies) shall be registered in accordance with CABAL (*Canadian Association of Environmental Analytical Laboratories*) unless otherwise instructed by the Regional Waste Manager.

4.7. Reporting

4.7.1. Record of Waste Disposal

The Permittee shall maintain a record of the quantity and source of refuse disposed of in each of the landfill areas. These records shall be made available for inspection by Pollution Prevention personnel. This record of the quantity of refuse deposited on a daily basis (ash in Bdt, sludge in wet tonnes and industrial refuse in tonnes) shall be submitted on a monthly basis. Daily, monthly and annual totals shall be recorded.

Along with this record, the Permittee shall also submit a report which includes a discussion of site maintenance conducted during the month, and shall include but is not limited to:

- approximate dates of site compaction, and intermittent soil cover.

4.7.2. Reporting of Groundwater and Ash Samples

The results of the monitoring required in Sections 4.2, 4.3, 4.6 and 4.7.1 above, except where otherwise stated, shall be submitted to the regional Pollution Prevention office in a format acceptable to the Regional Waste Manager. The reports shall be submitted monthly within 30 days of the end of the month in which the monitoring occurred.

4.7.3. Closure/Restoration Plan

A site closure plan for all of the landfill operations shall be submitted by **January 31, 2001** to the Regional Pollution Prevention office for approval. The Permittee shall maintain on file a copy of the current closure plan and this plan shall be updated as necessary. The closure plan shall include, but not be limited, to the following:

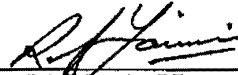
- a topographical plan showing the final elevation contours of the landfill;
- surface water diversion and drainage controls;

Date Issued: September 16, 1976

Date Amended: **SEP 20 2000**

(most recent)

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

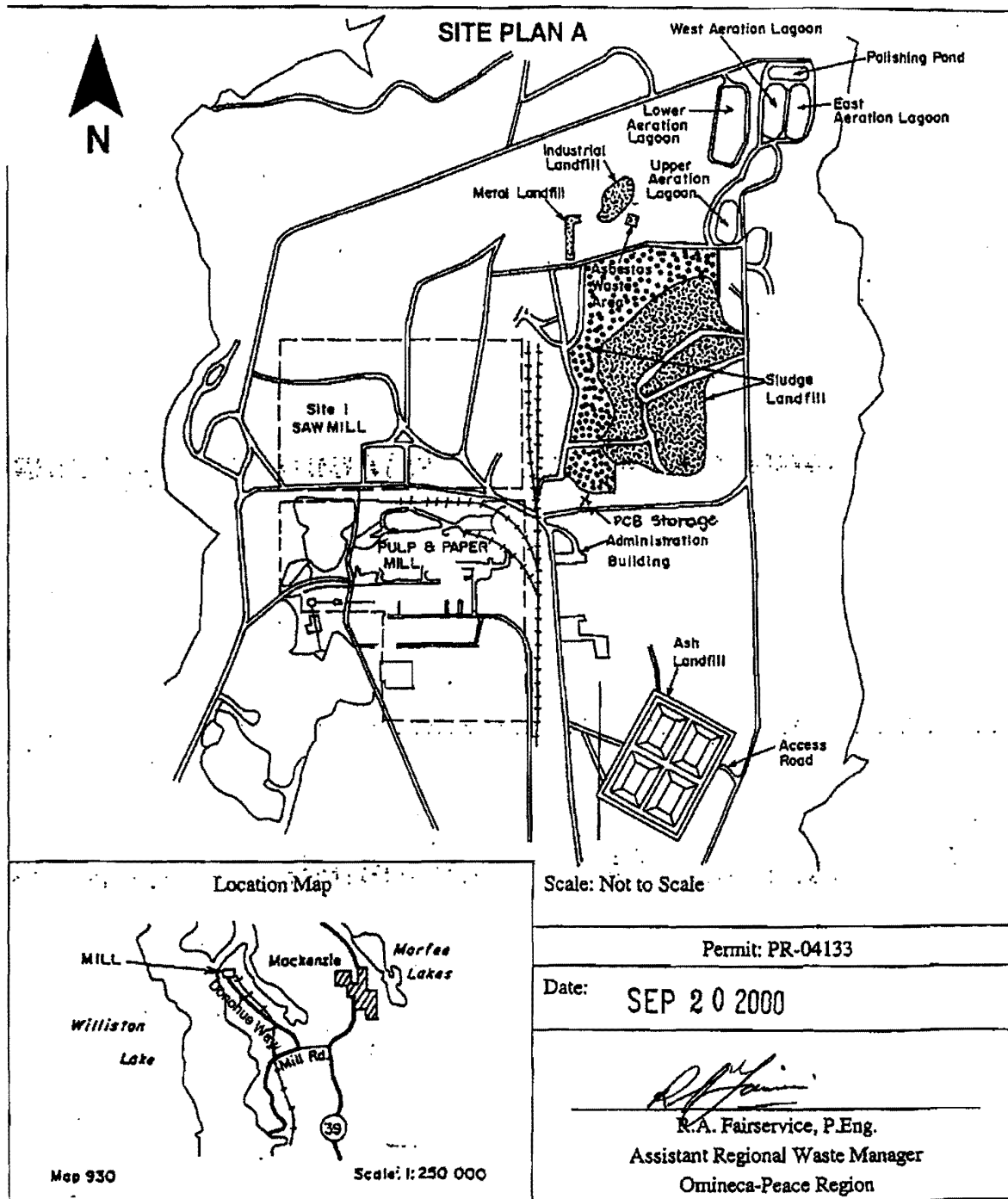
PERMIT: PR-04133

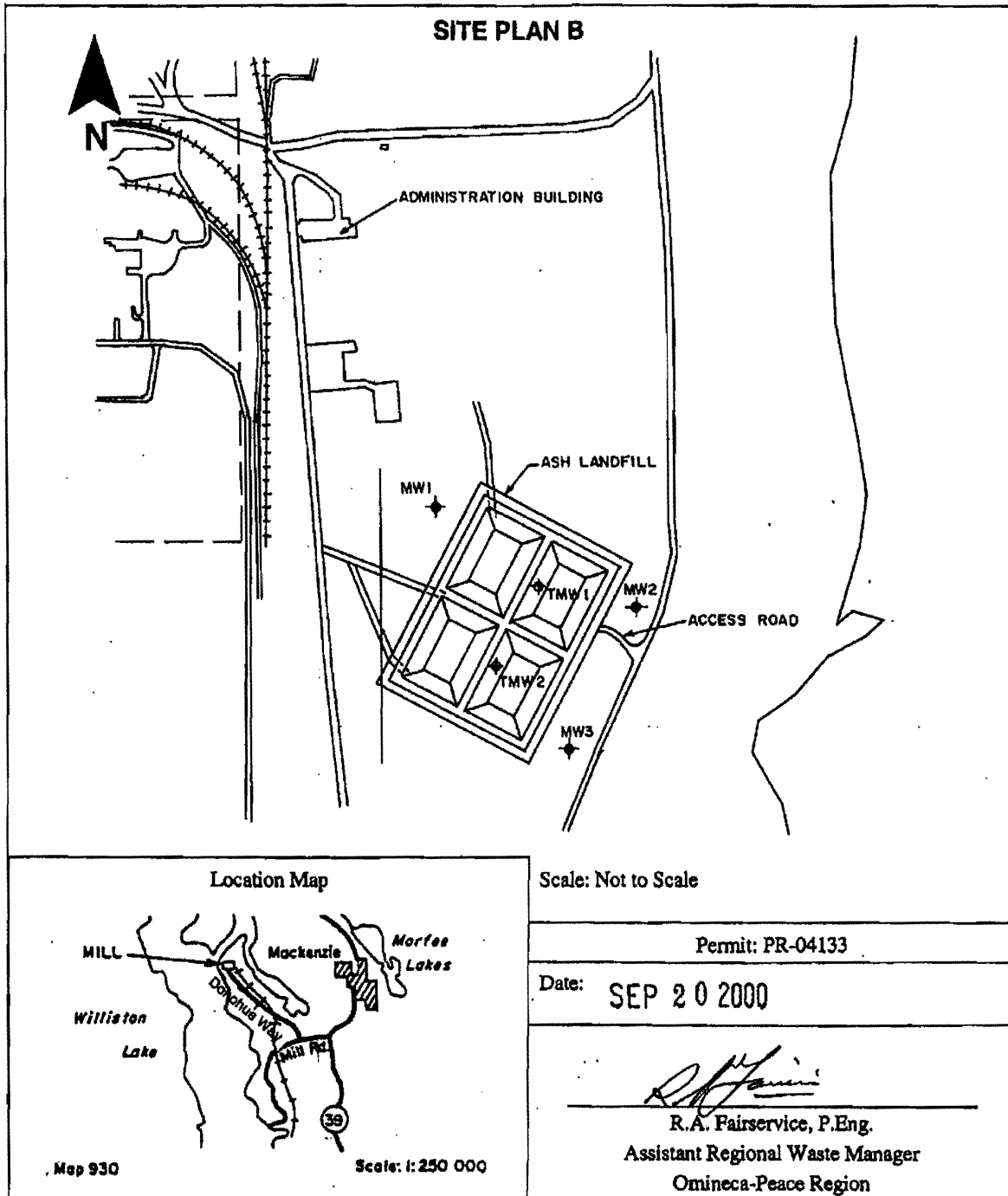
- design of the final cover, including thickness and permeability of barrier layers and top soil;
- drainage layers;
- vegetative cover;
- erosion prevention controls;
- proposed use of property after closure;
- based on the results of the ground water monitoring and visual monitoring, a plan for operation of any required pollution abatement engineering works such as leachate collection and treatment systems may be required;
- additional monitoring, and any other post-closure activities,
- and a proposed schedule of the implementation of actions and plans.

Date Issued: September 16, 1976
Date Amended: SEP 20 2000
(most recent)
Page: 9 of 9


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

PERMIT: PR-04133







Date: SEP 20 2000
REGISTERED MAIL

File: PR-04133

Produits Forestiers Donohue Inc. - Donohue Forest Products Inc.
Paper Division - Bag 2800
MACKENZIE, British Columbia V0J 2C0

Attention: Edith Asselin, Environmental Process Engineer

Dear Permittee:

Enclosed is Permit PR-04133 issued under the provisions of the *Waste Management Act*. Your attention is respectfully directed to the terms and conditions outlined in the permit. An annual permit fee will be determined according to the *Waste Management Permit Fees Regulation*.

This permit does not authorise entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorised by the owner of such lands or works. The responsibility for obtaining such authority shall rest with the permittee. This permit is issued pursuant to the provisions of the *Waste Management Act* to ensure compliance with Section 54(3) of that statute, which makes it an offence to discharge waste without proper authorisation. It is also the responsibility of the permittee to ensure that all activities conducted under this authorisation 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. Notice of the appeal must (1) be in writing, (2) include the grounds for appeal, (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria B.C., V8V 1X5 (4) be delivered within 30 days from the date notice of the decision is given, and (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Administration of this permit will be carried out by staff from our Regional Office located at 3rd Floor, 1011 Fourth Avenue, Prince George, British Columbia, V2L 3H9. Plans, data and reports pertinent to the permit are to be submitted to the Regional Waste Manager at this address.

Yours truly,

A handwritten signature in dark ink, appearing to read "R.A. Fairservice".

R.A. Fairservice, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

:enclosure

Ministry of
Environment,
Lands and Parks

Pollution Prevention
Environment and Lands
Omineca-Peace Region

Mailing Address:
1011 - 4th Avenue
Prince George, BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629



January 24, 2001

File: PR-04133

Produits Forestiers Donohue Inc. - Donohue Forest Products Inc.
P.O. Bag 2800
Mackenzie BC V0J 2C0

Attention: Sophie Mullen

Dear Sophie:

Re: Groundwater Wells for Ash Landfill, Old Boneyard and Sludge Landfill

At your request dated September 28, 2000 and as per Section 4 of PR-04133, I hereby modify the location and the number of monitoring wells as required by Section 4.2 of PR-04133. The relevant portion of Section 4.2 now reads:

- Four (4) monitoring wells, identified as MW1, MW2, TMW1 and TMW2 on the attached Site Plan B, shall be sampled according to the schedule listed in permit PR-04133 (amended September 20, 2000). Wells TMW1 and TMW2 are temporary wells and shall be monitored until refuse is added to the respective wells.
- As well Site Plan B has been amended and is attached. Please append this Site Plan to permit PR-04133 amended September 30, 2000.

This change in the location and number of wells has been granted to best allow monitoring of the area where the ash is actively been added to the site.

As well, in accordance with Section 3.2 of PR-04133 and at your request dated November 13, 2000 given the discovery of an "old boneyard" on the edge of the existing sludge site, I hereby approve the disposal of sludge on this "old boneyard" provided the following conditions are met:

- Large pieces of metal (including, but not limited to, old tanks and crushed culverts) shall be removed from the area and either marked for salvage wherever possible or landfilled in the landfill that has been designated for metal.
- Exposed logs and chunks of wood greater than 1 meter in length shall be removed from the site.
- Standing water will be redirected from the area and appropriate drainage will be installed to ensure that water does not pool in the area.
- The area will be covered, compacted, contoured and restored according to a closure plan approved by the Regional Waste Manager.
- The area of the "old boneyard" is restricted to the area marked on Site Plan A. Site Plan A has been amended and is attached. Please append this Site Plan to permit PR-04133 amended September 30, 2000.

Ministry of
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Environment and Lands
Omineca-Peace Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2K 3H9

Telephone: (250) 565-6459
Facsimile: (250) 565-6629

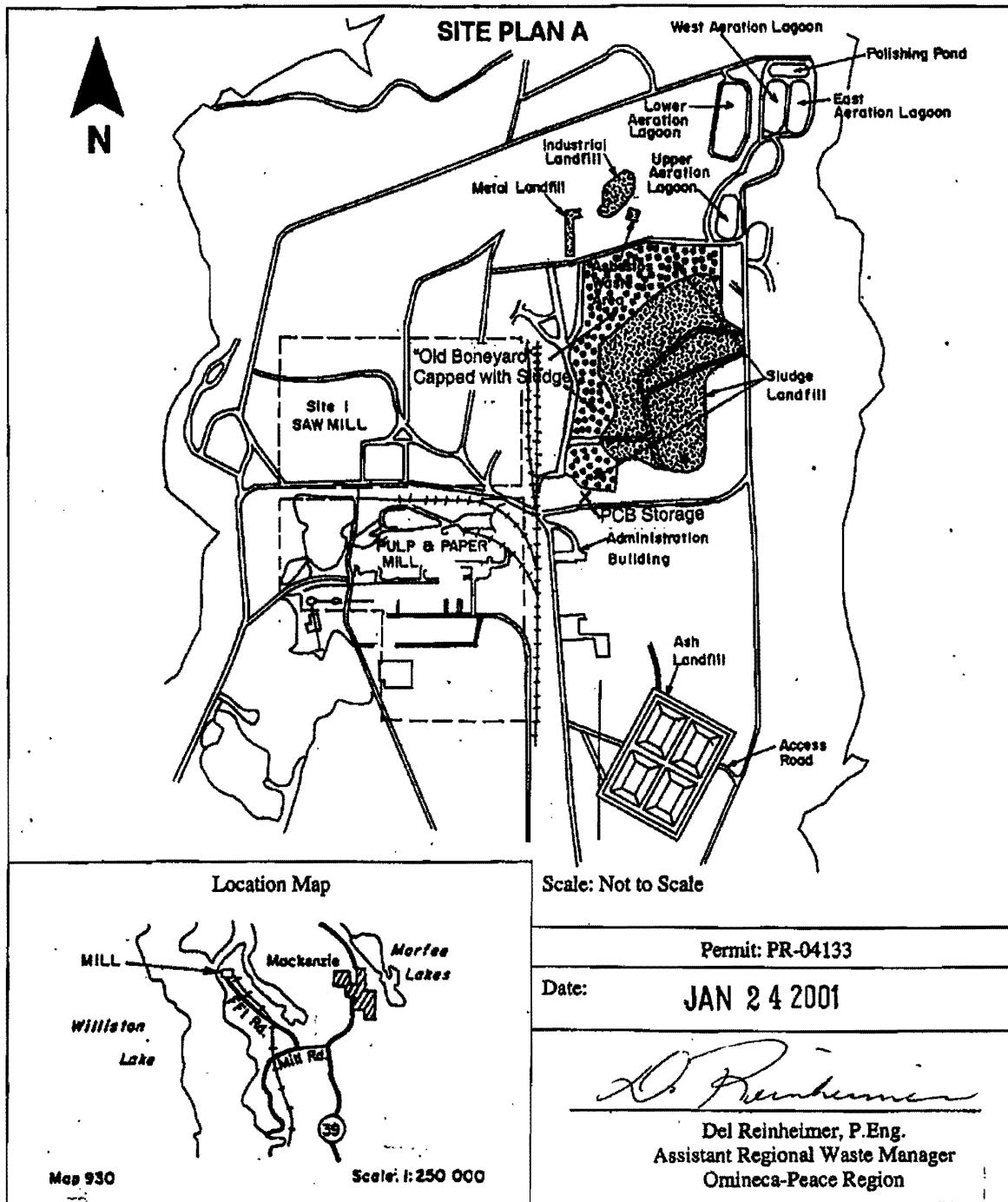
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If you have any questions about these issues please contact Maureen Blawchuk at 250-565-6459.

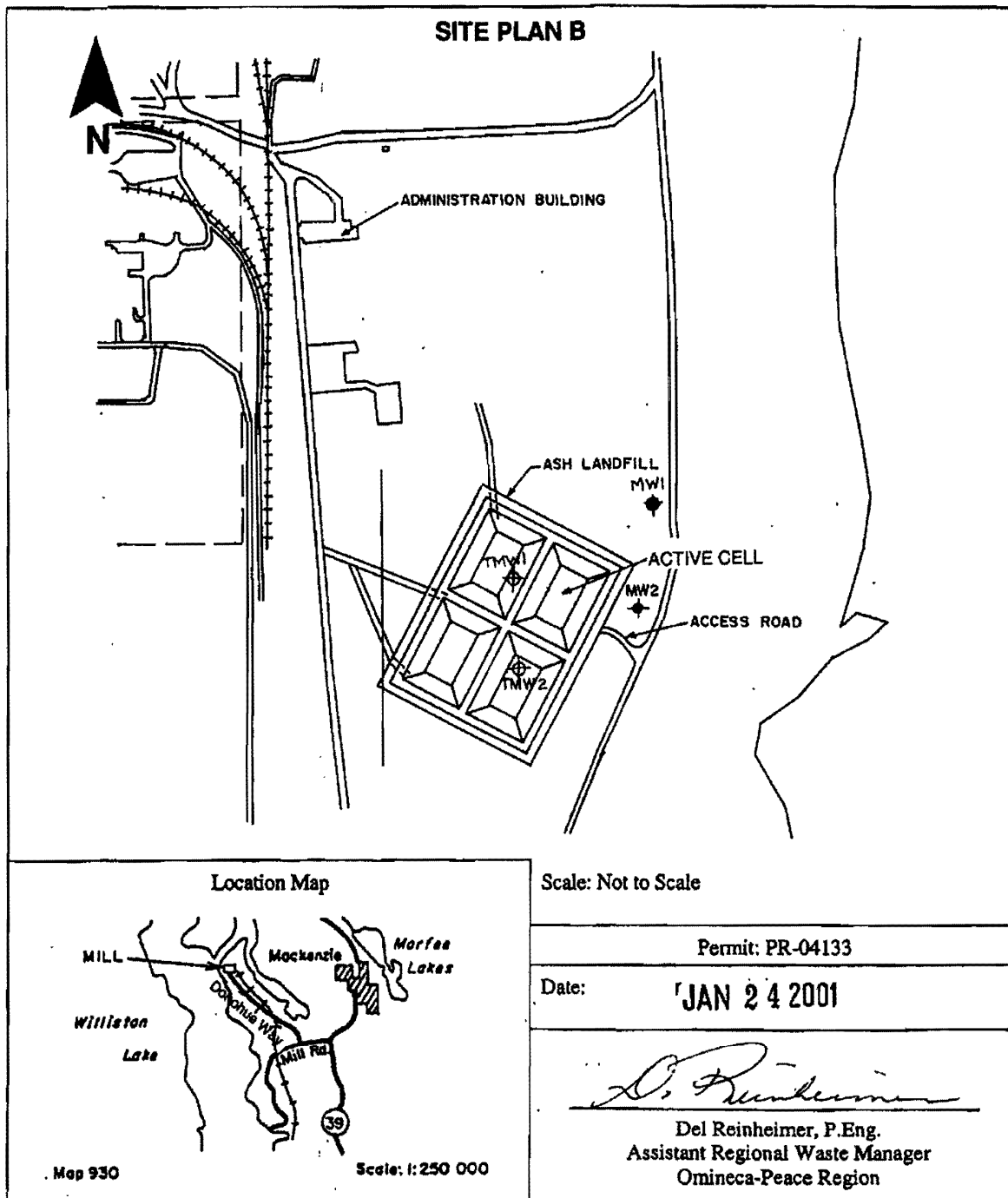
Yours truly,



Del Reinheimer, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

:msb / enclosure
cc. Environment Canada







17
D.R.
MSB

FAX TO: 250-997-6723

January 25, 2001

File: PR-04133

Products Forestiers Donohue Inc. - Donohue Forest Products Inc.
P.O. Bag 2800
Mackenzie BC V0J 2C0

Attention: Sophie Mullen

Dear Sophie:

Re: Extension for Closure Plan for PR-04133

At your request dated January 25, 2001 and as per Section 4 of PR-04133, I hereby approve an extension for the deadline of the Closure / Restoration Plan. The Closure / Restoration Plan required by Section 4.7.3 of permit PR-04133 shall now be submitted to this Regional Pollution Prevention office by **February 9, 2001**.

This extension will allow Donohue Forest Products sufficient time to compile all the necessary information including the relevant site contour maps.

If you have any questions about these issues please contact Maureen Bilawchuk at 250-565-6459.

Yours truly,

A handwritten signature in black ink, appearing to read "Del Reinheimer".

Del Reinheimer, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

:msb

Ministry of
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Lands and Parks

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Environment and Lands
Omineca-Peace Region

Mailing Address:
325 - 1011 Fourth Avenue
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Telephone: (250) 565-6459
Facsimile: (250) 565-6629



18
File: PR-04133

REGISTERED MAIL

January 7, 2002

Produits Forestiers Donohue Inc. – Donohue Forest Products Inc.
PO Bag 2800
Mackenzie BC V0J 2C0

Attention: Sophie Mullen
Environmental Coordinator

Dear Sophie,

Re: PERMIT AMENDMENT FOR PR-04133

Further to and as per the request dated December 11, 2001 by McCarthy Tetrault LLP, and in accordance with Section 13 of the *Waste Management Act*, Permit PR-04133 (dated September 18, 1976 and last amended January 25, 2001), is hereby amended so the Permit Holder for this permit is now:

**Compagnie Abitibi-Consolidated du Canada – Abitibi-Consolidated
Company of Canada**
PO Bag 2800
Mackenzie BC V0J 2C0

This decision may be appealed to the Environmental Appeal Board. Notice of the appeal must:

- (1) be in writing,
- (2) include the grounds for appeal,
- (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria B.C., V8V 1X5
- (4) be delivered within 21 days from the date notice of the decision is given, and
- (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Please attach this letter to the original permit. If you have any questions, please feel free to contact Maureen Bilawchuk at 250-565-6459.

Yours truly,

A handwritten signature in black ink, appearing to read "D. Reinheimer".

Del Reinheimer, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

msb / cc. Jim Tilerle, McCarthy Tetrault LLP, PO Box 10424, Pacific Centre, Suite 1300, 777
Dunsmuir Street, Vancouver, BC, V7Y 1K2.

**Ministry of Water,
Land and Air
Protection**

Pollution Prevention
Environment and Lands
Omineca-Peace Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6165
Facsimile: (250) 565-6629



19
FAXED

File: PR-04133, PR-15166

SENT BY FAX TO: 250-997-6723

January 15, 2002

Abitibi-Consolidated Company of Canada
PO Box 2800
Mackenzie BC V0J 2C0

Attention: Sophie Mullen

Dear Sophie,

Re: Extension for Site Closure Plans for Landfills (PR-04133 and PR-15166)

Further to my letters to you dated September 14, 2001 concerning the site closure plans for the landfills associated with PR-04133 and PR-15166, and at your request dated January 15, 2002, I hereby require that the updated site closure plans be submitted by **March 31, 2002**. Please note that the site closure plans associated with these sites have not been endorsed by me.

As well, further to letter of June 18, 2001, and as per Section 3.4 of PR-04133, I hereby approve the extension for the report on the evaluation of the sludge application project. This report shall be submitted by **March 31, 2002**. I trust the extra time for your submission will provide the extra opportunity to include all recent information so that closure and post-closure strategies will minimize any long term problems at the sites.

If you have any questions, please feel free to contact me or Maureen Blawchuk.

Yours truly,

A handwritten signature in black ink, appearing to read "Del Reinheimer".

Del Reinheimer, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

:msb

Ministry of
Water, Land and Air
Protection

Pollution Prevention
Environment and Lands
Omineca-Peace Region

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325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629



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File: PR-04133

FAX TO: 250-997-8723

April 7, 2005

Abitibi-Consolidated Company of Canada
Bag 2800
Mackenzie BC V0J 2C0

Attention: Stephanie Thibeault, Acting Environmental Coordinator

Dear Stephanie,

Re: Authorization of Waste Activated Carbon – Prohibition of Discharges

In accordance with Section 3.2 of permit PR-04133 and as per your email request dated April 7, 2005, I hereby authorize the disposal of spent activated carbon from filters on the west side of the TMP building to the sludge landfill authorized by Section 2.2 of permit PR-04133.

This authorization is given on the conditions that:

- the material does not contain any hazardous material,
- the estimated quantity of material to be landfilled is approximately 44 ft³,
- the disposal and landfill will occur before April 15, 2005,
- every caution necessary shall be taken to ensure that dust is minimized while the material is taken out of service and disposed of in the landfill. Precautions may include, but are not limited to, covering the material immediately upon placement in the landfill.

All other terms and conditions of the subject Permit PR-04133 remain in full force and effect.

Yours truly,

Del Reinheimer, P.Eng.
For Director, Environmental Management Act
Omineca and Peace Regions

:msb

Ministry of Water,
Land and Air
Protection

Environmental Protection Division
Regional Operations Branch
Omineca and Peace Regions

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629



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REGISTERED MAIL

File: PR-04133

Date: August 26, 2008

Abitibi-Consolidated Company of Canada
Bag 2800
Mackenzie, British Columbia V0J 2C0

Attention: Brian Richman - Site Coordinator

Re: Permit Amendments to PR-04133

Dear Brian:

I am in receipt of a permit amendment application, dated April 22, 2005, for permit PR-04133. This application requests an increase to the authorized rate of discharge of refuse from a power boiler from 14,000 Bdt/year to 15,386 Bdt/year, until January 7, 2007. Since this time has passed and the amendment was not processed prior to January 7, 2007 it will not be retroactively be amended.

The amendment request included removal of the part of section 2.2.3 of permit PR-04133 which states "Native trees on the south and east sides of the landfill are present as a stabilization barrier". The removal of this portion of the clause is authorized as the trees had to be removed due to Mountain Pine Beetle infestation. Section 2.2.3 now reads:

2.2.3. The authorized works shall include a landfill area, referred to as the "sludge landfill", and related appurtenances, are approximately located as shown on the attached Site Plan A. The edge of the sludge site on the north and west sides has expanded to the bordering roads. The sludge site does not include the area where PCB Storage Site is located.

The final amendment request is to have the Leachate Extraction Procedure required by section 4.3 of permit PR-04133 be changed to the Toxicity Characteristic Leaching Procedure to reflect the changes to the *Hazardous Waste Regulation*. Section 4.3 now reads:

4.3. Ash Monitoring

Once each year, whenever ash is being landfilled, the Permittee shall obtain one composite sample of the ash and the sample shall be analyzed according to the US EPA Method 1311, Toxicity Characteristic Leaching Procedure (TCLP), as required under the definition of Leachable Toxic Waste by the *Hazardous Waste Regulation*. Sample preparation for pH for the

Ministry of Environment

Environmental Protection Division
Regional Operations Branch
Omineca and Peace Regions

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Telephone: (250) 565-6135
Facsimile: (250) 565-6629
Website: www.gov.bc.ca/env

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ash shall follow Section 3.25 (2) (a) of the *Transportation of Dangerous Goods Regulation* which specifies that the sample be "prepared in a 50 percent by mass mixture or solution with distilled water..."

All other terms and conditions of PR-04133 remain in full force and effect.

These decisions 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.

If you should have any questions with regards to the above amendments, please do not hesitate to call myself at (250) 565-6459, Peter Lawrie (250) 565-4394.

Yours truly,

Maureen Bilawchuk

Maureen Bilawchuk, P.Ag.
for Director, *Environmental Management Act*
Omineca and Peace Regions

Enclosure

cc: Environment Canada
Sophie Mullen, Environmental Consultant



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Authorization Number: PR-4133
Tracking Number: 9416

REGISTERED MAIL

Date: September 16, 2008

Abitibi-Consolidated Company of Canada
Bag 2800
Mackenzie, British Columbia
V0J 2C0

Attention Brian Richman-Site Coordinator

Re: AMENDMENT OF PERMIT PR-4133

Dear Permittee:

Pursuant to Section 16 of the *Environmental Management Act*, Permit PA-01675 issued September 16, 1976 and last amended September 7, 2005, is hereby amended to temporarily reduce the authorized discharges to ground during a planned temporary operations shut down of the pulp mill operation located at Lot 12572, Cariboo Land District, Mackenzie, British Columbia. This amendment is in effect from September 16, 2008 to September 16, 2010. After this period the authorized discharge rates and conditions specified in the permit last amended on August 26, 2008 remain in effect.

The following sections of the permit are temporarily amended to reduce the authorized discharge rates as follows:

Section 2.1 This subsection applies to the discharge of refuse from a power boiler. The site reference number for this discharge is E240742.

2.1.1 Beginning September 16, 2008 the maximum authorized rate of discharge is zero (0) Bdt/year.

Section 2.2 This subsection applies to the discharge of sludge from a pulp and paper mill. The site reference number for this discharge is E211257.

2.2.1. The authorized rate of discharge is a maximum of zero (0) wet tonnes/year.

Section 2.3 This subsection applied to the discharge of industrial refuse from a pulp and paper mill. The site reference number for the industrial discharge site is E211258, and the site reference number for the metal discharge site is E211259.

2.3.1 The authorized rate of discharge is an average of zero (0) tonnes/day to a maximum of zero (0) tonnes/year.

Ministry of
Environment

Regional Operations
Omineca and Peace Regions

Mailing/Location Address
326 - 1011 Fourth Ave.
Prince George, V2L 3H9

Telephone: (250) 566-6135
Facsimile: (250) 566-6629
<http://www.gov.bc.ca/>
<http://www.gov.bc.ca/env>

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Your attention is respectfully directed to the conditions of the permit. All other terms and conditions of the permit remain in full force. Please be aware that as a result of this amendment there is to be absolutely no disposal of any waste material to ground at the pulp mill site for the period of the amendment. Please also be advised that the refuse permits associated with the company's adjacent sawmill sites (PR-04984, PR-15668, & PR-06207) do not authorize the disposal of materials from the pulpmill.

An annual fee for the permit will be determined in accordance with the Permit Fees Regulation. A copy of the permit is enclosed for your records.

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. It is also the responsibility of the permittee to ensure that all activities conducted under this permit are carried with due 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 Omineca Region. Plans, data, and reports pertinent to the permit are to be submitted to the Regional Manager, Environmental Protection, at Ministry of Environment, Regional Operations, Omineca and Peace Regions, 325-1011 Fourth Ave., Prince George, V2L 3H9.

Yours truly,

Maureen Bilawchuk

Maureen Bilawchuk, P.Ag,
for Director, *Environmental Management Act*
Omineca and Peace Regions

Enclosure

cc: Environment Canada



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Authorization Number : PR-04133

REGISTERED MAIL

Date: February 17, 2009

Abitibi-Consolidated Company of Canada
Bag 2800
Mackenzie, British Columbia
V0J 2C0

Attention Wayne Lewis-Site Coordinator

Re: **AMENDMENT OF PERMIT PR-4133-Correction and Revision**

Dear Permittee:

Please be advised that a correction is required to the previous revision of permit PR-4133 issued September 16, 2008. The first line of the permit refers to permit PA-01675, whereas it is PR-04133 that was to be amended.

In addition, in response to a letter from Mr. Richman dated September 18, 2008, the reporting frequency outlined in Section 4.7 of permit PR-04133 is amended to reflect the change in operation.

The following replaces the permit amendment letter dated September 16, 2008.

Pursuant to Section 16 of the *Environmental Management Act*, Permit PR-04133 issued September 16, 1976 and last amended September 16, 2008, is hereby amended to temporarily reduce the authorized discharges to ground during a planned temporary operations shut down of the pulp mill operation located at Lot 12572, Cariboo Land District, Mackenzie, British Columbia. This amendment is in effect from September 16, 2008 to September 16, 2010. After this period the authorized discharge rates and conditions specified in the permit last amended on August 26, 2008 remain in effect.

The following sections of the permit are temporarily amended to reduce the authorized discharge rates as follows:

Section 2.1 This subsection applies to the discharge of refuse from a power boiler. The site reference number for this discharge is E240742.

2.1.1 Beginning September 16, 2008 the maximum authorized rate of discharge is zero (0) Bdt/year.

Section 2.2 This subsection applies to the discharge of sludge from a pulp and paper mill. The site reference number for this discharge is E211257.

Ministry of
Environment

Regional Operations
Omineca and Peace Regions

Mailing/Location Address
325 - 1011 Fourth Ave.
Prince George, V2L 3H9

Telephone: (250) 565-6135
Facsimile: (250) 565-6629
<http://www.gov.bc.ca/>
<http://www.gov.bc.ca/env>

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2.2.1. The authorized rate of discharge is a maximum of zero (0) wet tonnes/year.

Section 2.3 This subsection applied to the discharge of industrial refuse from a pulp and paper mill. The site reference number for the industrial discharge site is E211258, and the site reference number for the metal discharge site is E211259.

2.3.1 The authorized rate of discharge is an average of zero (0) tonnes/day to a maximum of zero (0) tonnes/year.

Section 4.7.1 Record of Waste Disposal

The Permittee shall maintain a record of the quantity and source of refuse disposed of in each of the landfill areas. These records shall be made available for inspection by Environmental Protection personnel. This record of the quantity of refuse deposited on a daily basis (ash in Bdt, sludge in wet tones and industrial refuse in tones) shall be submitted on a quarterly basis for the following periods:

- January 1st to March 31st;
- April 1st to June 30;
- July 1st to September 30; and
- October 1st to December 31,

for the duration of the shutdown. The report is to be submitted within 30 calendar days of the end of the period.

Daily, monthly, and totals shall be recorded.

Along with this record, the Permittee shall also submit a report which includes a discussion of site maintenance conducted during the month, and shall include but is not limited to:

- Approximate dates of site compaction and intermittent soil cover.

Your attention is respectfully directed to the conditions of the permit. All other terms and conditions of the permit remain in full force.

Please be aware that as a result of this amendment there is to be absolutely no disposal of any waste material to ground at the pulp mill site for the period of the amendment. Please also be advised that the refuse permits associated with the company's adjacent sawmill sites (PR-04984, PR-15668, & PR-06207) do not authorize the disposal of materials from the pulp mill.

An annual fee for the permit will be determined in accordance with the Permit Fees Regulation. A copy of the permit is enclosed for your records.

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. It is also the responsibility of the

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Permittee to ensure that all activities conducted under this permit are carried with due 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 Omineca Region. Plans, data, and reports pertinent to the permit are to be submitted to the Regional Manager, Environmental Protection, at Ministry of Environment, Regional Operations, Omineca and Peace Regions, 325-1011 Fourth Ave., Prince George, V2L 3H9.

Yours truly,



Del Reinheimer, PEng.
for Director, *Environmental Management Act*
Omineca and Peace Regions

Enclosure

cc: Environment Canada

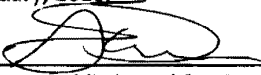
This is Exhibit "9"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 9



Pollution Prevention
1011 Fourth Avenue
Prince George
British Columbia V2L 3H8
Telephone: (250) 565-6155
Fax: (250) 565-6629

MINISTRY OF ENVIRONMENT,
LANDS AND PARKS

PERMIT
PR-15166

Under the Provisions of the Waste Management Act

Finlay Forest Industries Inc.

Pulp Mill - Bag 2800

MACKENZIE BC V0J 2C0

is authorized to discharge refuse to the ground from an integrated thermomechanical / chemical thermomechanical pulp and paper mill located near Mackenzie, 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 revokes and replaces approval number AR-14694 and previous versions of PR-15166 issued under Part 2, Section 10 of the *Waste Management Act*.

1. DEFINITIONS

For the purposes of this permit:

- 1.1. "Leachate" means any liquid and suspended materials which it contains, which has percolated through or drained from the material that has been placed in the landfill facility. Leachate does not include uncontaminated surface water.

2. AUTHORIZED DISCHARGES

- 2.1. This subsection applies to the discharge of refuse from a power boiler. The site reference number for this discharge is E223785. Authorization for this discharge expires July 31, 2000.

- 2.1.1. The maximum authorized rate of discharge is 14,000 Bdt/year, except in 1999 when an additional 19,762 Bdt of material which had been temporary

Date Issued: March 30, 1999
Date Amended: **SEP 28 1999**
(most recent)
Page: 1 of 7

B.A. Fairservice, P.Eng.
Assistant Regional Waste Manager

PERMIT: PR-15166

been stored at this site between October 1997 and March 1999, is now authorized to be landfilled.

- 2.1.2. The components of refuse which may be discharged are sand and combustion residue (ash) generated by the power boiler authorized in permit PA-03647.
- 2.1.3. The authorized works of the landfill shall include a landfill area and related appurtenances, are approximately located as shown on the attached Site Plan A.
- 2.1.4. The location of the facilities from which the discharge originates and the location of the point of discharge is Lot 12572, Cariboo Land District, British Columbia.

3. GENERAL REQUIREMENTS

3.1. Maintenance of Authorized 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 including, but not limited to, an unauthorized fire arising from spontaneous combustion or other causes, or the detection of leachate on the property, the Permittee shall notify the Regional Pollution Prevention office forthwith, and take appropriate remedial action.

The Permittee shall submit written documentation of any malfunction or emergency or fire which occurs at the site to the Pollution Prevention office within 30 days of the occurrence of the incident.

3.2. Prohibition of Discharges

Only waste materials authorized in Section 1 above shall be buried in the authorized landfill areas unless prior consent and approval in writing is granted by the Regional Waste Manager.

3.3. Bypasses

The discharge of refuse which has bypassed the authorized works is prohibited unless the consent of the Regional Waste Manager is obtained and confirmed in writing.

3.4. Upgrading of Authorized Works

The Regional Waste Manager may require upgrading of the authorized works if, based upon data and information received, it is apparent that such improvements are necessary to protect the environment. The Permittee may be required to undertake additional studies to monitor and to determine the environmental impact associated with the landfill operation.

3.5. Fugitive Dust Control

The Permittee shall suppress fugitive dust created during the transportation of ash to the landfill site, and within the landfill operation area. If airborne dust becomes a problem, in the opinion of the Regional Waste Manager, the Permittee may be required to implement additional control measures on fugitive dust sources.

3.6. Operational Requirements for Landfill Areas

3.6.1. Site Preparation and Restoration

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

3.6.2. Prohibition of Open Burning

There shall be no open burning at the site.

3.6.3. Compaction, Covering and Grooming

The Permittee shall compact the refuse and apply cover material at least once every month. The Regional Waste Manager may vary the frequency of covering or issue specific operating instructions when circumstances affect normal operation. The site shall be maintained in such a way to prevent pooling of surface water and minimize edge erosion.

3.6.4. General Restrictions

- No waste shall be discharged into free standing water or into a "stream" (as defined in the Water Act). The potential for liquid entering the landfill site shall be minimized. Liquids removed from the landfill sites shall be collected and pumped into the secondary effluent treatment system at the paper mill or disposed of in a manner acceptable to the Regional Waste Manager.

Date Issued: March 30, 1999
Date Amended: SEP 28 1999
(most recent)
Page: 3 of 7


R. K. Fairservice, P.Eng.
Assistant Regional Waste Manager

PERMIT: PR-15166

- A minimum distance of 150 m (500 feet) shall be maintained between any discharged refuse and the top of the bank along Williston Lake .

4. MONITORING AND REPORTING REQUIREMENTS

The Regional Waste Manager may in writing, modify the monitoring and reporting requirements.

4.1. Additional Monitoring and Sampling

The Permittee may be required to conduct monitoring and environmental impact assessments based on the results of visual monitoring or other information collected by Pollution Prevention staff in connection with the discharges.

4.2. Groundwater Monitoring

The Permittee shall maintain a ground water monitoring program which is acceptable to the Regional Waste Manager. The numbers, locations and design details of these facilities shall be acceptable to the Regional Waste Manager. The program should include, but is not limited to:

- two monitoring wells, identified as TH-1 and TH-2 on the attached Site Plan, shall be sampled according to schedule below.
- all samples of groundwater shall be analysed for the following parameters.

PARAMETER	SAMPLING FREQUENCY*	MINIMUM DETECTION LEVEL
total organic carbon	Twice a year	1.0 mg/l
pH	Quarterly	0.01 pH units
barium	Twice a year	0.01 mg/l
boron	Twice a year	0.01 mg/l
cadmium	Twice a year	0.0001 mg/l
chromium	Twice a year	0.001 mg/l
lead	Twice a year	0.001 mg/l
zinc	Twice a year	0.001 mg/l
electrical conductivity	Quarterly	1 μ S / cm, 20 C.

- * - At least one sample shall follow Spring freshet and another shall be taken once in the fall.

- The groundwater monitoring program shall be maintained until October 31, 2005, or unless otherwise specified in writing by the Regional Waste Manager. At the end of this period and by December 31, 2005, the Permittee shall submit to the regional Pollution Prevention office a summary of all ash and groundwater data including QA/QC data. The report shall include a discussion of results, an assessment on the receiving environment and recommendations if further action is necessary to protect the environment.

4.3. Ash Monitoring

Once each year, whenever ash is being landfilled, the Permittee shall obtain one composite sample of the ash and the sample shall be analyzed according to the Leachate Extraction Procedure, Schedule IV of the *Special Waste Regulation* for metals and pH. Sample preparation for pH for the ash shall follow Section 3.25 (2) (a) of the *Transportation of Dangerous Goods Regulation* which specifies that the sample be "prepared in a 50 percent by mass mixture or solution with distilled water...".

4.4. Monitoring Procedures

Sampling, monitoring and quality assurance/quality control are to be carried out in accordance with procedures described in the latest version of *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) dated November 1996, or by suitable alternative procedures as authorized by the Regional Waste Manager.

4.5. Analyses

Except where otherwise specified, 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.

A copy of the above manual may be purchased from Queen's 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 review at all Pollution Prevention offices.

4.6. Quality Assurance

- 4.6.1. The Permittee shall obtain from the analytical laboratory(ies) their precision, accuracy and blank data for each sample set submitted as well as

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an evaluation of the data acceptability, based on the criteria set by the laboratory.

- 4.6.2. A duplicate sample shall be prepared and submitted for analysis for each parameter sampled at the one of the ground water monitoring sites during each monitoring period.
- 4.6.3. The analytical laboratory(ies) shall be registered in accordance with CAEAL (*Canadian Association of Environmental Analytical Laboratories*) unless otherwise instructed by the Regional Waste Manager.

4.7. Reporting

4.7.1. Record of Waste Disposal

The Permittee shall maintain a record of the quantity and source of refuse disposed of in the landfill areas. These records shall be made available for inspection by Pollution Prevention personnel. This record of the quantity of refuse deposited on a daily basis (in Bdt) shall be submitted on a monthly basis. Daily, monthly and annual totals shall be recorded.

Along with this record, the Permittee shall also submit a report which includes a discussion of site maintenance conducted during the month, and shall include but is not limited to:

- approximate dates of site compaction, and intermittent soil cover.

4.7.2. Reporting of Groundwater and Ash Samples

The results of the monitoring required in Sections 4.2, 4.3, 4.6 and 4.7.1 above, except where other stated, shall be submitted to the regional Pollution Prevention office in a format acceptable to the Regional Waste Manager. The reports shall be submitted monthly within 30 days of the end of the month in which the monitoring occurred.

4.7.3. Closure/Restoration Plan

A current site closure plan shall be submitted by **November 30, 1999** to the Regional Pollution Prevention office for approval. The Permittee shall maintain on file a copy of the current closure plan and this plan shall be updated as necessary. The closure plan shall include, but not be limited, to the following:

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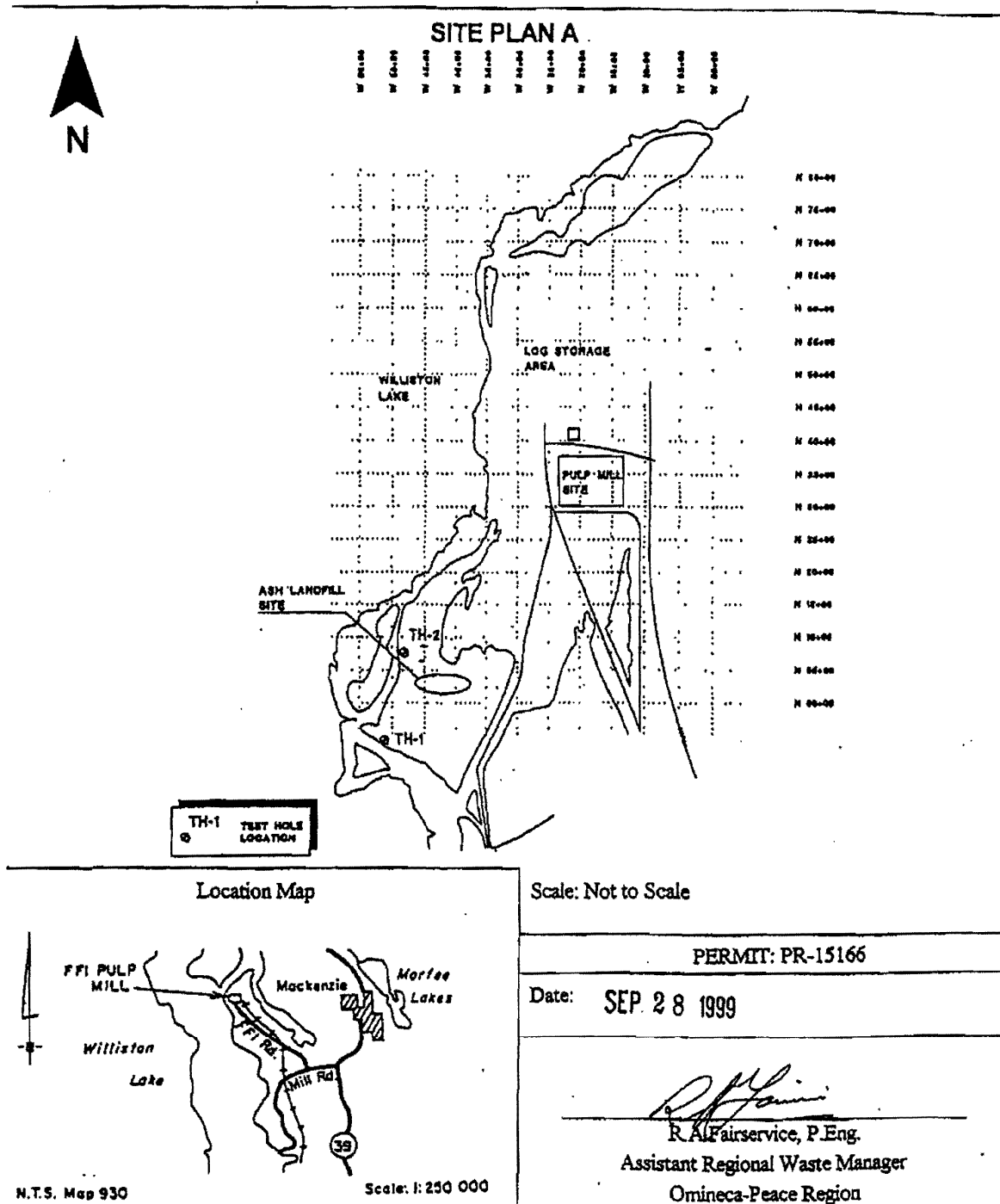
- a topographical plan showing the final elevation contours of the landfill;
- surface water diversion and drainage controls;
- design of the final cover, including thickness and permeability of barrier layers and top soil;
- drainage layers;
- vegetative cover;
- erosion prevention controls;
- proposed use of property after closure;
- based on the results of the ground water monitoring and visual monitoring, a plan for operation of any required pollution abatement engineering works such as leachate collection and treatment systems may be required;
- additional monitoring, and any other post-closure activities,
- and a proposed schedule of the implementation of actions and plans.

Date Issued: March 30, 1999
Date Amended: **SEP 28 1999**
(most recent)
Page: 7 of 7



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

PERMIT: PR-15166





Date: SEP 28 1999
REGISTERED MAIL

File: PA-15166

Finlay Forest Industries Inc.
Bag 2800
MACKENZIE, British Columbia V0J 2C0

Attention: Brian Houle, P.Eng.

Dear Permittee:

Enclosed is Permit PA-15166 issued under the provisions of the *Waste Management Act*. Your attention is respectfully directed to the terms and conditions outlined in the permit. An annual permit fee will be determined according to the *Waste Management Permit Fees Regulation*.

This permit does not authorise entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorised by the owner of such lands or works. The responsibility for obtaining such authority shall rest with the permittee. This permit is issued pursuant to the provisions of the *Waste Management Act* to ensure compliance with Section 54(3) of that statute, which makes it an offence to discharge waste without proper authorisation. It is also the responsibility of the permittee to ensure that all activities conducted under this authorisation 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. Notice of the appeal must (1) be in writing, (2) include the grounds for appeal, (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria B.C., V8V 1X5 (4) be delivered within 30 days from the date notice of the decision is given, and (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Administration of this permit will be carried out by staff from our Regional Office located at 3rd Floor, 1011 Fourth Avenue, Prince George, British Columbia, V2L 3H9. Plans, data and reports pertinent to the permit are to be submitted to the Regional Waste Manager at this address.

Yours truly,

R.A. Fairservice, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

enclosure /cc. Vitezslav Kumpera, Environmental Engineer, Finlay Forest Industries Inc.

Ministry of
Environment,
Lands and Parks

Pollution Prevention
Environment and Lands
Omineca-Peace Region

Mailing Address:
1011 - 4th Avenue
Prince George, BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629



10
File: PR-15166

REGISTERED MAIL

December 6, 1999

Finlay Forest Industries Inc.
PO Bag 2800
Mackenzie BC V0J 2C0

Attention: Victor Kumpere

Dear Permittee,

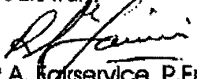
Re: Permit Amendment for PR-15166

As per the request dated October 27, 1999 by Ladner Downs Barristers & Solicitors, and in accordance with Section 13 of the Waste Management Act, Permit PR-15166 (dated March 30, 1999 with an amendment date of September 28, 1999) is hereby amended so that the Permit Holder for this permit is now:

Produits Forestiers Donohue Inc. - Donohue Forest Products Inc.
PO Bag 2800
Mackenzie BC V0J 2C0

This decision may be appealed to the Environmental Appeal Board. Notice of the appeal must: (1) be in writing, (2) include the grounds for the appeal, (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria, BC, V8V 1X5, (4) be delivered within 21 days from the date notice of the decision is given, and (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Yours truly,


R.A. Karservice, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

:msb/ cc. Original to be sent to Robert Owen, Ladner Downs Barristers & Solicitors, 1200 Waterfront Centre, 200 Burrard Street, PO Box 48600, Vancouver, BC, V7X 1T2.
cc. Huges Simon, Comptroller, Donohue Forest Products Inc., PO Box 250, Mackenzie, V0J 2C0.

**Ministry of
Environment,
Lands and Parks**

Pollution Prevention
Environment and Lands
Omineca-Peace
Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629



File: PR-15166

DOUBLE REGISTERED

SENT BY FAX TO: 250-997-6723

August 23, 2000

Produits Forestiers Donohue Inc. – Donohue Forest Products Inc.
PO Box 2800
Mackenzie BC V0J 2C0

Attention: Brian Houle / Edith Asselin

Dear Brian and Edith,

Re: Permit Amendment for PR-15166

In accordance with Section 13 of the *Waste Management Act*, Permit PR-15166 (dated September 28, 1999), is hereby amended as follows:

Section 2.1 has been added and reads:

This subsection applies to the discharge of **refuse from a power boiler**. The site reference number for this discharge is E223785. **Authorization for this discharge expires November 30, 2000.**

This decision may be appealed to the Environmental Appeal Board. Notice of the appeal must:

- (1) be in writing,
- (2) include the grounds for appeal,
- (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria, B.C., V8V 1X5
- (4) be delivered within 21 days from the date notice of the decision is given, and
- (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

If you have any questions, please feel free to contact me or my staff.

Yours truly,

R.A. Fairservice, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

:msb / cc. Environment Canada

Ministry of
Environment,
Lands and Parks

Pollution Prevention
Environment and Lands
Omineca-Peace
Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629



12
File: PR-15166

REGISTERED MAIL

January 7, 2002

Produkta Forestiers Donohue Inc. – Donohue Forest Products Inc.
PO Bag 2800
Mackenzie BC V0J 2C0

Attention: Sophie Mullen
Environmental Coordinator

Dear Sophie,

Re: PERMIT AMENDMENT FOR PR-15166

Further to and as per the request dated December 11, 2001 by McCarthy Tetrault LLP, and in accordance with Section 13 of the *Waste Management Act*, Permit PR-15166 (dated March 30, 1999 and last amended August 23, 2000), is hereby amended so the Permit Holder for this permit is now:

Compagnie Abitibi-Consolidated du Canada – Abitibi-Consolidated
Company of Canada
PO Bag 2800
Mackenzie BC V0J 2C0

This decision may be appealed to the Environmental Appeal Board. Notice of the appeal must:

- (1) be in writing,
- (2) include the grounds for appeal,
- (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 838 Yates Street, Victoria B.C., V8V 1X5
- (4) be delivered within 21 days from the date notice of the decision is given, and
- (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Please attach this letter to the original permit. If you have any questions, please feel free to contact Maureen Bilawchuk at 250-565-6459.

Yours truly,

A handwritten signature in black ink, appearing to read "Del Reinheimer".

Del Reinheimer, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

msb / cc. Jim Titerle, McCarthy Tetrault LLP, PO Box 10424, Pacific Centre, Suite 1300, 777
Dunsmuir Street, Vancouver, BC, V7Y 1K2.

**Ministry of Water,
Land and Air
Protection**

Pollution Prevention
Environment and Lands
Omineca-Peace Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629



13
FAXED

File: PR-04133, PR-15166 ←

SENT BY FAX TO: 250-897-6723

January 15, 2002

Abitibi-Consolidated Company of Canada
PO Box 2800
Mackenzie BC V0J 2C0

Attention: Sophie Mullen

Dear Sophie,

Re: Extension for Site Closure Plans for Landfills (PR-04133 and PR-15166)

Further to my letters to you dated September 14, 2001 concerning the site closure plans for the landfills associated with PR-04133 and PR-15166, and at your request dated January 15, 2002, I hereby require that the updated site closure plans be submitted by **March 31, 2002**. Please note that the site closure plans associated with these sites have not been endorsed by me.

As well, further to letter of June 18, 2001, and as per Section 3.4 of PR-04133, I hereby approve the extension for the report on the evaluation of the sludge application project. This report shall be submitted by **March 31, 2002**. I trust the extra time for your submission will provide the extra opportunity to include all recent information so that closure and post-closure strategies will minimize any long term problems at the sites.

If you have any questions, please feel free to contact me or Maureen Ellawchuk.

Yours truly,

A handwritten signature in black ink, appearing to read "Del Reinheimer".

Del Reinheimer, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

:msb

Ministry of
Water, Land and Air
Protection

Pollution Prevention
Environment and Lands
Omineca-Peace Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 585-6165
Facsimile: (250) 585-6629



FAXED

File: PR-15166

SENT BY FAX TO: 250-997-6723

August 5, 2005

Abitibi-Consolidated Company of Canada
PO Box 2800
Mackenzie BC V0J 2C0

Attention: Stephanie Thibeault, Acting Environmental Coordinator

Dear Stephanie,

Re: AMENDMENT - Extension of Program and Report on Site Closure Plan for Ash Landfill (PR-15166)

At your request dated June 27, 2005, and further to my approval granted on June 25, 2004, as per Section 4.7.3 of permit PR-15166, I hereby extend the groundwater monitoring program and change the date of submission of the groundwater report from the old ash landfill. This is done to accommodate the utilization of sludge directly from the press versus mining old sludge from the landfill. The "fresh" sludge will be used in the capping of the landfill which will provide optimum fabrication of the barrier system. As well this enables the mill to analyse the first year of results from the barrier system project. The final approval of the closure of the site is conditional on the results of the barrier performance comparison testing trial.

To accommodate the changes in the original schedule, the following portion of Section 4.2 of permit PR-15166 is hereby amended to read as follows:

- The groundwater monitoring program shall be maintained until **December 31, 2007**, or unless otherwise specified in writing by the Director. At the end of this period and by **March 31, 2007**, the Permittee shall submit to the regional Environmental Protection office a summary of all ash and groundwater data including QA/QC data. The report shall include a discussion of results, an assessment of the receiving environment and recommendations if further action is necessary to protect the environment.

If you have any further concerns or questions, please feel free to contact me or Maureen Bilawchuk.

Yours truly,

Del Reinheimer, P.Eng.
for Director,
Environmental Management Act
Omineca & Peace Regions

:msb

Ministry of
Environment

Environmental Protection
Omineca & Peace
Regions

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629



Fax to: 250-997-6723

File: PR-15166

Date: February 20, 2008

**Abitibi Bowater Inc.
Bag 2800
Mackenzie, British Columbia V0J 2C0**

Attention: William Murphy: Environmental Coordinator

**Re: AMENDMENT-Extension of Program and Report on Site Closure Plan for Ash
Landfill (PR-15166)**

Further to the approval granted August 5, 2005, as per Section 4.7.3 of permit PR-15166, it is necessary to extend the groundwater monitoring program, and change the date of submission of the groundwater report for the old ash landfill.

To accommodate the changes in the original schedules, the final bullet of Section 4.2 of permit PR-15166 is hereby amended as follows:

4.2 Groundwater Monitoring

- The groundwater monitoring program shall be maintained until otherwise specified in writing by the Director. No later than March 31st of each year, the Permittee shall submit to the regional Environmental Protection office an annual summary of all ash and groundwater data including QA/QC data. The report shall include a discussion of results, an assessment of the receiving environment and recommendations if further action is necessary to protect the environment.

Ministry of Environment	Regional Operations Omineca and Peace Regions	Mailing/Location Address 326 - 1011 Fourth Ave. Prince George, V2L 3H9	Telephone: (250) 565-6135 Facsimile: (250) 565-6829 http://www.gov.bc.ca/ http://www.gov.bc.ca/env
------------------------------------	--	---	--

If you should have any questions with regards to the above options, please do not hesitate to call myself at (250) 565-6459, Peter Lawrie (250) 565-4394, or Lisa Barkowsky at (250) 565-4168.

Yours truly,

Maureen Bilawchuk.

Maureen Bilawchuk, P.Ag.
for Director, *Environmental Management Act*
Omineca and Peace Regions

Enclosure

cc: Environment Canada
Brian Richman-Site Coordinator Abitibi Bowater
Nicole Roy-Manager Environment, Abitibi Bowater
Mike Macfarlane-Manager, Land Remediation
Sophie Mullen-Abitibi Bowater Consultant

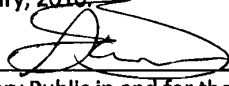
This is Exhibit "10"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 10



MINISTRY OF
ENVIRONMENT

PERMIT

18335

Under the Provisions of the Environmental Management Act

ABITIBI-CONSOLIDATED COMPANY OF CANADA

Abitibi - Papermill

#1 FFI Road

Mackenzie BC V0J 2C0

is authorized to discharge wood chips to ground from a paper mill located near Mackenzie, British Columbia, subject to the terms and conditions listed below. Contravention of any of these conditions is a violation of the Environmental Management Act and may lead to prosecution.

1 AUTHORIZED DISCHARGE

1.1 This section applies to the discharge of black wood chips from a paper mill. The site reference number for this discharge is E267852.

- 1.1.1 The maximum authorized rate of discharge is 314 dry tonnes/hectare, with a maximum of 40,300 m³ of material to be spread during 2007, 2008 and 2009.
- 1.1.2 The authorized discharge period is May 1 to October 31 during snow free periods.
- 1.1.3 The characteristics of the discharge shall be that of uncontaminated, old, blackened wood chips. This material shall not contaminate any other residuals or other waste material.
- 1.1.4 The authorized works are the land base District Lot 12572, as shown on Site Plan A, and necessary mobile equipment.
- 1.1.5 The location of the land application areas approved in this permit are 33.4 hectares within District Lot 12572, Cariboo Land District and restricted to those areas identified on Site Plan A.

Other locations for soil enhancement, within District Lot 12572, using black chips may be authorised with notification from the Permittee in the form of an addendum to the Operations Plan, as per section 5.1.

Date issued: August 29, 2007

Date amended:
(most recent)

Page 1 of 5

Maureen Bilawchuk

Maureen Bilawchuk

for Director, *Environmental Management Act*

Omineca and Peace Regions

Permit Number: 18335

2 GENERAL REQUIREMENTS

2.1 Wildlife Nuisance

The discharge is one of concern because of the possibility of a nuisance or hazard being caused by bears or other animals attracted to the site. Additional works may be required or other operating instructions may be issued by the Director if such problems arise.

2.2 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 Director.

2.3 Emergency Procedures

In the event of an emergency or condition beyond the control of the Permittee, including but not limited to an unauthorized fire arising from spontaneous combustion or other causes or the detection of leachate on the property, the Permittee shall immediately notify Environmental Protection staff and take appropriate remedial action.

2.4 Bypasses

The discharge of waste which has bypassed the authorised works is prohibited unless the consent of the Director is obtained and confirmed in writing.

2.5 Prohibition

The direct landfilling of black chips or hog is prohibited.
The discharge of black chips or hog into freestanding water is prohibited.

2.6 Leachate

The Permittee shall not allow the runoff of any fertilizer or chip application to any surface water or off property boundaries.

3 LAND APPLICATION REQUIREMENTS

- 3.1 The Permittee shall carry out all activities in accordance with the black chip application, monitoring and reporting program described in the document "Soil Enhancement Using Black Chips: Technical Assessment", prepared by SYLVIS Environmental, dated June 2007.

Date issued: August 29, 2007
Date amended:
(most recent)

Page 2 of 5


Maureen Bilawchuk
for Director, Environmental Management Act
Omineca and Peace Regions
Permit Number: 18335

- 3.2 The Director may alter or accept changes to the "Soil Enhancement Using Black Chips: Technical Assessment", prepared by SYLVIS Environmental, dated June 2007, if the changes are based on:
- 1) a request by the Permittee and prepared by a qualified professional, or
 - 2) any other results submitted or any other information obtained by Environmental Protection regarding land application activity.
- 3.3 Chemical fertilizer shall be applied in conjunction with the wood chip application or after the wood chips have been incorporated in the soil, at the rate calculated by a qualified professional, and as outlined in the "Soil Enhancement Using Black Chips: Technical Assessment", prepared by SYLVIS Environmental, dated June 2007.
- 3.4 Once per month, until snow covers the ground, the Permittee shall visually inspect all land application areas and document the observations and soil conditions. In the following year, after the snow has receded, the Permittee shall inspect all land application areas once per month and at a minimum prior to any additional fertilization and document any observation and soil conditions.
- 3.5 Soil amendments must not be applied within 30 meters of any drinking water sources, irrigation well, lake river stream or dwelling.

4 MONITORING REQUIREMENTS

The Director may alter the monitoring and reporting program based on results submitted, as well as, any other information obtained by the Environmental Protection Office in connection with this discharge.

4.1 Sampling Procedures

Sampling is to be carried out in accordance with the procedures described in the most recent edition of the "British Columbia Field Sampling Manual for Continuous Monitoring Plus the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples", or by suitable alternative procedures as authorized by the Director.

A copy of the above manual 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). A copy of the manual is also available for inspection at all Environmental Protection offices.

Date issued: August 29, 2007

Date amended:
(most recent)

Page 3 of 5

Maureen Bilawchuk
Maureen Bilawchuk
for Director, Environmental Management Act
Omineca and Peace Regions
Permit Number: 18335

4.2 Analytical Procedures

All samples shall be analysed using analytical procedures which have a detection limit below the relevant standard each parameter will be compared to.

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

A copy of the above manual may be purchased from the Queen's Printer Publication Centre, P. O. Box 9452, Stn. Prov. Govt. Victoria, British Columbia, V8W 9V7 (1-800-663-6105 or (250) 387-6409). The manual is also available for review at all Environmental Protection offices.

4.3 Analysis-Soil

Within one (1) year of wood chip incorporation, the Permittee shall collect and analyze a statistically significant number of soil samples for each application site. Each sample shall be analysed for the following:

pH,	Electrical Conductivity (EC),
Total Kjeldahl Nitrogen (TKN),	Total Organic Carbon (TOC),
Nitrate,	Nitrite,
Trace Elements and,	Select Phenols.

A complete listing of actual parameters to be tested for, including detection limits and standards used for comparison, shall be submitted 30 prior to sample collection. Additional sampling may be required depending on assessment of soil characterization.

4.4 Analysis-Water

Within three (3) months of wood chip incorporation, the Permittee shall collect and analyse groundwater samples from the area of land application. Sampling shall include quarterly collection and analysis of the following parameters at MW05-01, MW05-02, 03-01 and 93-10:

4.4.1 Summer and Winter

pH,	Electrical Conductivity (EC),
Total Kjeldahl Nitrogen (TKN),	Total Organic Carbon (TOC),
Nitrate,	Nitrite,
Dissolved Metals and,	Select Phenols.

Date issued: August 29, 2007
Date amended:
(most recent)

Page 4 of 5

Maureen Blawchuk
Maureen Blawchuk
for Director, Environmental Management Act
Omineca and Peace Regions
Permit Number: 18335

4.4.2 Spring and Fall

pH,	Electrical Conductivity (EC),
Total Kjeldahl Nitrogen (TKN),	Total Organic Carbon (TOC),
Nitrate,	Nitrite,
Dissolved Metals and,	Total Phenols.

- 4.5 For each land application site, the location of nearby water sources shall be identified. Based on observations, complaints, or other evidence, the Director may require the Permittee to carry out additional surface water or groundwater monitoring. The locations and manner of monitoring required shall be to the satisfaction of the Director.

5 REPORTING REQUIREMENTS

The Permittee shall submit the following reports in a format satisfactory to the Director including:

5.1 Operations Plan

Each year, 30 days prior to any chip or nutrient application to the ground, an Operations Plan identifying and characterizing:

- Application areas to receive black chips and fertilization for that calendar year.
- Application rates for each area for black chips and fertilizer and total amount of material to be incorporated.

5.2 Operations Report

For each calendar year an Operations Report that includes, but is not limited to:

- the information specified in section 3,
- confirmation of exact application rates for black chips and fertilizer,
- total amount of black chips spread on each area,
- documentation of a final inspection of all application sites,
- discussion of whether soil enhancement objectives and standards have been met, with a comparison to provincial and Canada wide standards for relevant soil and groundwater objectives,
- identification of any further monitoring,
- identification of additional fertilization and/or land application activity,
- a statement on the land use and soil quality.

The first report shall be submitted April 30, 2008 with a report to follow each calendar year thereafter until the Director is satisfied that no further work is required.

- 5.3 All reports submitted shall be prepared and sealed by a qualified professional in the area of soil, groundwater and nutrient management.

Date issued: August 29, 2007
Date amended:
(most recent)

Page 5 of 5

Maureen Bilawchuk
Maureen Bilawchuk
for Director, Environmental Management Act
Omineca and Peace Regions
Permit Number: 18335

Site Plan A



Scale: 1:16,000

Approximate location of areas assessed for application of black chips and fertilizer as described in the 2007 technical report. Approximate location of monitoring wells. Yellow outline indicates an approximation DL 12572. Not for navigation. Used for illustrative purposes only.

PERMIT:

Date: **AUG 29 2007**
(Office Use Only)

Maureen Bilawchuk
for Director, *Environmental Management Act*
Omineca and Peace Regions
Permit Number: 18335
(Office Use Only)



August 29, 2007

Tracking Number: 895

Authorization Number: 18335

ABITIBI-CONSOLIDATED COMPANY OF CANADA
BOX 250
MACKENZIE, BC
V0J 2C0

ATTENTION: William Murphy;

Dear ABITIBI-CONSOLIDATED COMPANY OF CANADA,

Enclosed is Permit 18335 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 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.

As of September 1, 2007 the Soil Amendment Code of Practice comes into force. Please be advised that any future applications of wood residue into the soil, outside that authorised by this permit, would require full compliance with this Code of Practice.

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 regional office. Plans, data and reports pertinent to the permit are to be submitted to the Regional Manager, Environmental Protection, at the address shown on this letter.

Yours truly,

Maureen S. Bilawchuk, P.Ag.
Section Head, Business Management Unit
Environmental Protection, Prince George Office
Ministry of Environment
Omineca and Peace Region

CC: SYLVIS Environmental, 427 Seventh St., New Westminster, BC, V3M 3L2
Environment Canada

ENCL: Authorization Document

Ministry of Environment

Environmental Protection Division
Regional Operations Branch
Omineca and Peace Regions

Mailing Address:
#325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6135
Facsimile: (250) 565-6629
Website: www.gov.bc.ca/eny



File: 18335

September 13, 2007

REGISTERED MAIL

Abitibi-Consolidated Company of Canada
PO Box 2800
Mackenzie, British Columbia V0J 2C0

Dear Permittee:

Re: Notice of Correction to Permit 18335 issued to Abitibi-Consolidated Company of Canada, on August 29, 2007

This is to advise you that the following correction has been made to the subject permit:

Section 4.3, on page 4 is changed as follows:

BEFORE

A complete listing of actual parameters to be tested for, including detection limits and standards used for comparison, shall be submitted 30 days prior to sample collection.

AFTER

A complete listing of actual parameters to be tested for, including detection limits and standards used for comparison, shall be submitted 30 days prior to sample collection.

Please remove and destroy the original pages in the permit package and replace them with the enclosed version.

Yours truly,

Maureen Bilawchuk, P.Ag.
for Director, *Environmental Management Act*
Omineca and Peace Regions

Enclosure

cc: Environment Canada
SYLVIS, 427 Seventh Street, New Westminster, BC V3M 3L2

Ministry of Environment	Environmental Protection Division Regional Operations Branch Omineca and Peace Regions	Mailing Address: #325 - 1011 Fourth Avenue PRINCE GEORGE BC V2L 3H9	Telephone: (250) 563-6135 Facsimile: (250) 563-6629 Website: www.gov.bc.ca/cov
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- 3.2 The Director may alter or accept changes to the "Soil Enhancement Using Black Chips: Technical Assessment", prepared by SYLVIS Environmental, dated June 2007, if the changes are based on:
- 1) a request by the Permittee and prepared by a qualified professional, or
 - 2) any other results submitted or any other information obtained by Environmental Protection regarding land application activity.
- 3.3 Chemical fertilizer shall be applied in conjunction with the wood chip application or after the wood chips have been incorporated in the soil, at the rate calculated by a qualified professional, and as outlined in the "Soil Enhancement Using Black Chips: Technical Assessment", prepared by SYLVIS Environmental, dated June 2007.
- 3.4 Once per month, until snow covers the ground, the Permittee shall visually inspect all land application areas and document the observations and soil conditions. In the following year, after the snow has receded, the Permittee shall inspect all land application areas once per month and at a minimum prior to any additional fertilization and document any observation and soil conditions.
- 3.5 Soil amendments must not be applied within 30 meters of any drinking water sources, irrigation well, lake, river, stream or dwelling.

4 MONITORING REQUIREMENTS

The Director may alter the monitoring and reporting program based on results submitted, as well as, any other information obtained by the Environmental Protection Office in connection with this discharge.

4.1 Sampling Procedures

Sampling is to be carried out in accordance with the procedures described in the most recent edition of the "British Columbia Field Sampling Manual for Continuous Monitoring Plus the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples", or by suitable alternative procedures as authorized by the Director.

A copy of the above manual 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). A copy of the manual is also available for inspection at all Environmental Protection offices.

Date Issued:
Date Amended: **SEP 13 2007**
(most recent)

Page 3 of 5


Maureen Bilawchuk, P. Eng.
for Director, Environmental Management Act
Omineca and Peace Regions

Permit Number: PR-18335

4.2 Analytical Procedures

All samples shall be analysed using analytical procedures which have a detection limit below the relevant standard each parameter will be compared to.

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

A copy of the above manual may be purchased from the Queen's Printer Publication Centre, P. O. Box 9452, Stn. Prov. Govt. Victoria, British Columbia, V8W 9V7 (1-800-663-6105 or (250) 387-6409). The manual is also available for review at all Environmental Protection offices.

4.3 Analysis-Soil

Within one (1) year of wood chip incorporation, the Permittee shall collect and analyze a statistically significant number of soil samples for each application site. Each sample shall be analysed for the following:

pH,	Electrical Conductivity (EC),
Total Kjeldahl Nitrogen (TKN),	Total Organic Carbon (TOC),
Nitrate,	Nitrite,
Trace Elements and,	Select Phenols.

A complete listing of actual parameters to be tested for, including detection limits and standards used for comparison, shall be submitted 30 days prior to sample collection. Additional sampling may be required depending on assessment of soil characterization.

4.4 Analysis-Water

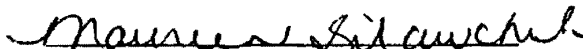
Within three (3) months of wood chip incorporation, the Permittee shall collect and analyse groundwater samples from the area of land application. Sampling shall include quarterly collection and analysis of the following parameters at MW05-01, MW05-02, 03-01 and 93-10:

4.4.1 Summer and Winter

pH,	Electrical Conductivity (EC),
Total Kjeldahl Nitrogen (TKN),	Total Organic Carbon (TOC),
Nitrate,	Nitrite,
Dissolved Metals and,	Select Phenols.

Date Issued:
Date Amended: **SEP 13 2007**
(most recent)

Page 4 of 5


Maureen Bilawchuk, P. Ag.
for Director, Environmental Management Act
Omineca and Peace Regions

Permit Number: PR-18335

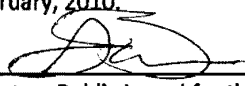
This is Exhibit 1111
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 11



MINISTRY OF ENVIRONMENT,
LANDS AND PARKS

PERMIT
PS-8555

Under the Provisions of the Waste Management Act

Finlay Forest Industries Inc.

P.O. Box 250

Mackenzie, British Columbia

V0J 2C0

Is authorized to operate a Short Term Special Waste Storage Facility located near Mackenzie, 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.

1. SPECIFIC AUTHORIZED WASTES AND STORAGE FACILITY

1.1 Short Term Storage of articles contaminated with or containing polychlorinated biphenyl

- 1.1.1** The composition of the special waste authorized to be stored is polychlorinated biphenyl waste as defined in the Special Waste Regulation.
- 1.1.2** The maximum quantity of special waste authorized to be stored is 20,000 kilograms consisting of capacitors, transformers, ballasts, other decommissioned electrical equipment, and miscellaneous contaminated materials generated during handling, draining and clean up procedures.
- 1.1.3** The maximum concentration of PCB in the special waste is 100%.
- 1.1.4** The works authorized are an outdoor short term storage facility that consists of two transportable shipping containers.

2. LOCATION OF THE FACILITIES

The location of the authorized special waste storage site is District Lot 12572, Cariboo Land District.

Date issued: August 31, 1990
Amendment date:

Page: 1 of 3

JUL 29 1994

A handwritten signature in dark ink, appearing to read 'R.A. Fairservice'.

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

PERMIT NO. PS 8555

3. SPECIAL WASTE REGULATION REQUIREMENTS

The Permittee shall comply with all applicable provisions of the Special Waste Regulation of the Waste Management Act. In the event of a conflict between this Permit and the Special Waste Regulation, the Special Waste Regulation shall override and the conflicting provisions of this Permit shall have no effect. Provisions of the Special Waste Regulation include, but are not limited to, the following:

3.1 Plans

Plans and specifications of the special waste storage facility shall be submitted to the Regional Waste Manager and his consent obtained, in writing, before modifying existing works. Work shall only be carried out in accordance with plans approved by the Regional Waste Manager.

3.2 Access Security

The Permittee shall provide adequate security for the storage facility and restrict access to authorized personnel. All valves, pumps, doors and controls, accessible if security were breached, are to be locked.

3.3 Warning Signs

Warning signs, conforming to Section 8(d) of the Special Waste Regulation are to be posted at each entrance to the facility and at other locations as required by the Regional Waste Manager.

3.4 Inspections

The Permittee shall inspect the storage facility regularly to detect irregularities such as deterioration, leaks or spills which may lead to the escape of special waste from the facility or may pose a threat to human health. Adequate space is to be maintained within the facility to allow for manual, visual inspection for irregularities. Inspections shall be conducted on a weekly basis as specified in Section 10(b) of the Special Waste Regulation. Records of inspections shall be maintained on site and shall be available for inspection by Environmental Protection staff.

3.5 Operational Records and Contingency Plans

3.5.1 The Permittee shall develop and maintain an accurate record of the wastes in storage, as described in Section 6 of the Special Waste Regulation and notify the Regional Waste Manager and local fire commissioner of any changes. In addition, records of the facility inspections, emergency system testing and personnel training shall be maintained.

3.5.2 The Permittee shall develop and annually test a contingency plan, in accordance with Section 11 of the Special Waste Regulation, describing actions to be taken in the event of an emergency.

Date issued: August 31, 1990
Amendment date:

Page: 2 of 3

JUL 29 1994


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

PERMIT NO. PS 8555

3

3.6 Closure Plan

Prior to operating the facility, a written closure plan, in accordance with Section 14 of the Special Waste Regulation, shall be submitted to the Regional Waste Manager and his approval obtained in writing. The closure plan shall indicate how the facility will be closed and how, where and when the wastes will be disposed.

3.7 Additional Requirements Specific to the Storage of PCB Waste

PCB waste and PCB waste handling equipment shall be segregated from all other wastes, equipment and materials stored at the facility. The Permittee shall ensure compliance with Section 17.1 of the Special Waste Regulation which specifies additional operational requirements for the short term storage of PCB wastes.

4. EMERGENCY PROCEDURES

In the event of an emergency or any irregularities identified by the Permittee, the Regional Waste Manager must be notified immediately and appropriate remedial action taken.

5. FUTURE UPGRADING OF WORKS

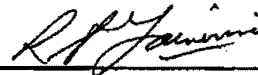
The Regional Waste Manager may require upgrading of the works in the future if, based on information made available to him, he is convinced that upgrading of works is necessary to protect the environment.

6. REPORTING

The following information shall be submitted to the Regional Environmental Protection Office at the specified frequencies:

- 6.1 updated waste inventories and details of any waste added or removed as described in clause 3.5.1 above are to be submitted, suitably tabulated, on or before January 31 of each year for the operation of the preceding calendar year, and
- 6.2 the contingency plan, as described in clause 3.5.2 above, is to be submitted within 90 days of the date of this permit and the approval of the Regional Waste Manager obtained in writing.

JUL 29 1994



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



Province of
British Columbia

MINISTRY OF
ENVIRONMENT,
LANDS AND PARKS

BC
Environment

Environmental Protection
1011 4th Avenue
Prince George, British Columbia
V2L 3H9
Telephone: (804) 565-6155
Fax: (804) 565-6629

REGISTERED MAIL

Date: JUL 29 1994

File:PS-8555

Finlay Forest Industries Inc.
P.O. Box 250
Mackenzie, British Columbia
V0J 2C0

Attention: A.J. Boldt

Dear Permittee:

Enclosed is an amended copy of Permit No. PS-8555 issued under the provisions of the Waste Management Act. Your attention is respectfully directed to the terms and conditions outlined in the Permit.

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 shall rest with the Permittee.

The Permittee shall ensure that any discharge under this Permit meets the requirements of other regulatory agencies including, but not restricted to, Environment Canada and the Department of Fisheries and Oceans (Canada).

An annual permit fee will be determined according to the Waste Management Permit Fees Regulation.

The administration of this Permit will be carried out by staff from our Regional Office located in Prince George, (telephone 565-6155). Plans, data and reports pertinent to the Permit are to be submitted to the Environmental Protection office, 3rd Floor, 1011 Fourth Avenue, Prince George, British Columbia, V2L 3H9.

This decision may be appealed in accordance with Section 27 of the Waste Management Act by giving written notice to me within 21 days of this notification.

Yours truly,

R.A. Fairservice P.Eng.
Assistant Regional Waste Manager
Northern Interior Region

enclosure



5

File: PS-08555

REGISTERED MAIL

December 6, 1999

Finlay Forest Industries Inc.
PO Bag 2800
Mackenzie BC V0J 2C0

Attention: Victor Kumpera

Dear Permittee,

Re: Permit Amendment for PS-08555

As per the request dated October 27, 1999 by Ladner Downs Barristers & Solicitors, and in accordance with Section 13 of the Waste Management Act, Permit PS-08555 (dated August 31, 1990 with an amendment date of July 29, 1994) is hereby amended so that the Permit Holder for this permit is now:

Products Forestiers Donohue Inc. - Donohue Forest Products Inc.
PO Bag 2800
Mackenzie BC V0J 2C0

This decision may be appealed to the Environmental Appeal Board. Notice of the appeal must: (1) be in writing, (2) include the grounds for the appeal, (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria, BC, V8V 1X5, (4) be delivered within 21 days from the date notice of the decision is given, and (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Yours truly,

R.A. Fairservice, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

:msb/ cc. Original to be sent to Robert Owen, Ladner Downs Barristers & Solicitors, 1200 Waterfront Centre, 200 Burrard Street, PO Box 48600, Vancouver, BC, V7X 1T2.
cc. Huges Simon, Comptroller, Donohue Forest Products Inc., PO Box 250, Mackenzie, V0J 2C0.

**Ministry of
Environment,
Lands and Parks**

Pollution Prevention
Environment and Lands
Omineca-Peace
Region

Mailing Address:
326 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629



REGISTERED MAIL

File: PS-08555

January 7, 2002

Produits Forestiers Donohue Inc. – Donohue Forest Products Inc.
PO Bag 2800
Mackenzie BC V0J 2C0

Attention: Sophie Mullen
Environmental Coordinator

Dear Sophie,

Re: PERMIT AMENDMENT FOR PS-08555

Further to and as per the request dated December 11, 2001 by McCarthy Tetrauit LLP, and in accordance with Section 13 of the *Waste Management Act*, Permit PS-08555 (dated August 31, 1990 and last amended December 6, 1999), is hereby amended so the Permit Holder for this permit is now:

**Compagnie Abitibi-Consolidated du Canada – Abitibi-Consolidated
Company of Canada**
PO Bag 2800
Mackenzie BC V0J 2C0

This decision may be appealed to the Environmental Appeal Board. Notice of the appeal must:

- (1) be in writing,
- (2) include the grounds for appeal,
- (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 838 Yates Street, Victoria B.C., V8V 1X5
- (4) be delivered within 21 days from the date notice of the decision is given, and
- (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Please attach this letter to the original permit. If you have any questions, please feel free to contact Maureen Blawchuk at 250-565-6459.

Yours truly,

Del Reinheimer, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

:msb / cc. Jim Titerle, McCarthy Tetrauit LLP, PO Box 10424, Pacific Centre, Suite 1300, 777 Dunsmuir Street, Vancouver, BC, V7Y 1K2.

**Ministry of Water,
Land and Air
Protection**

Pollution Prevention
Environment and Lands
Omineca-Peace Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629

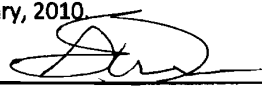
This is Exhibit "12"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 12



PERMIT INSPECTION

Ministry of Environment
325 1011 4th Avenue
Prince George BC V2L 3H9
Tel: (250) 866-6135
Fax: (250) 866-6629

Inspection Date: September 25, 2009 Permit No: PR-15668
Permittee: Abitibi-Consolidated Company of Canada Location: Site 1 - Mackenzie

(A) OBSERVATIONS, CONCERNS OR ISSUES: Last inspection October 23, 2008

Site Inspection: Abitibi Sawmills indefinitely idling effective January 11th. Toured area with Wayne Lewis of Abitibi.

- Annual report submitted by January 31, 2009? Yes ☒ No ☐
- Refuse compacted and covered? Yes ☒ No ☐
- Slopes between 4 and 33%? Yes ☒ No ☐
- Pooled water present on surface? Yes ☐ No ☒
- Discharge of refuse material into freestanding water? Yes ☐ No ☒
- Sign(s) of wildlife problems? Yes ☐ No ☒
- Putrescible or unauthorized use of the landfill? Yes ☐ No ☒
- Materials >1m in length present? Yes ☐ No ☒

Comments: Area contoured and temporarily capped with local materials in 2008 (sand/silt).
Some indications of channelling of runoff at access point.

Review of Monitoring Data:

(B)	PERMIT COMPLIANCE	IN ☒	OUT ☐		BASED ON SITE INSPECTION
	PERMIT COMPLIANCE:	IN ☒	OUT ☐	N/A ☒	BASED ON MONITORING DATA
	OVERALL COMPLIANCE:	IN ☒	OUT ☐		

(C) ACTION REQUIRED:

- Continue to maintain cover.
- Submit annual report by January 31, 2010.*

* Permittee may apply in writing to change the monitoring and reporting requirements specified under section 3 of the permit. Under section 2.7 the Regional Waste Manager may, in writing, modify the monitoring and reporting requirements.

(D) SAMPLES TAKEN: YES ☐ NO ☒ LOCATIONS: _____
Parameters Sampled: Photos taken.

PR-15668

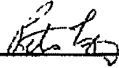
September 25, 2009

Copy Hand Delivered to Permittee: YES ☐ NO ☒
Copy Mailed to Permittee: YES ☒ NO ☐

Copy mailed to: Wayne Lewis Abitibi Bowater, PO Box 250, Mackenzie, B.C. V0J 2C0

Permittee/Representative's Signature

(Ministry representative discussed inspection findings with Permittee/Rep.)


Environmental Protection Division Representatives

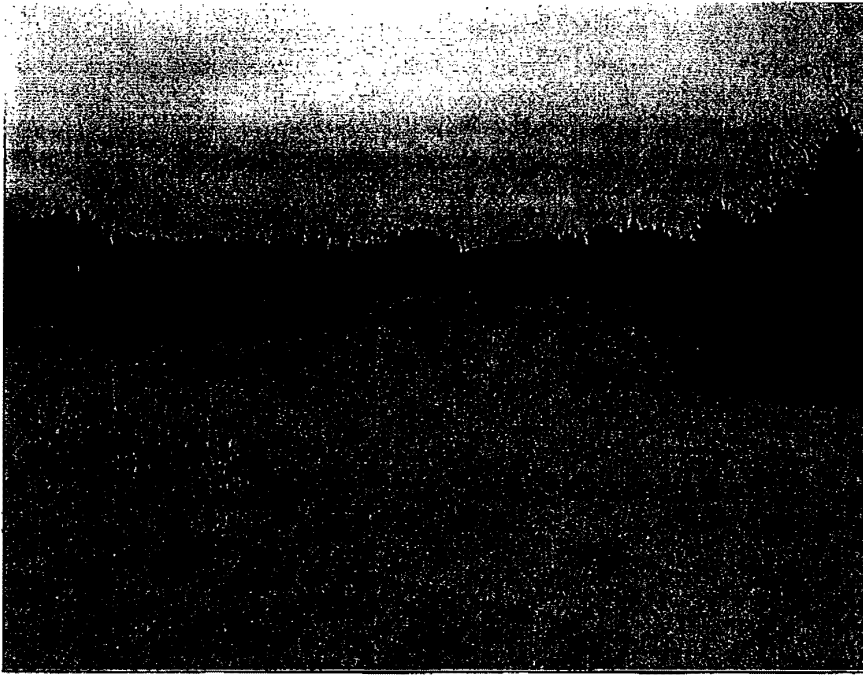


Fig. 1 PR-15668 Capped and Contoured (N)



Fig. 2 PR-15668 Capped and Contoured (SW)

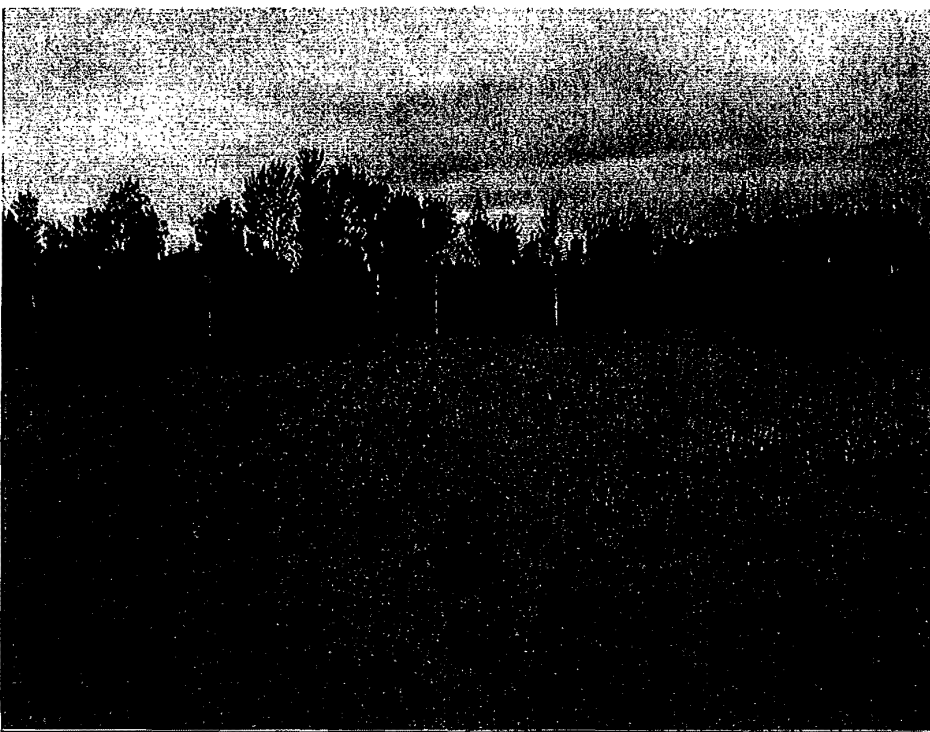


Fig. 3 View of surface

PR-15668

September 25, 2009

This is Exhibit "13"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 13



PERMIT INSPECTION

Ministry of Environment
325 1011 4th Avenue
Prince George BC V2L 3H9
Tel: (250) 565-6135
Fax: (250) 565-6629

Inspection Date: September 25, 2009 Permit No: PR-04984
Permittee: Abitibi-Consolidated Company of Canada Location: Site 1 - Mackenzie
Permittee Representatives: Wayne Lewis Last Inspection: October 23, 2008

OBSERVATIONS, CONCERNS OR ISSUES:

Abitibi Sawmills indefinitely idling effective January 11th.

Site Inspection New Site:

Status: Inactive and waiting for capping and final closure.

- Refuse compacted and covered? Yes ☒ No ☐
- Slopes between 4 and 33%? Yes ☒ No ☐
- Pooled water present on surface? Yes ☐ No ☒
- Discharge of refuse material into freestanding water? Yes ☐ No ☒
- Sign(s) of wildlife problems? Yes ☐ No ☒
- Putrescible or unauthorized use of the landfill? Yes ☐ No ☒
- Materials >1m in length present? Yes ☒ No ☐ -Slash piles
- Evidence of leachate? Yes ☐ No ☒
- Maximum depth of compacted lift ≤ 3 metres? Yes ☐ No ☐ -Unknown
- Unauthorized access prohibited? Yes ☒ No ☐
- Signs of open burning present? Yes ☐ No ☒

Comments:

Landfill Operational 1978-1998

Closure plan called for groundwater and sampling analysis to proceed in August 2003.

Closure plan approval dependent on final report on closure of PR-15166. An application for PR-15166 abandonment is currently under review.

Slash piles containing materials >1m in length observed during October 23, 2008 Inspection have been removed.

(B)	PERMIT COMPLIANCE	IN ☒	OUT ☐		BASED ON SITE INSPECTION
	PERMIT COMPLIANCE:	IN ☐	OUT ☐	N/A ☒	BASED ON MONITORING DATA
	OVERALL COMPLIANCE:	IN ☒	OUT ☐		

(C) ACTION REQUIRED:

SAMPLES TAKEN: YES ☐ NO ☒

LOCATIONS: _____

Parameters Sampled: _____

Copy Hand Delivered to Permittee: YES ☐ NO ☒

Copy Mailed to Permittee: YES ☒ NO ☐

Copy mailed to: Wayne Lewis Abitibi Bowater, PO Box 250, Mackenzie, B.C. V0J 2C0

Permittee/Representative's Signature

(Ministry representative discussed inspection findings with Permittee/Rep.)

Environmental Protection Division Representatives

Regional Office Follow-up:

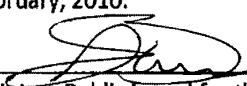
This is Exhibit "14"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 14



PERMIT INSPECTION

Ministry of Environment
325 1011 4th Avenue
Prince George BC V2L 3H9
Tel: (250) 565-6135
Fax: (250) 565-6629

Inspection Date: November 25, 2009 Permit No: PA-3057
Permittee: Abitibi-Consolidated Company of Canada Location: Site 1 - Mackenzie

(A) **OBSERVATIONS, CONCERNS OR ISSUES:** Last Inspection July 16, 2008

Site Inspection: Abitibi Sawmills indefinitely idling effective January 11th, 2008. Site 1 reactivated October 23, 2009. Sawmill only. No discharge concerns noted. The number of permitted cyclones appears to exceed actual operational number. Facility is permitted for:

1. One dust cyclone;
2. Two shavings cyclones;
3. One chip cyclone; and
4. One chipper cyclone.

Review of Monitoring Data:

(B) **PERMIT COMPLIANCE** IN ☒ OUT ☐ **BASED ON SITE INSPECTION**
PERMIT COMPLIANCE: IN ☐ OUT ☐ N/A ☒ **BASED ON MONITORING DATA**
OVERALL COMPLIANCE: IN ☒ OUT ☐

(C) **ACTION REQUIRED:**

Depending on discharge levels of remaining cyclones an amendment for remaining cyclones may result in a reduction in annual fees. See Fig. 6 for approximate breakdown by source of annual fees.

(D) **SAMPLES TAKEN:** YES ☐ NO ☒ **LOCATIONS:** _____
Parameters Sampled: _____

Copy Hand Delivered to Permittee: YES ☐ NO ☒

Copy Mailed to Permittee: YES ☒ NO ☐

Copy mailed to: Wayne Lewis Abitibi Bowater, PO Box 250, Mackenzie, B.C. V0J 2C0


Environmental Protection Division Representative

November 25, 2009

PA-3057

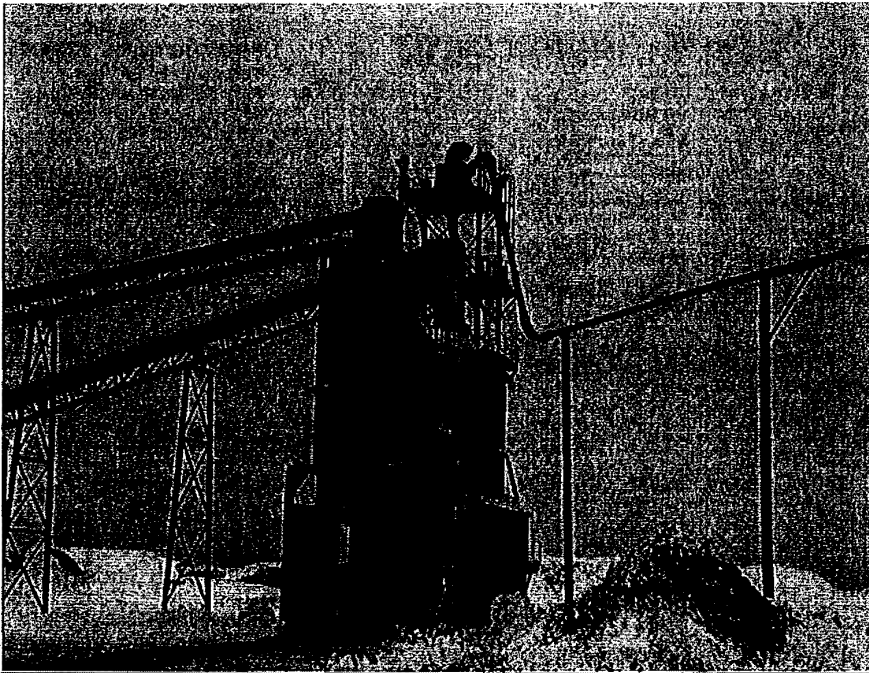


Fig. 1 Hog Waste Bin Shavings Cyclone

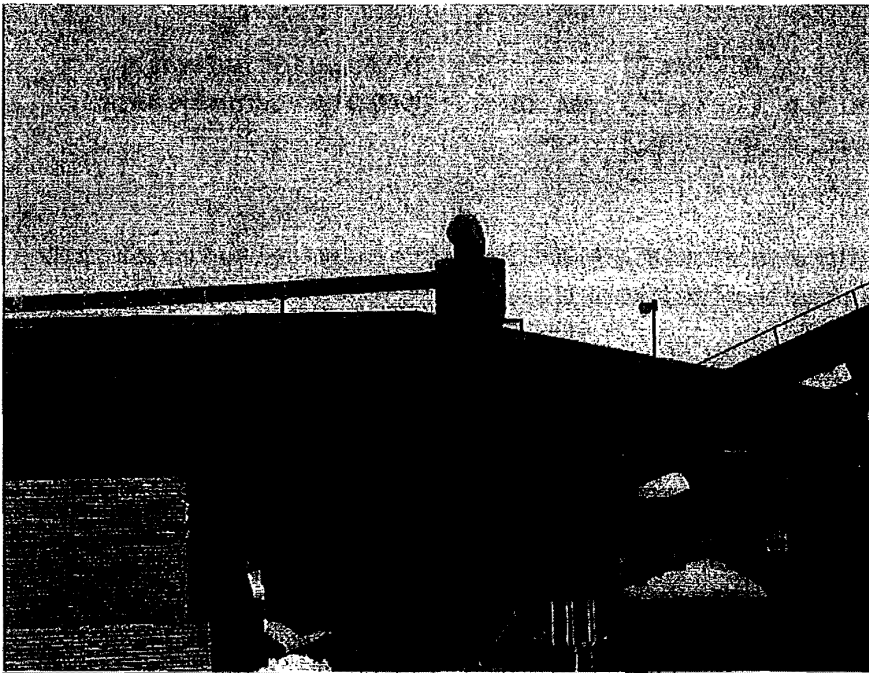


Fig. 2 Dust Cyclone(out of service)

November 25, 2009

PA-3057

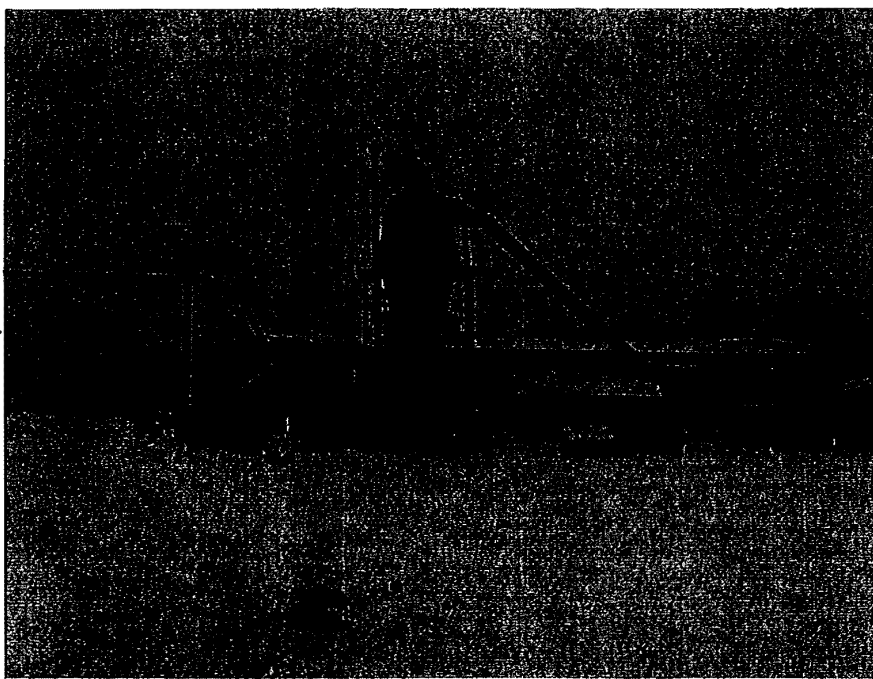


Fig. 3 Planer Waste Blower and Shavings Cyclone (planer not operating)

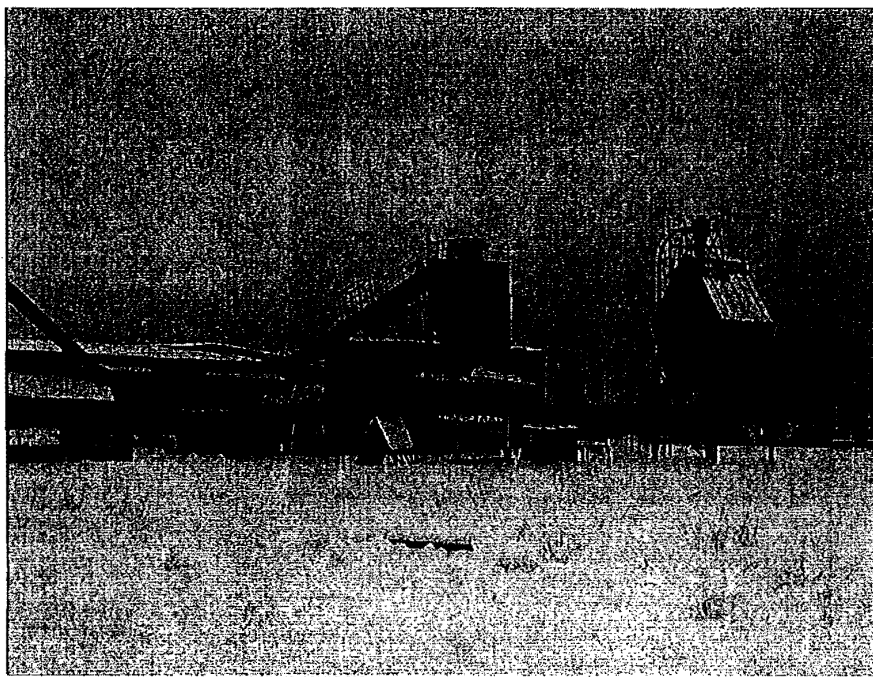


Fig. 4 Former location of Chipper cyclone (left-now belt fed) and decommissioned planer/chip bin cyclone

4

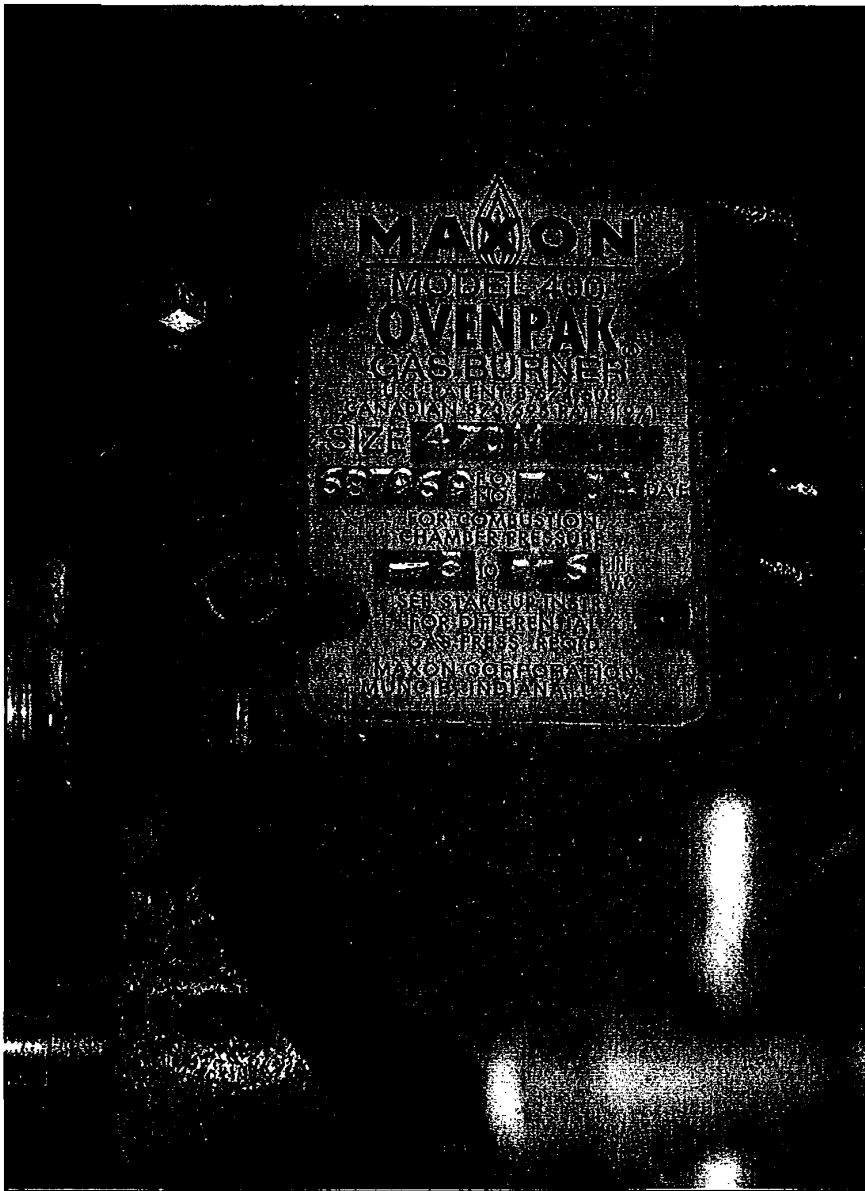


Fig. 5 Burner plate #5 Kiln

November 25, 2009

PA-3057

DISCHARGE POINT:

Facility Type:	sawmill - Site 1
Facility Description:	sawmill located in Mackenzie, BC

IIACS Code: 321111

Description of Source	Discharge Type	Fee
FFSITE 1 (PA 3057) SAWMILL - CHIP CAR	air	\$180.63 CAD
FFSITE 1 (PA 3057) SAWMILL - CYCLOPONES	air	\$0.00 CAD
FFSITE 1 (PA 3057) SAWMILL - CYCLOPONES	air	\$3,240.76 CAD
FFSITE 1 (PA 3057) SAWMILL - KOLNS	air	\$305.43 CAD
FFSITE 1 (PA 3057) SAWMILL - KOLNS	air	\$1,759.33 CAD

Annual Base fee	\$100.00 CAD
Total Annual Fee	\$5,596.14 CAD

RECEIVING ENVIRONMENT:

* An asterisk indicates a required field.

SAVER **SAVER**

 [Top](#)

Screen ID: 20400456

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Fig. 6 Annual fees by source

This is Exhibit "15"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 15



PERMIT INSPECTION

Ministry of Environment
325 1011 4th Avenue
Prince George BC V2L 3H9
Tel: (250) 566-6135
Fax: (250) 566-6629

Inspection Date: November 25, 2009 Permit No: PA-1722
Permittee: Abitibi-Consolidated Company of Canada Location: Site 2 - Mackenzie

(A) OBSERVATIONS, CONCERNS OR ISSUES: Last inspection Sept 25, 2009

Site Inspection: Abitibi Sawmills Indefinitely Idling effective January 11th, 2008. Site 2 reactivated October 18, 2009.
Planer Mill only.

1. Wood Residue Burner
 - Operational? Yes ☐ No ☒
 - Has the burner operated within the last year? Yes ☐ No ☒
 - Burner not likely to be rebuilt. Annual fees associated with this discharge are approximately \$1056.97 (see figure 7)
 2. Number of natural gas fired kilns operational? 4 (Max 4) Only one in use.
 3. Hog bin planer shavings cyclones:
 - Operational? Yes ☐ No ☒ Down as sawmill not operating.
 4. Planer shavings cyclone?
 - Operational? Yes ☒ No ☐
 - Excessive Discharge? Yes ☐ No ☒ Some discharge. Distinct pattern on surrounding snow.
 - Opacity? 5%
 - Excessive dust in area of cyclone? Yes ☐ No ☒

Cyclone not identified in permit site diagram
 5. High pressure line shavings cyclone
 - Operational? Yes ☒ No ☐
 - Excessive Discharge? Yes ☐ No ☒
 - Opacity? <5%
 - Excessive dust in area of cyclone? Yes ☐ No ☒
 6. Chip cyclone
 - Operational? Yes ☒ No ☐
 - Excessive Discharge? Yes ☐ No ☒
 - Opacity? <5%
 - Excessive dust in area of cyclone? Yes ☐ No ☒
 7. Fine dust cyclone
 - Operational? Yes ☐ No ☒ Down as sawmill not operating.
- November 25, 2009

PA-1722

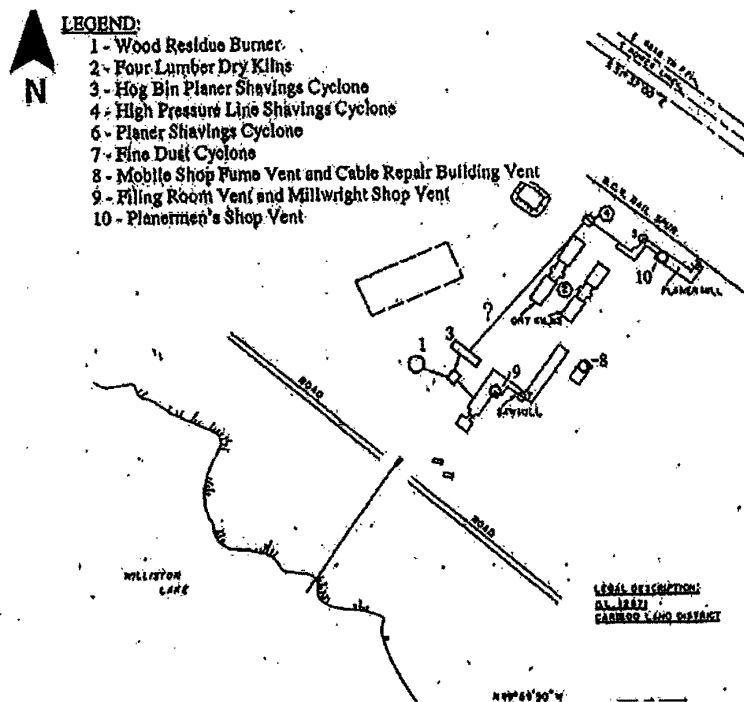


Fig 1. Site Diagram

"?" denotes location of cyclone missing in permit site diagram

Review of Monitoring Data:

Not in compliance with permit monitoring requirements. See September 26, 2009 inspection report for details.

(B) PERMIT COMPLIANCE IN ☒ OUT ☐ BASED ON SITE INSPECTION
 PERMIT COMPLIANCE: IN ☐ OUT ☒ N/A ☐ BASED ON MONITORING DATA
 OVERALL COMPLIANCE: IN ☐ OUT ☒

(C) ACTION REQUIRED:

- Provide required reports or apply, in writing, to change the monitoring and reporting requirements specified under Section 10 of the permit.
- Suppress fugitive dust.
- Update site diagram

November 25, 2009

PA-1722

(D) SAMPLES TAKEN: YES ☐ NO ☒ LOCATIONS: _____
Parameters Sampled: _____

Copy Hand Delivered to Permittee: YES ☐ NO ☒
Copy Mailed to Permittee: YES ☒ NO ☐

Copy mailed to: Wayne Lewis Abitibi Bowater, PO Box 250, Mackenzie, B.C. V0J 2C0

Permittee/Representative's Signature


Environmental Protection Division Representatives

Regional Office Follow-up: _____

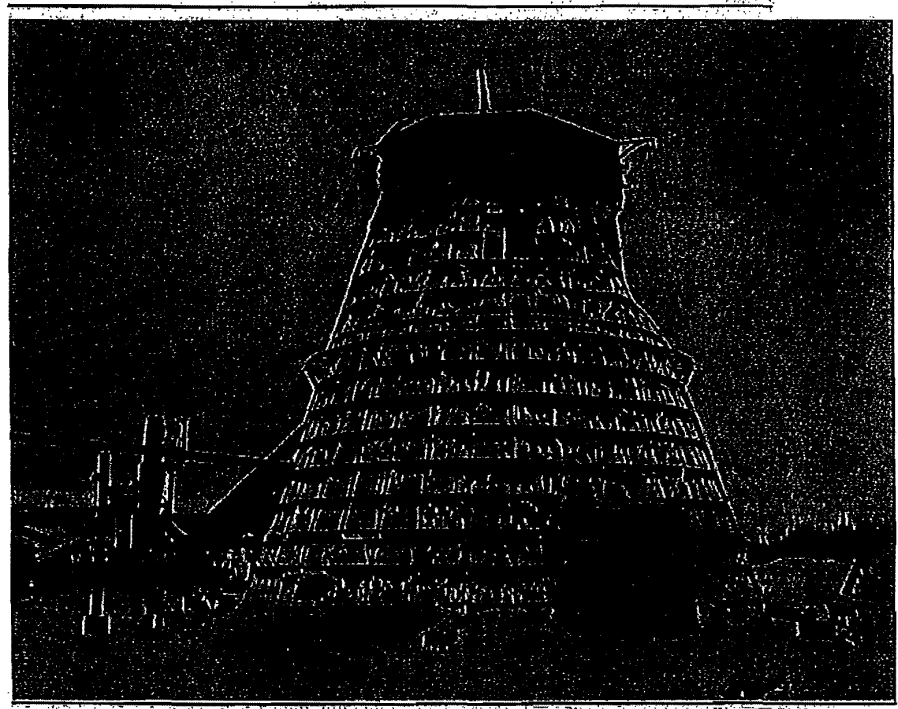


Fig. 2 Burner (out of commission)

4

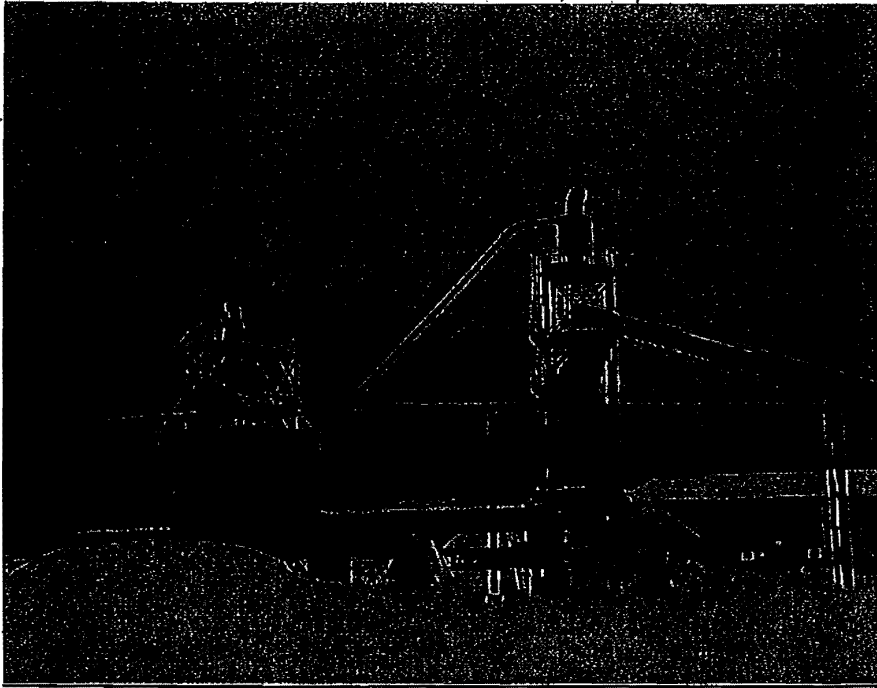


Fig. 3 Plane shavings cyclone? (left) Hog Bin Planer Shavings Cyclone (right)



Fig. 4 High Pressure Line Shavings Cyclone

November 25, 2009

PA-1722

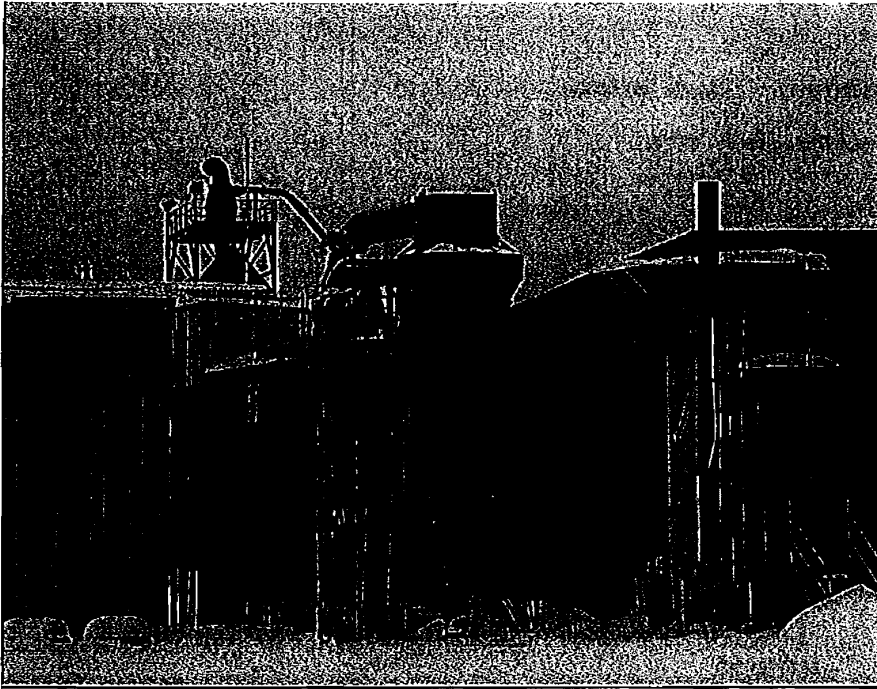


Fig. 5 Fine Dust Cyclone

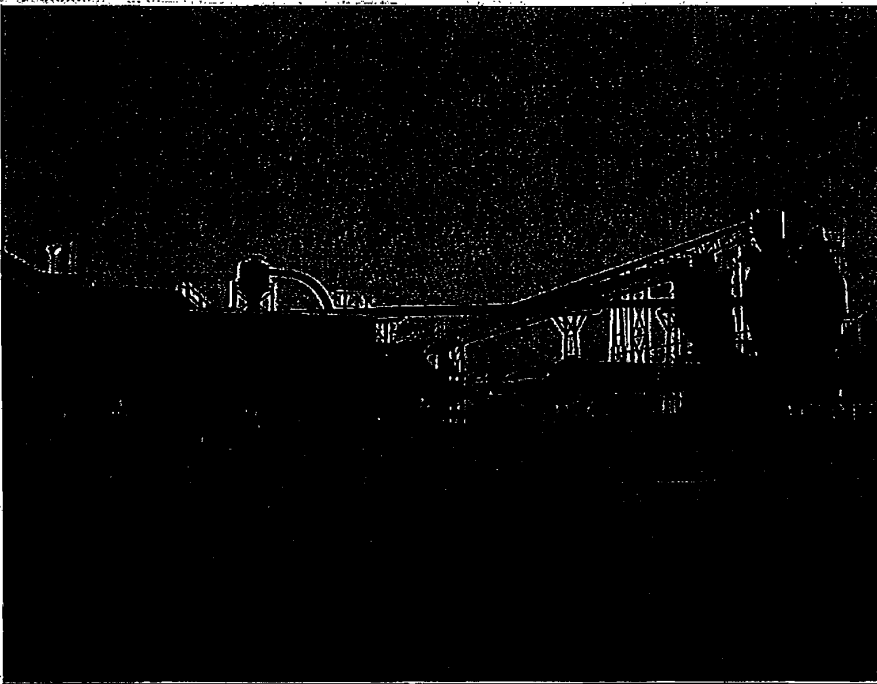


Fig. 6 Chip cyclone

FACILITY LOCATION:

Regional District: (None)
Latitude: 55.3211111 N Longitude: 123.1004 W
Source of Data:
Legal Land Description: MACKENZIE INDUSTRIAL SITE #2

PID/PIH/Crown File Number:

Facility Address: Address

DISCHARGE POINT:

Facility Type:
Facility Description:

HAICS Code: 321111

Description of Source	Discharge Type	Fee
FEL PA1722-KILNS	slr	\$289.87 CAD
FEL PA1722-KILNS	slr	\$2,129.82 CAD
FEL PA-01722-6 CYCLONES	slr	\$5,179.49 CAD
PA1772-ABTBI-BURNER	slr	\$0.00 CAD
PA1772-ABTBI-BURNER	slr	\$1,058.87 CAD

Annual Base Fee: \$100.00 CAD
Total Annual Fee: \$8,734.21 CAD

Fig. 7 Approximate Annual Fees by Discharge Source.



PERMIT INSPECTION

Ministry of Environment
325 1011 4th Avenue
Prince George BC V2L 3H9
Tel: (250) 565-6135
Fax: (250) 565-6629

Inspection Date: September 25, 2009 Permit No: PA-1722
Permittee: Abitibi-Consolidated Company of Canada Location: Site 2 - Mackenzie

(A) OBSERVATIONS, CONCERNS OR ISSUES: Last Inspection July 16, 2008

Site Inspection: Abitibi Sawmills indefinitely idling effective January 11th. Confirmed idling September 25, 2009

Wood residue burner inoperative.

Accumulation of wood waste from clean-up activities remains at base of burner (trim ends, cants etc.). Some material has been removed by fibre procurement company.

Review of Monitoring Data:

Monthly reports for wood residue burner not received since December 17, 2007.

Quarterly dustfall data not reported since February 2006.

Annual record of fuel burnt in the wood residue burner not received.

(B) PERMIT COMPLIANCE IN ☒ OUT ☐ BASED ON SITE INSPECTION
PERMIT COMPLIANCE: IN ☐ OUT ☒ N/A ☐ BASED ON MONITORING DATA
OVERALL COMPLIANCE: IN ☐ OUT ☒

Section 10.2 of Permit PA-1722 states that "(T)he Permittee shall measure the average combustible material, as dustfall, for a two week period each quarter at five locations." Locations are to be as per Amendment Letter dated October 31, 2002.

Section 10.5 of Permit PA-1722 requires the reporting of burner operational parameters within 30 days of month end.

Section 10.6 of Permit PA-1722 requires the monitoring results for total mill particulate must be submitted within 30 days of the end of the monitoring period.

Section 10.7 of Permit PA-1722 requires that records of fuel burned in the wood residue burner and maintenance records of the wood residue burner be submitted within 30 days of month end.

(C) ACTION REQUIRED:

September 25, 2009

PA-1722

- Provide required reports or apply, in writing, to change the monitoring and reporting requirements specified under Section 10 of the permit.
- Suppress fugitive dust.

(D) SAMPLES TAKEN: YES ☐ NO ☒ LOCATIONS: _____
Parameters Sampled: _____

Copy Hand Delivered to Permittee: YES ☐ NO ☒
Copy Mailed to Permittee: YES ☒ NO ☐

Copy mailed to: Wayne Lewis Abitibi Bowater, PO Box 250, Mackenzie, B.C. V0J 2C0

Permittee/Representative's Signature 
Environmental Protection Division Representatives

Regional Office Follow-up: _____

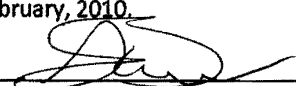
This is Exhibit 416
referred to in the Affidavit
of Maureen Blawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 16



PERMIT INSPECTION

Ministry of Environment
325 1011 4th Avenue
Prince George BC V2L 3H9
Tel: (250) 865-6135
Fax: (250) 865-6629

Inspection Date: September 25, 2009 Permit No: PR-06207
Permittee: Abitibi-Bowater Location: Site 2 - Mackenzie

(A) OBSERVATIONS, CONCERNS OR ISSUES:

Site Inspection: Abitibi Sawmills indefinitely idling effective January 11th.

- Annual report submitted by January 31, 2009? Yes ☒ No ☐
- Refuse compacted and covered? Yes ☒ No ☐
- Slopes between 4 and 33%? Yes ☒ No ☐
- Pooled water present on surface? Yes ☐ No ☒
- Discharge of refuse material into freestanding water? Yes ☐ No ☒
- Sign(s) of wildlife problems? Yes ☐ No ☒
- Putrescible or unauthorized use of the landfill? Yes ☐ No ☒
- Materials >1m in length present? Yes ☐ No ☒

Comments: Area contoured and temporarily capped with local materials in 2008 (sand/silt).

Review of Monitoring Data:

- Groundwater report not received for 2008.
- Groundwater report for 2007 received October 2008 (late).

(B) PERMIT COMPLIANCE	IN ☒	OUT ☐	BASED ON SITE INSPECTION
PERMIT COMPLIANCE:	IN ☐	OUT ☒	N/A ☐
OVERALL COMPLIANCE:	IN ☐	OUT ☒	BASED ON 2008 MONITORING DATA

Section 3.2 requires that "The Permittee shall maintain a groundwater monitoring program that is acceptable to the Regional Waste Manager. The number, frequency, location and design details of the facilities shall be acceptable to the Regional Waste Manager."
Attached letter dated June 30, 2004 outlines the required monitoring with the report to be submitted annually by January 31st.

(C) ACTION REQUIRED:

- 1) Maintain inactive landfill sites.
- 2) Monitor and report as required by permit.

September 25, 2009

PR-6207

2

SAMPLES TAKEN: YES ☐ NO ☒ LOCATIONS: _____

Parameters Sampled: _____

Copy Hand Delivered to Permittee: YES ☐ NO ☒

Copy Mailed to Permittee: YES ☒ NO ☐

Copy mailed to: Wayne Lewis Abitibi Bowater, PO Box 250, Mackenzie, B.C. V0J 2C0

Permittee/Representative's Signature: _____

Rita Ino

(Ministry representative discussed inspection findings with Permittee/Rep.) Environmental Protection Division Representatives

Regional Office Follow-up: _____



Fig. 1 Temporary cap

September 25, 2009

PR-6207

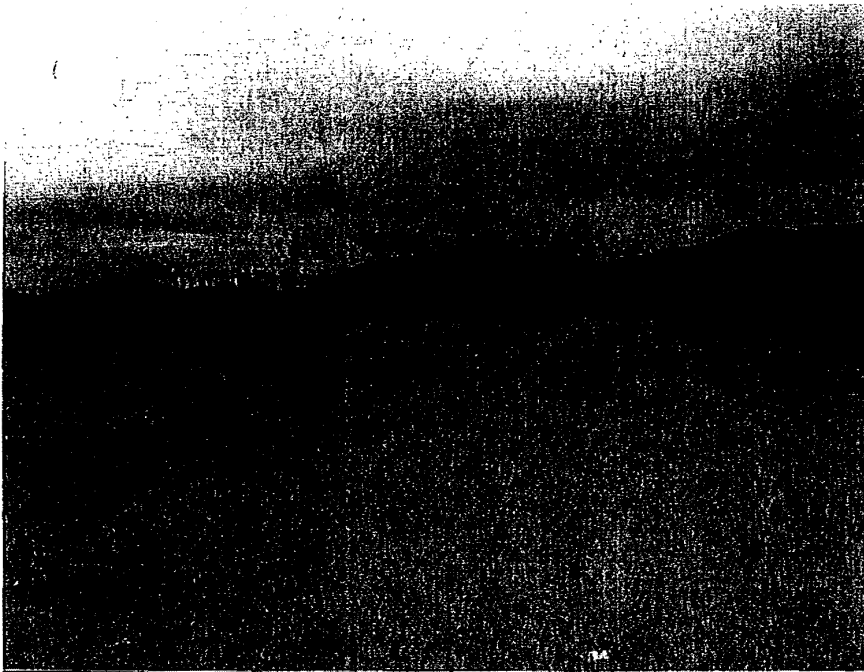


Fig. 2 PR-6207 looking North



Fig. 3 PR-6207 Looking towards site 2 sawmill

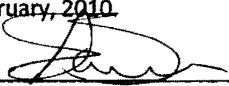
This is Exhibit 117
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 17



MINISTRY OF ENVIRONMENT
Environmental Protection

PULP MILL EFFLUENT PERMIT INSPECTION

Permit No: PE-01174

Date of Inspection: September 25, 2009

Permittee : Abitibi-Consolidated Company of Canada
Local Address: PO Bag 2800 Mackenzie BC V0J 2C0

REASON FOR INSPECTION	☒ Routine	☐ Complaint driven
	☐ Non-compliance	☐ Other (specify)
Mill indefinitely idling effective January 20, 2008.		
Permit had been amended for zero discharge until February 4, 2010. Unless permit is amended before January 4, 2010, it will revert to original discharge and fees will be assessed accordingly.		

TYPE OF INSPECTION	☒ Pre-arranged	☐ Unannounced
	☐ Sample Collection	☐ Sampling equipment
	☐ Inspection of Discharge / Outfall	☐ Meeting

INSPECTION BASED ON	☒ Visual observations	☒ Data review
	☒ Instrumentation readings	☒ Permittee Discussions

SAMPLES TAKEN	☐ Yes	☒ No
SPLIT SAMPLES TAKEN	☐ Yes	☒ No
INDEPENDENT SAMPLES TAKEN	☐ Yes	☒ No
SAMPLING EQUIPMENT INSPECTED	☐ Yes	☒ No
ON SITE SAMPLING PROCEDURES AUDITED	☐ Yes	☒ No
Comments:		

September 25, 2009

PE-1174 1

Main Outfall

Discharged since last inspection? ☐ Yes ☒ No
 -If yes, was consent of Director obtained? ☐ Yes ☐ No ☒ N/A

General Information

Emergency or unusual conditions occurring: ☒ YES (Specify) ☐ NO
Mill shutdown since January 20, 2008. Powerboiler shutdown April 4, 2008. Last discharge May 9, 2008.

Any Bypasses Occurring ☒ YES (Specify) ☐ NO
Effluent bypasses splitter and primary clarifiers and discharges directly to cooling basin. Split pond also bypassed. Effluent discharged from cooling basin to bio basin. From bio basin goes directly to west aeration lagoon, bypassing the secondary clarifier, and then to polishing pond.

Authorization Granted on: July 30, 2008
 Specify conditions: Zero discharge without authorization.

Evidence of Any Spills on Property ☐ YES ☒ NO
 Comments: _____

Any complaints received about the operation: ☐ YES (specify) ☒ NO

Groundwater Monitoring (total resin acids):
 Quarterly report submitted: ☐ YES ☒ NO
 Comments: _____

Monitoring Data Submitted on Time: ☐ YES ☒ NO
 Monitoring Data in Compliance for All Parameters: ☐ YES ☒ NO
 Electronic Data Submitted: ☐ YES ☐ NO

Comments: Quarterly groundwater monitoring results required as per section 4.1.3 not received.

PERMIT COMPLIANCE:

The Permittee is ☐ IN ☒ OUT of compliance with the requirements of the permit. This assessment is based on:

4.6.1 "The data and monitoring results from subsections 3.10, 4.1 and 4.4 shall be suitably tabulated and submitted to the Regional Waste Manager on a monthly basis within 30 days of the end of the month in which the data is collected."

ACTION REQUIRED BY PERMITTEE

1) Monitor and report as required by permit.

REGIONAL OFFICE FOLLOW-UP

Inspection form delivered to the Permittee:
Inspection form mailed to the Permittee:

☐ YES
☒ YES

☒ NO
☐ NO

Copy mailed to: Wayne Lewis, Abitibi Bowater Inc. Bag 2800, Mackenzie, BC, V0J 2C0
Permittee / Representative



Environmental Protection Representatives



Fig. 1 Polishing Pond (note low level)

4

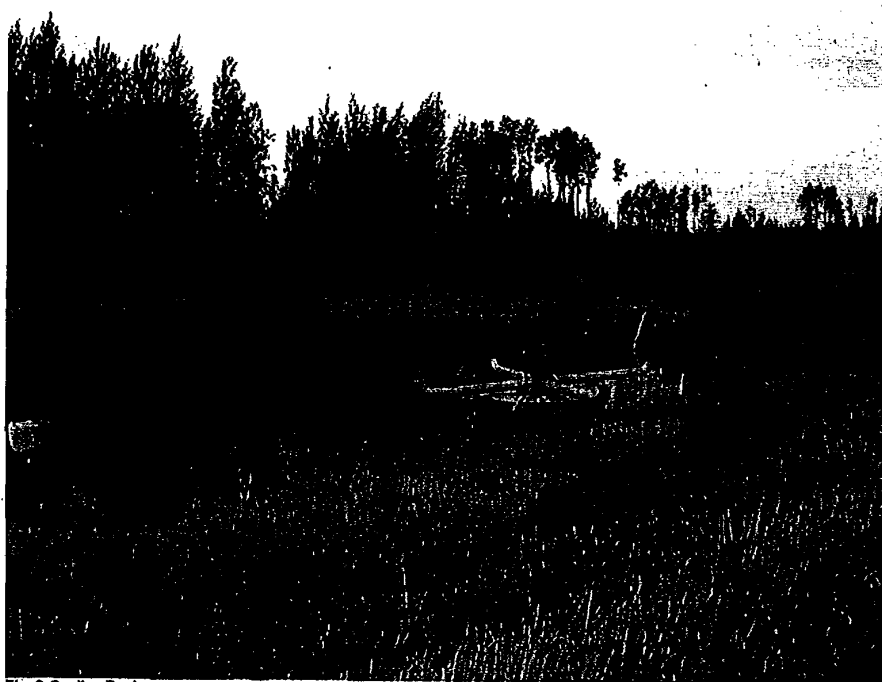


Fig. 2 Cooling Basin

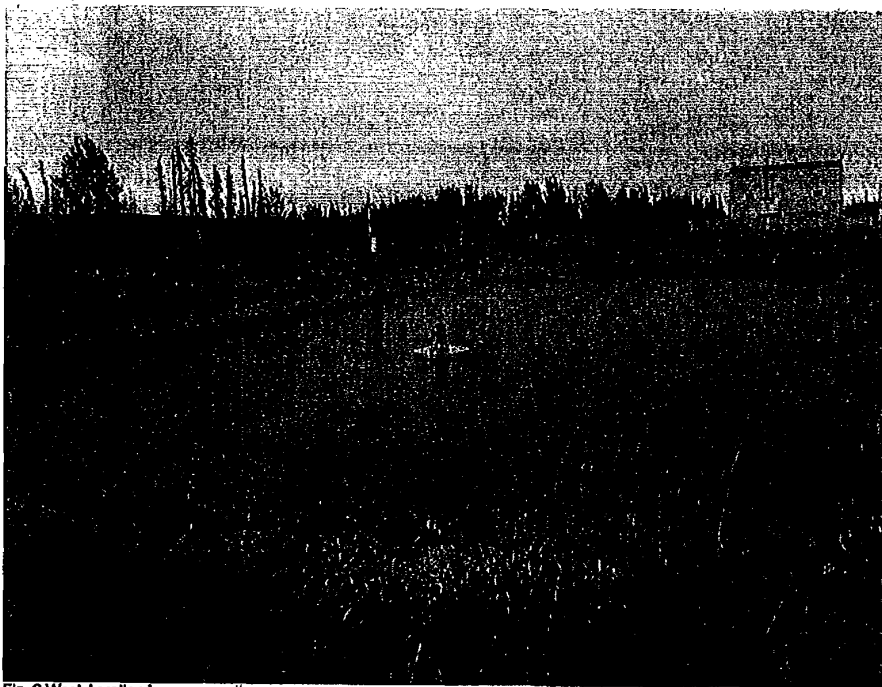


Fig. 3 West Aeration Lagoon

September 25, 2009

PE-1174 4

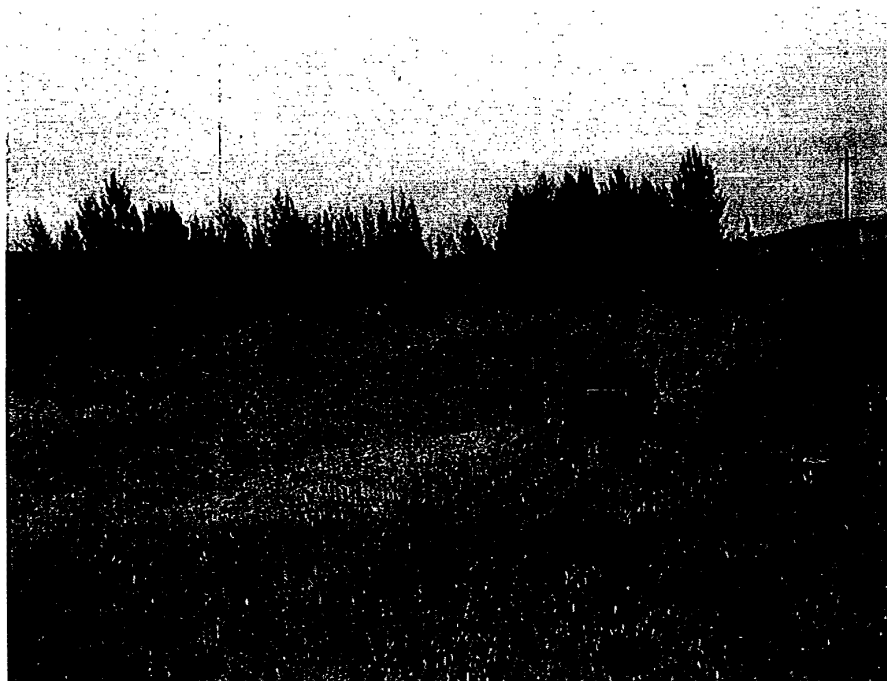


Fig. 4 Spill Pond

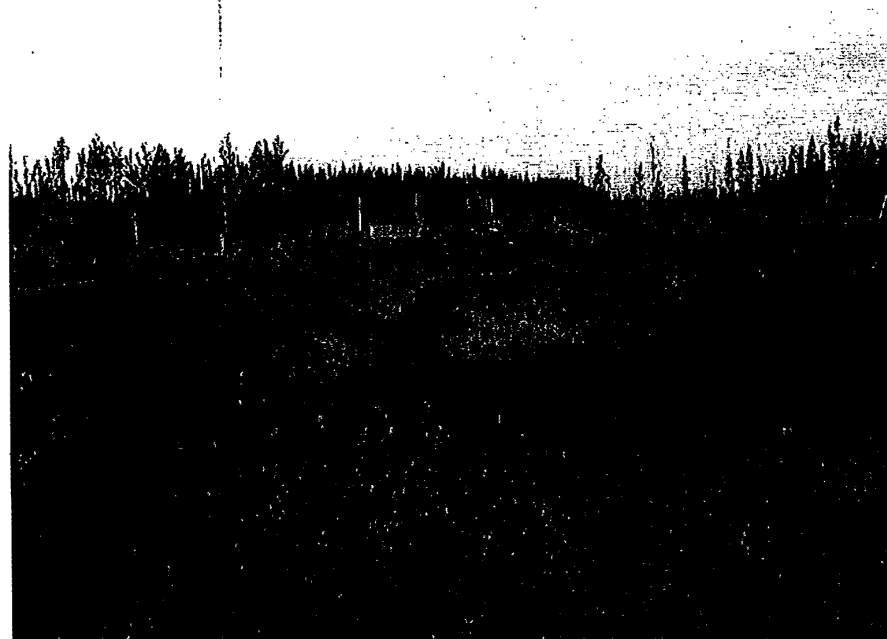


Fig. 5 East Aeration Lagoon

September 25, 2009

PE-1174 5

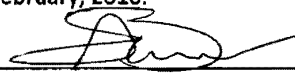
This is Exhibit "18"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 18



PERMIT INSPECTION

Ministry of Environment
325 1011 4th Avenue
Prince George BC V2L 3H9
Tel: (250) 566-8136
Fax: (250) 566-8829

Inspection Date: September 25, 2009

Permit No: PR-4133

Permittee: Abitibi-Consolidated Company of Canada

Location: Papernill- Mackenzie

(A) OBSERVATIONS, CONCERNS OR ISSUES: Last Inspection Oct 23, 2008 Mill idled since January 20, 2008.

Site Inspection:

New material has not been added since idling commenced.

PR-04133 Mixed Landfill

- Annual report submitted by January 31, 2009? Yes ☒ No ☐
- Spring groundwater analyzed and submitted? Yes ☐ No ☒
- Quarterly waste disposal record submitted? Yes ☐ No ☒
- Quarterly groundwater monitoring results reported as required? Yes ☐ No ☒

Comments: 2008 4th Quarter MW2 Chromium VI reported as 0.04 mg/L. CSR Sched 6 AW limit is 0.01 mg/L for Cr (VI).

Ash Landfill (4133)

Annual ash sample analyzed? Yes ☐ No ☐ N/A ☒ -Only required when ash is being landfilled.

Refuse compacted and covered? Yes ☒ No ☐

Slopes between 4 and 33%? Yes ☒ No ☐

Pooled water present on surface? Yes ☐ No ☒

Discharge of refuse material into freestanding water? Yes ☐ No ☒

Sign(s) of wildlife problems? Yes ☐ No ☒

Putrescible or unauthorized use of the landfill? Yes ☐ No ☒

Comments: Powerboiler shutdown as of April 4, 2008. Surface temporarily capped and covered with local sand/silt material.

Sludge Landfill (4133)

Refuse compacted? Yes ☐ No ☒

Slopes between 4 and 33%? Yes ☒ No ☐

Pooled water present on surface? Yes ☐ No ☒

Discharge of refuse material into freestanding water? Yes ☐ No ☒

Sign(s) of wildlife problems? Yes ☐ No ☒

Putrescible or unauthorized use of the landfill? Yes ☐ No ☒

Comments: Fissures have developed in the surface of the sludge landfill increasing the exposed area of the landfill and inhibiting surface runoff. As a result, increased infiltration of the sludge and possible leaching into the groundwater and slumping may become a concern. Surface is well vegetated.

Industrial and Metal Refuse (4133)

Refuse compacted and covered? Yes ☐ No ☐ N/A ☒

Slopes between 4 and 33%? Yes ☒ No ☐ N/A ☐

Pooled water present on surface? Yes ☐ No ☒

Discharge of refuse material into freestanding water? Yes ☐ No ☒

Sign(s) of wildlife problems? Yes ☐ No ☒

Putrescible or unauthorized use of the landfill? Yes ☐ No ☒

Comments: N/A

PR-04133

Sept 25, 2009

2

Review of Monitoring Data:

- Section 4.7.2 of Permit PR-04133 requires that "The results of the monitoring required in Sections 4.2, 4.3, 4.6 and 4.7.1 above, except where otherwise stated, shall be submitted to the regional Pollution Prevention office in a format acceptable to the Regional Waste Manager. The reports shall be submitted monthly within 30 days of the end of the month in which the monitoring occurred." Section 4.7.1 was amended February 17, 2009 amendment (attached) to require that the record of waste disposal be submitted within 30 calendar days of the end of the quarter.
- Quarterly groundwater monitoring results as detailed in section 4.2 not received for 2009.

(B) PERMIT COMPLIANCE IN ☒ OUT ☐ BASED ON SITE INSPECTION
PERMIT COMPLIANCE: IN ☐ OUT ☒ N/A ☐ BASED ON MONITORING DATA
OVERALL COMPLIANCE: IN ☐ OUT ☒

(C) ACTION REQUIRED:

- 1) Maintain inactive landfill sites.
- 2) Monitor and report as required by permit.

(D) SAMPLES TAKEN: YES ☐ NO ☐ LOCATIONS: _____

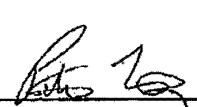
Parameters Sampled: _____

Copy Hand Delivered to Permittee: YES ☐ NO ☐

Copy Mailed to Permittee: YES ☐ NO ☐

Copy mailed to: Wayne Lewis, Abitibi Bowater Inc, Bag 2800, Mackenzie, BC, V0J 2C0

Permittee/Representative's Signature



Environmental Protection Division Representatives
(Ministry representative discussed inspection findings
with Permittee/Rep.)

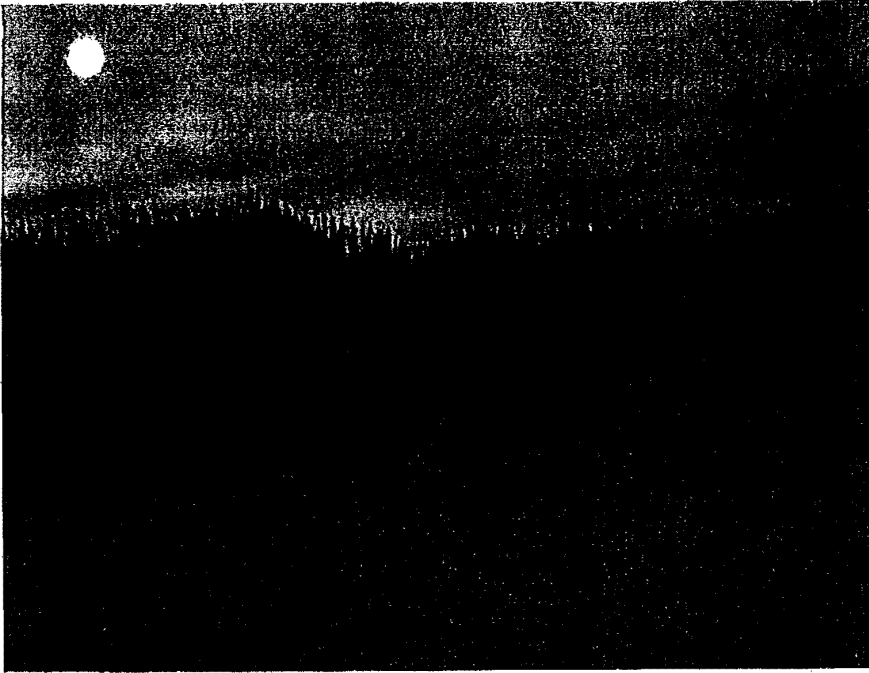


Fig.1 Ash Landfill

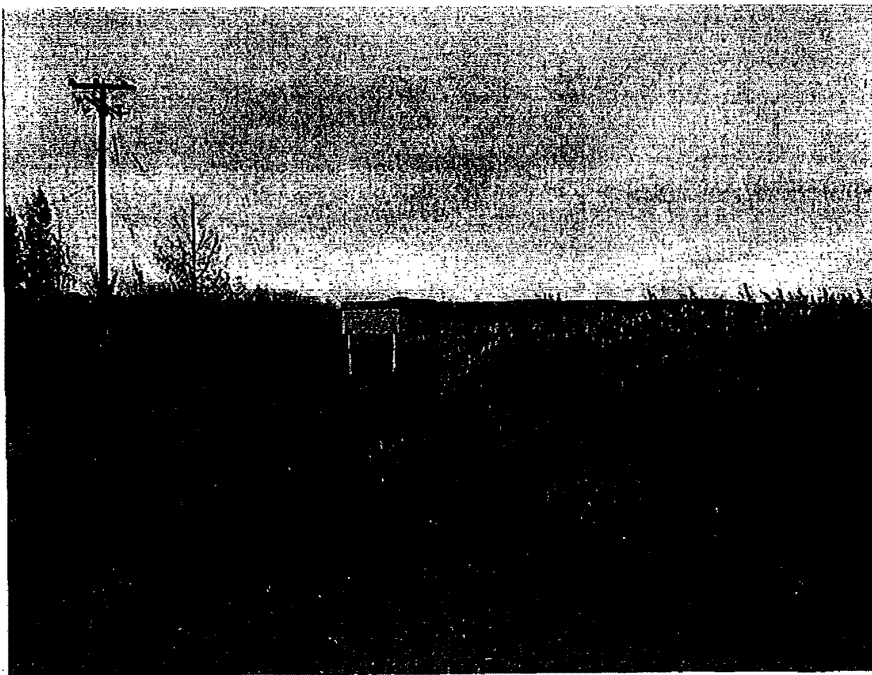


Fig. 2 Sludge Landfill



Fig. 3 Surface of sludge landfill (note fissures)

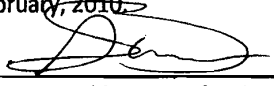
This is Exhibit "19"
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of Maureen Blawchuk
sworn before me this 4 day of
~~February, 2010~~

A Notary Public in and for the Province of
British Columbia

Exhibit 19



PERMIT INSPECTION

Ministry of Environment
325 1011 4th Avenue
Prince George BC V2L 3H9
Tel: (250) 565-8135
Fax: (250) 565-8829

Inspection Date: September 25, 2009 Permit No: PR-15166
Permittee: Abitibi-Consolidated Company of Canada Location: Mackenzie

(A) OBSERVATIONS, CONCERNS OR ISSUES: Last inspection July 16, 2008. Mill idled since January 20, 2008.

Site Inspection:

-No disturbance since last inspection. Covered with vegetation.

Review of Monitoring Data:

2008 Annual groundwater monitoring report not received. Due March 31st.

(B)	PERMIT COMPLIANCE	IN	☒	OUT	☐	BASED ON SITE INSPECTION
	PERMIT COMPLIANCE:	IN	☐	OUT	☒	N/A ☐ BASED ON MONITORING DATA
	OVERALL COMPLIANCE:	IN	☐	OUT	☒	

(C) ACTION REQUIRED:

Submit required groundwater report required under section 4.2 of permit (see attached letter).

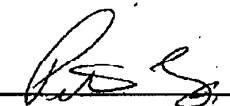
(D) SAMPLES TAKEN: YES ☐ NO ☒ LOCATIONS: _____
Parameters Sampled: _____

Copy Hand Delivered to Permittee: YES ☐ NO ☒
Copy Mailed to Permittee: YES ☒ NO ☐

Copy mailed to: Wayne Lewis, Abitibi Bowater Inc. Bag 2800, Mackenzie, BC, V0J 2C0

Permittee/Representative's Signature

(Ministry representative discussed inspection findings with Permittee/Rep.)


Environmental Protection Division Representatives

Regional Office Follow-up: _____

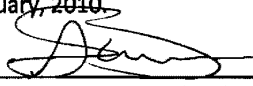
This is Exhibit "20"
referred to in the Affidavit
of Maureen Blawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 20



PERMIT INSPECTION

Ministry of Environment
325 1011 4th Avenue
Prince George BC V2L 3H9
Tel: (250) 665-6135
Fax: (250) 665-6629

Inspection Date: September 25, 2009 Permit No: PR-18335
Permittee: Abitibi-Consolidated Company of Canada Location: Papernmill- Mackenzie

(A) OBSERVATIONS, CONCERNS OR ISSUES:

Land application permit expires by December 31, 2009. Copy of Code of Practice left with Permittee.

Site Inspection:

Black chips spread.

Tramp material on surface of black chips (plastic).

Review of Monitoring Data:

Quarterly monitoring data for groundwater monitoring not received for Q1 and Q2 2009.

Annual Operations report not received.

(B) PERMIT COMPLIANCE IN ☒ OUT ☐ BASED ON SITE INSPECTION
PERMIT COMPLIANCE: IN ☐ OUT ☒ N/A ☐ BASED ON MONITORING DATA
OVERALL COMPLIANCE: IN ☐ OUT ☒

The Permittee shall submit the following reports in a format satisfactory to the Director including:

5.2 Operations Report

"For each calendar year an Operations Report that includes, but not limited to:

- The information specified in section 3,
- Confirmation of exact application rates for black chips and fertilizer,
- Total amount of black chips spread on each area,
- Documentation of a final inspection of oil application sites,
- Discussion of whether soil enhancement objectives and standards have been met, with a comparison to provincial and Canada wide standards for relevant soil and groundwater objectives,
- Identification of any further monitoring,
- Identification of additional fertilization and/or land application activity,
- A statement on the land use and soil quality.

The first report shall be submitted April 30, 2008 with a report to follow each calendar year thereafter until the Director is satisfied that no further work is required.

(C) ACTION REQUIRED:

- Submit Operations Report for 2008 as per section 5.2.
- Prior to any chip or nutrient application to the ground, submit Operations Plan as per section 5.1.

September 25, 2009

PR-18335

- Carry out all activities in accordance with the black chip application, monitoring and reporting program described in the document "Soil Enhancement Using Black Chips: Technical Assessment" as per section 3.1.
- Remove tramp material prior to soil incorporation.

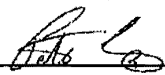
(D) SAMPLES TAKEN: YES ☐ NO ☒ LOCATIONS: _____

Parameters Sampled: _____

Copy Hand Delivered to Permittee: YES ☐ NO ☒

Copy Mailed to Permittee: YES ☒ NO ☐

Copy mailed to: Wayne Lewis, Abitibi Bowater Inc, Bag 2800, Mackenzie, BC, V0J 2C0
Permittee/Representative's Signature


Environmental Protection Division Representatives

Regional Office Follow-up: _____



Fig. 1 Spread Black Chips

September 25, 2009

PR-18335



Fig. 2 Leading edge of black chips (note tramp material)

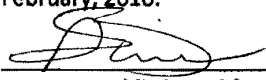
This is Exhibit "21"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 21



File: PE-1174
PA-1722
PA-3647
PR-4133
PR-4984
PR-6207
PR-15166
PR-15668
PR-18335

Date: September 30, 2009

Wayne Lewis
Abitibi Bowater,
PO Box 250,
Mackenzie, B.C. V0J 2C0

Dear Wayne:

Re: September 25, 2009 Permit Inspections

Please find enclosed copies of the completed permit inspection forms for PE-1174, PA-1722, PA-3647, PR-4133, PR-4984, PR-6207, PR-15668, and PR-18335 resulting from the September 25, 2009 site inspection.

PE-1174: Out of Compliance

- Quarterly groundwater report not received.

PA-1722: Out of Compliance

- Monitoring reports not received.

PA-3647: In compliance. Status update due November 25th.

PR-4133: Out of compliance

- Quarterly groundwater monitoring results for 2009 not received.
- Record of waste disposal not received.

PR-4984: In compliance.

PR-6207: Out of Compliance

- 2008 groundwater report not received.

Ministry of Environment

Environmental Protection Division
Regional Operations Branch
Omineca and Peace Regions

Mailing Address:

#325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6135

Facsimile: (250) 565-6629

Website: www.gov.bc.ca/env

PR-15166: Out of compliance

- 2008 groundwater report not received.

PR-15668: In compliance

PR-18335: Out of compliance

- 2008 Operations report incomplete.
- Unauthorized material.

Please see the actual reports for details.

The majority of the "out of compliance" assessments were the result of not reporting within the required time frames. Similar infractions were noted during the July 16, 2008 permit inspection. Please note that failing to comply with permit requirements is a contravention of Section 120(6) of the Environmental Management Act (EMA) and may be subject to prosecution.

Several of the permits contain a clause which allows for the "Regional Waste Manager" to amend monitoring and reporting requirement without having to go through the permit amendment process. If the Permittee wishes to vary the frequency (or in some cases suspend) monitoring and reporting requirements during the idling period they may apply in writing to:

Omineca and Peace; Environmental Protection Division
1011 Fourth Ave., Suite #325
Prince George, BC
V2L 3H9

Attn: Maureen Bilawchuk

All permit conditions and requirements remain until otherwise authorized by the Director.

Best regards,



Peter D. Lawrie
Environmental Protection Officer
Omineca and Peace Regions, BC Environment
1011-4th Ave., Prince George

cc.

Encl. Inspection Reports for:

PE-1174, PA-1722, PA-3647, PR-4133, PR-4984, PR-6207, PR-15166, PR-15668, PR-18335

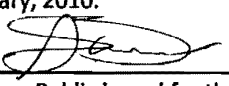
This is Exhibit "22"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 22



File: PA-1722
PA-3057

Date: November 26, 2009

Wayne Lewis
Abitibi Bowater,
PO Box 250,
Mackenzie, B.C. V0J 2C0

Dear Wayne:

Re: November 25, 2009 Permit Inspections

Please find enclosed copies of the completed permit inspection reports for PA-1722 and PA-3057, resulting from the November 25, 2009 site inspection.

PA-1722: Out of Compliance

- Monitoring reports not received.

PA-3057: In compliance.

See the actual reports for details.

Please note that Section 10 of Permit PA-1722 allows that the Regional Waste Manager may, in writing, change the monitoring and reporting requirements

If the Permittee wishes to vary the frequency (or in some cases suspend) monitoring and reporting requirements during the idling period they may apply in writing to:

Omineca and Peace: Environmental Protection Division
1011 Fourth Ave., Suite #325
Prince George, BC
V2L 3H9

Attn: Maureen Bilavchuk

Ministry of Environment

Environmental Protection Division
Regional Operations Branch
Omineca and Peace Regions

Mailing Address:

#325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6133

Facsimile: (250) 565-6629

Website: www.gov.bc.ca/env

2

All permit conditions and requirements remain until otherwise authorized by the Director.

As discussed during the inspection, there may be a discrepancy between the permitted discharges and actual discharges. The company is also paying for the permitting of a Wood Waste Incineration which is not likely to be rebuilt. The inspection reports include an estimate of the annual charges associated with the discharges.

If you have any questions, please do not hesitate to contact me at 250-565-4394.

Best regards,



Peter D. Lawrie
Environmental Protection Officer
Omineca and Peace Regions, BC Environment
1011-4th Ave., Prince George

cc.
Encl. Inspection Reports for:
PA-1722, PA-3057

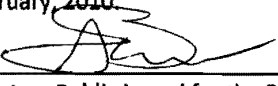
This is Exhibit "23"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public In and for the Province of
British Columbia

Exhibit 23



File: PE-1174
PA-1722
PA-3647
PR-4133
PR-4984
PR-6207
PS-6666
PR-18166
PR-16666
PR-18336

Date: January 26, 2010

Wayne Lewis
Abilibi-Consolidated Company of Canada,
PO Box 250,
Mackenzie, B.C. V0J 2G0

Dear Wayne:

Re: Follow-up to September 26, 2009 Permit Inspections

Thank you for the package containing the groundwater reports received December 21st 2009.

The status of as the end of the third quarter of 2009 is revised as follows:

- PE-1174- In compliance (revised)
- PA-1722-out of compliance.
 - Action required: submit monitoring reports or apply to director to suspend monitoring requirements.
- PA-3647-In compliance
- PR-4133-out of compliance. Quarterly report not received.
 - Action required: submit report as per February 17, 2009 letter of amendment.
- PR-4984-In compliance
- PR-6207-In compliance (revised with receipt of groundwater reports)
- PR-18166-In compliance
- PR-16666-In compliance
- PR-18336-out of compliance Qualified Professional's assessment report not received.
 - Action required: submit reports as per section B of permit.

Ministry of Environment	Environmental Protection Division Regional Operations Branch Omineca and Peace Regions	Mailing Address: #325 - 1011 Fourth Avenue PRINCE GEORGE BC V2L 9H9	Telephone: (250) 563-6115 Facsimile: (250) 563-6629 Website: www.gov.bc.ca/env
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In review of the data in the submitted reports the following was noted:

1. Test results were reported in a random fashion. In future reports, please compile the analysis results according to permit number in tabular form.
2. Results from MW 2 (PR-4133) continue to be of concern as there is an increasing trend of TOC and conductivity and March 2009's sample showed elevated Cr VI levels. Please continue to speculate for Cr VI at this location.
3. The following well numbers have not been reported previously. Please confirm that the following information is complete.

MW 09-A is for PR-15188
 MW 09-B is for PR-4133
 MW09-C is for PR-18335
 MW 09-D is for PE-1174

Please provide a site diagram showing the location of the new wells in relation to their respective source.

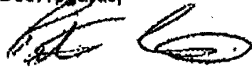
We look forward to receiving the following:

- PE-1174:
 - Fourth Quarter 2009 and First Quarter Groundwater Reports (due within 30 days of the end of the month of sampling).
- RA-3847: Status update letter as per section 3.7 of letter of amendment dated October 28, 2008 (due November 28, 2008).
- PR-4133:
 - Quarterly reports as per section 4.7.1 of letter of amendment dated February 17, 2009, (2009-Q1, Q2, Q3 overdue. Q4 due January 30, 2010).
 - Fourth Quarter 2009 and First Quarter Groundwater Reports (due within 30 days of the end of the month of sampling).
- PR-6207:
 - Discharge record, annual site restoration plan update as per section 3 (due January 31, 2010).
 - Receiving Environment Assessment of Wood Waste Landfill PR-6207 as per Director's Site Closure Plan letter of June 30, 2004 (due January 31, 2010).
 - Fourth Quarter 2009 and First Quarter Groundwater Reports (due within 30 days of the end of the month of sampling).
- PS-8555:
 - Updated waste inventory as per section 6 (due January 28, 2010).
- PR-15188
 - Annual Groundwater Reports (due March 31, 2010).

- PR-16668:
 - Discharge record and annual site restoration plan update as per section 3.0 and 4.2 (due January 31, 2010).
- PR-16935
 - Qualified Professional's Operational Report as per section 3.1 (due April 2008 and annually thereafter until Director is satisfied that no further work is required).
 - Annual Groundwater Report (due April 30, 2008).

All permit conditions and requirements remain until otherwise authorized by the Director.

Best regards,



Peter D. Lawrie
Environmental Protection Officer
Omineca and Peace Regions, BC Environment
1011-4th Ave., Prince George

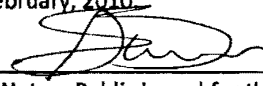
This is Exhibit "24"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 24

File PR-4984



Corporate Head Office:
5151 CANADA WAY
BURNABY, BRITISH COLUMBIA
CANADA V5E 3N1

TELEPHONE: 604 515 5151
FACSIMILE: 604 515 5150

WWW.MORROWENV.COM
CORP@MORROWENV.COM

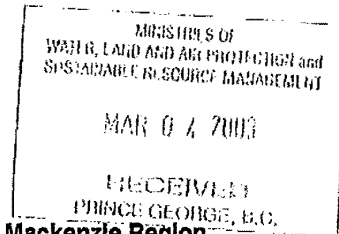
February 28, 2003

Project V1-856

Abitibi-Consolidated Company of Canada
Mackenzie Region
P.O. Box 250
MACKENZIE, BC
V0J 2C0

ATTENTION: Les Skaalid

REFERENCE: Abitibi-Consolidated Company of Canada, Mackenzie Region
Site 1 Closed Wood Waste Landfill Closure Plan
PR-04984



INTRODUCTION AND BACKGROUND

The following presents the landfill closure plan for the Site 1 Closed Wood Waste landfill at Abitibi-Consolidated Mackenzie operations.

The landfill is operated under permit PR-04984, originally issued to Donohue Forest Products Inc. in 1978 and updated in December 1991. The permit authorizes the deposit of up to 3,900 m³ annually of wood waste, broken logs and waste lumber. The site was operated from 1991 to 1998 and has not been operational since. There are no monitoring or reporting conditions attached to the permit, except that site restoration must be to the satisfaction of the Regional Waste Manager and it is intended to complete a final closure plan for this landfill. The location of the landfill at the Mackenzie operation is shown on Site Plan, Drawing V1-856-001.

Physical Setting

The landfill is situated high on the bank above Williston Lake. Based on the maximum permitted volume of 3,900 m³ per year, and an operation period of seven years, the landfill has an estimated maximum volume of 27,300 m³. The landfill covers an area of approximately 5 ha (Drawing V1-856-003). At its closest point, the landfill footprint is approximately 50 m from the top of bank of Williston Lake, and approximately 170 m at the furthest. As such, Williston Lake is the nearest surface water receptor. The landfilled materials consist of coarse log yard debris and log deck cleanup consisting of bark mixed with sand. The main wood species handled at the landfill is spruce and pine. Abitibi reports that none of the wood waste in this landfill contains wood preservatives.

Abitibi reports that the wood waste was placed directly onto the native sandy soils. The surface of the landfill is currently covered with approximately 0.3 m of silty sand. The south end of the landfill is covered with paper mill sludge and seeded with clover. The existing ground cover is graded relatively flat at approximately 2% to 4 % in grade and slopes toward the access road,

Corporate Head Office:
Burnaby, British Columbia

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Fort St. John

ALBERTA
Calgary
Edmonton

MANITOBA
Winnipeg

away from Williston Lake. There are no surrounding drainage ditches and no erosion gullies are evident.

Hydrogeology

The landfill overlies native sands (less than 1.5 m in thickness) which overlie silts to a known maximum depth of 9 m. The stratigraphy of TH-1, a borehole log drilled near the landfill, is attached. The underlying silts are glaciolacustrine in origin and as such likely contain various percentages of sand and clay or sand/clay lenses. The estimated hydraulic conductivity of the silts is 10 m/s - 6 m/s (0.086 m/day)¹. Based on TH-1, the water table is approximately 6 m below the ground surface. The current lake elevation is 672 m and the ground surface is approximately elevation 692 m, indicating the landfill is situated some 20 m above the lake. The underlying aquifer is relatively shallow and unconfined, and as such is vulnerable to potential pollution sources from the surface.

Water table contours for the entire site were developed by Sentar Consultants (Reference Drawing 102, Job Number 48-515-02-01, October 1993). The drawing indicates that groundwater flow in this area is west/northwest towards Williston Lake with an estimated hydraulic gradient of 0.009 m/m. The following relationship is used to estimate the rate of groundwater flow below the landfill.

$$V = \frac{K}{N} \frac{dh}{dl} \text{ where}$$

V = average linear velocity m/day
K = hydraulic conductivity (0.086 m/day)
N = porosity (0.3 estimated)
dh/dl = hydraulic gradient (0.009)

$$= 0.086 / 0.3 * 0.009$$

$$= 0.0026 \text{ m/day (1 m/year)}$$

Based on the above calculation, at the landfill's nearest point, leachate would take at least 50 years to reach the lake under advective flow conditions. Since this landfill has been in operation only since 1991, any leachate generated would not likely have reached the lake. However, under the closure plan, when additional monitoring wells are completed, the estimates of hydraulic gradient and hydraulic conductivity would be refined through in situ well testing to confirm or refute the above assumptions.

Landfill Location and Construction

Factors that affect the quantity of leachate produced include: climatic conditions, landfill configuration, hydrogeological conditions beneath the landfill, and distance to receptor. The potential leachate production is estimated by conducting a water balance on the landfill.

¹ Freeze, R.A. and J.A. Cherry, 1979. *Groundwater*. Prentice-Hall Inc., Englewood Cliffs, NJ, USA.

Precipitation and evaporation are the primary climatic conditions that influence the quantity of leachate that is produced. Local climatic conditions determine the amount of precipitation (rain or snow), which is deposited directly onto the landfill. The BC coast experiences a significant amount of rainfall and therefore landfills in this area will produce a significant amount of leachate. Seasonal and annual variations in precipitation influence leachate generation and should be considered when determining the most effective leachate management technique. The Mackenzie region is relatively dry and the 20 year average annual precipitation from 1971 to 1990 was: rainfall 353 mm and snowfall 369 mm (Environment Canada, Canadian Climate Normals). Based on the climatic conditions, the potential for leachate production begins in the spring during snowmelt when the ground thaws.

CLOSURE PLAN

Objectives

The objectives of the closure plan are to isolate wastes from terrestrial contact, protect surface water and groundwater by minimizing leachate production, protect the final cover from erosion using self-sustaining vegetation, control drainage and return productivity to equal or better than the surrounding area.

Final Cover and Slope

The final landfill cover material will consist of fine sand, native to the area and paper mill sludge to reduce the permeability of the cover. There are no clays, local to the area, that are suitable for cover material and the use of an artificial liner is considered too costly.

The use of paper mill sludge to provide a low permeability cap in the order of 1×10^{-6} cm/s is well documented. A study by Golder Associates² (2000) indicated that the paper mill sludge from Abitibi's Mackenzie operations achieved a laboratory permeability of 6.7×10^{-7} cm/sec with the following physical parameters:

- dry density 241 kg/m³
- water content (%dry weight) 143.8

Golder achieved the observed density using standard Proctor laboratory compaction techniques.

² *Testing of Potential Landfill Cover Materials, Mackenzie, BC, Golder Associates Ltd., 2000 12 11.*

The permeability value was obtained using high hydraulic gradients in the range of 13.8 m/m to 16.1 m/m. This range of hydraulic gradients would not usually be realized in a landfill in the interior of British Columbia with adequate drainage, but none-the-less can be used as a conservative approach. Other publications such as Benson and Wang³ (2000) and Krause et al.⁴ (1997), have identified that paper mill sludge can achieve permeability values as low as 1×10^{-7} cm/sec in the laboratory permeameter testing.

Benson and Wang showed that field testing results using the double-ring infiltrometer agreed well with the laboratory data and that the permeabilities measured in the field using large scale testing were very similar to the results observed with re-molded laboratory specimens. As a result, field verification of the in situ permeability results would be carried out using double-ring infiltrometer testing as defined in ASTM D 3385 – 88.

The paper sludge proposed for use will likely be a mixture of primary and secondary treated sludge, similar to the material already applied to the older portion of the landfill. Compaction of the sludge will be difficult at observed water contents (>100 % dry weight). However, Benson and Wang (2000) showed that adequate in situ permeabilities were achieved at a low effective stress of 5 kPa (<0.6 m of sandy soil) and permeabilities decreased with increasing effective stress.

On behalf of Abitibi Consolidated Company of Canada, Mackenzie Region – Paper, Sylvis Environmental has completed a *Closure Plan for the Old Ash Landfill (Permit PR-15166)*. This work has included a comprehensive literature review and analytical testing to determine the suitability of an alternate cover design using paper sludge as part of a landfill cover. Paper sludge has unique low permeability attributes and, given that suitable native clays are not present locally, artificial covers are very costly, and the paper mill has a surplus of sludge, a study has been undertaken to identify the suitability of using sludge as part of a landfill cover.

As such, Sylvis has completed a water balance, final cover design (including vegetation cover) and post closure performance monitoring with respect to the cover design. Following review by the Ministry of Water Land and Air Protection, it is our intent to include the recommendations of Sylvis and the Ministry of Water, Land and Air Protection (MWLAP) for cover design and post closure performance evaluation into a closure plan for the wood waste landfill and integrate these into a final grading plan, drainage controls and post closure monitoring. The landfill cover design for the wood waste landfill will be completed based on the Sylvis approach for the Ash landfill.

³ Benson, C.H. and Wang, X., *Hydraulic Conductivity Assessment of Hydraulic Barriers Constructed with Paper Sludge*, Geotechnics of High Water Content Materials, ASTM STP 1374, T.B. Edli and P.J. Fox, Eds. American Society for Testing and Materials, West Conshohocken, PA, 2000.

⁴ Kraus, J. et al., *Laboratory and Field Hydraulic Conductivity of Three Compacted Paper Mill Sludges*, Journal of Geotechnical and Geoenvironmental Engineering, July 1997.

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Based on the current configuration of the landfill, final slopes will conform to the minimum slope requirement of 4% and will slope away from Williston Lake. Slope stability at this angle of closure will not be a concern.

The final cover will consist of compacted sludge sandwiched between sand layers. The use of sludge as a surface impermeable barrier will significantly reduce infiltration and the potential for leachate generation. The thickness of the sludge lifts and sand cover will be determined by Sylvis using numerical modelling in a manner similar to that used for the ash landfill. This will be completed once the site survey is complete and the final landfill configuration is determined. Compaction testing will be undertaken to confirm the level of compaction to assist in performance evaluation of the cover. The typical cross-section for the final cover presented as Option 2 in Sylvis' report is attached as Drawing V1-856-005.

Final grading plan drawings as well as a cross-section of the final cover design will be included in the closure plan as soon as the present landfill configuration is determined when snowmelt is complete.

Drainage Layers

The sand layer underlying the sludge will provide drainage below the cap. The sand overlying the sludge will direct shallow subsurface water to the edge of the landfill. Grading controls during placement of the sludge will ensure that no depressions occur, causing water to pond on the sludge. A graded filter will be designed to ensure that drainage does not remove fines from the sand as it emerges at the perimeter of the landfill. Perimeter drainage will be constructed as required once the site survey is complete and the results of the hydrologic model are evaluated. Throughout the application of the final cover, the landfill will be graded and contoured to ensure that the final cover is constructed with slopes to adequately control erosion and positive drainage of the landfill surface to the east.

Vegetative Cover

Once the sludge has been placed over the entire landfill, seeding will take place when weather and ground conditions permit. The following seed mixture has been developed by Sylvis for the ash landfill and will be applied to the wood waste landfill:

NON-COMPETITIVE LANDFILL SEED MIX	
%	SPECIES
23	Perennial Rye
20	Creeping Red Fescue
20	Italian Ryegrass
16	Tall Fescue
10	Red Clover
5	Orchard Grass
5	Timothy
2	White Clover
100	

The seeding will be applied at a rate of 75 kg/ha and will be completed by mechanical broadcasting.

Landfill Gas

Prior to design of the final landfill cover, the potential of landfill gas generation from the wood waste will be assessed. Based on the make-up of the landfill, gas production is not considered likely. Once the cover is in place, landfill gas monitoring will be undertaken if preliminary investigations indicate the potential for gas accumulation. If present, a system will be designed to limit landfill gas migration by passive venting.

Proposed Use of Property After Closure

No activities are planned for this landfill after closure.

POST-CLOSURE ACTIVITIES

Inspections

Abitibi Consolidated will conduct monthly inspections of the landfill during snowmelt conditions to ensure that there is no damage to the cap from instability, erosion or other sources such as wildlife. Any damage to drainage or growing media will be repaired in the summer months. Vegetation growth will be closely monitored and any areas showing distress or no growth will be re-seeded and fertilized as required. Results of inspections will be documented and kept on file.

Monitoring

Monitoring Well Installation

It is recommended that a total of three monitoring wells be completed at the locations shown on Drawing V1-856-003. Monitoring wells will be installed straddling the water table with a 3 m long well screen. One well will be completed as a multilevel installation to determine the

magnitude of vertical hydraulic gradients if present. Wells should be monitored semi-annually, once following spring snowmelt in June and in January to reflect the seasonal high and low groundwater conditions. Monitoring may be adjusted seasonally as water levels will be dependent on the lake levels.

Monitoring wells will be constructed of 50 mm O.D. (outside diameter) Schedule 40 PVC, decontaminated and bagged by the supplier. Each well installation will consist of a typically 1.5 m long slotted screen section with blank riser pipe extending to surface. An inert silica sand filter pack will be installed around the screened section of each well and a bentonite seal typically 1 m thick placed above the filter pack to prevent downward migration of surface water within the annulus of the borehole. The remainder of the borehole will be backfilled with either clean sand found on site or with silica sand. Surface completions will consist of either locking protective steel stick-up boxes or flush mount steel road boxes with bolt down lids. Both types of completions will be concreted in place.

Monitoring Well Development and Sampling

At the completion of monitoring well installation, each well will be developed to remove fine grained material from the well screen and filter pack, equilibrate the filter pack with the groundwater geochemistry, and improve the hydraulic connection between the well and formation to allow entry of representative groundwater into the well. Each well will be developed using dedicated Waterra® foot valves and tubing. A minimum of three borehole volumes of water will be removed from each well, in accordance with Morrow's in-house preferred operating procedures (POPs).

The groundwater monitoring wells will be sampled with the dedicated sampling equipment. Prior to collecting the groundwater samples, each monitoring well will be purged. Groundwater purging protocols stipulate the evacuation of, at minimum, three volumes of the water standing in the well casing to ensure the collected groundwater is representative of formation conditions. Accordingly, purging protocols will consist of evacuating groundwater from the wells until conductivity measurements have stabilized. Conductivity, pH, and temperature measurements will be recorded for each monitoring well.

Because standards are pH and temperature dependent, these will be monitored very closely in the field. All groundwater samples will be collected in laboratory supplied containers and preserved according to accepted protocols and procedures (CCME⁵ EPC-NCS62E, 1993). A field quality assurance (QA) program will be conducted concurrently with the groundwater sampling program. The QA program will consist of trip blanks and the collection of duplicate samples comprising approximately 10% of the number of samples analyzed. Groundwater samples will be stored in coolers, on-ice, until transfer to the laboratory. Samples will be transferred to the laboratory within 48 hours of collection. Chain-of-custody (COC) forms will be

⁵ Canadian Environmental Quality Guidelines (CEQG), Canadian Council of Ministers of the Environment (CCME), Winnipeg MB, 1989.

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filled out for all samples collected and will be included with the samples when they are transferred to the analytical laboratory.

The groundwater monitoring well development and purging water will be stored in steel drums on each site pending characterization. If on-site security is an issue for the drummed development and purging water as well as the drill cuttings, Morrow will discuss relocating the drums to a possible secure location.

Surface and top of pipe elevations will be surveyed in the field to determine groundwater elevations. Field elevation data will be related to a local benchmark (if present), if not, a temporary benchmark will be established.

Groundwater monitoring and sampling should include the following parameters:

- Depth to water
- pH
- Conductivity
- Temperature
- Resins and Fatty acids
- Dissolved metals
- Total Phenols
- Biological oxygen demand (BOD)
- Total organic carbon (TOC)

Sampling and analysis of groundwater indicators of wood waste leachate such as pH, conductivity, total organic carbon and biological oxygen demand should be undertaken quarterly.

Following installation, *in situ* hydraulic response testing will be undertaken in each well to determine the hydraulic conductivity of the aquifer and confirm the groundwater flow direction and velocity.

The analytical results will be compiled annually and submitted to the Ministry. The report will include the analytical results compared to the *Contaminated Sites Regulation* (CSR)⁶ groundwater aquatic life standards. It is proposed to monitor the groundwater based on the above recommended frequency for two years. Adjustments in monitoring will be recommended based on the results obtained.

⁶ Waste Management Act, *Contaminated Sites Regulation* (CSR), BC Reg. 375/96, deposited December 16, 1996, O.C. 1480/96, effective April 1, 1997 (includes amendments BC Reg. 244/99, deposited July 19, 1999 and BC Reg. 17/2002, deposited February 4, 2002).

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SCHEDULE

Field work required to complete the project will begin as soon as snowmelt is complete and site access is available. Upon MWLAP approval, it is proposed that the closure plan proceed with final cover design by June 30, 2003. Final cover addition and grading would proceed in August 2003 following MWLAP's approval of the plan. Seeding to follow immediately upon completion of final grading.

Groundwater monitoring wells and sampling and analysis should proceed in August 2003.

An annual report will be submitted no later than January 31, 2004.

COSTS

Costs for the final cover will be developed upon completion of a site survey and design of the final cover, grading plan, vegetation cover. Long term monitoring costs will also be submitted in the annual report.

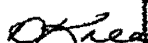
CLOSURE

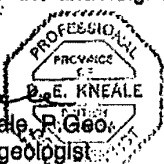
The alternate cover design approach is presented because of the lack of suitable clays in the area, the cost of artificial liners is prohibitive and the water balance calculations indicate this to be a reasonable approach. The design of the landfill cover will meet the project objectives. Neither erosion of the vegetated growing medium or slope instability are considered a concern.

The landfill has been in place for approximately 12 years with limited intermediate cover and no groundwater monitoring for the potential contaminants of concern. The proposed initial groundwater monitoring program will identify if groundwater impacts are present. The results of one year's monitoring data showing both high and low groundwater conditions will be used to determine if the closure plan will require revision.

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We trust this provides you with the information you currently require. If you have any questions, please contact the undersigned.


David E. Kneale, P. Geo.
Senior Hydrogeologist

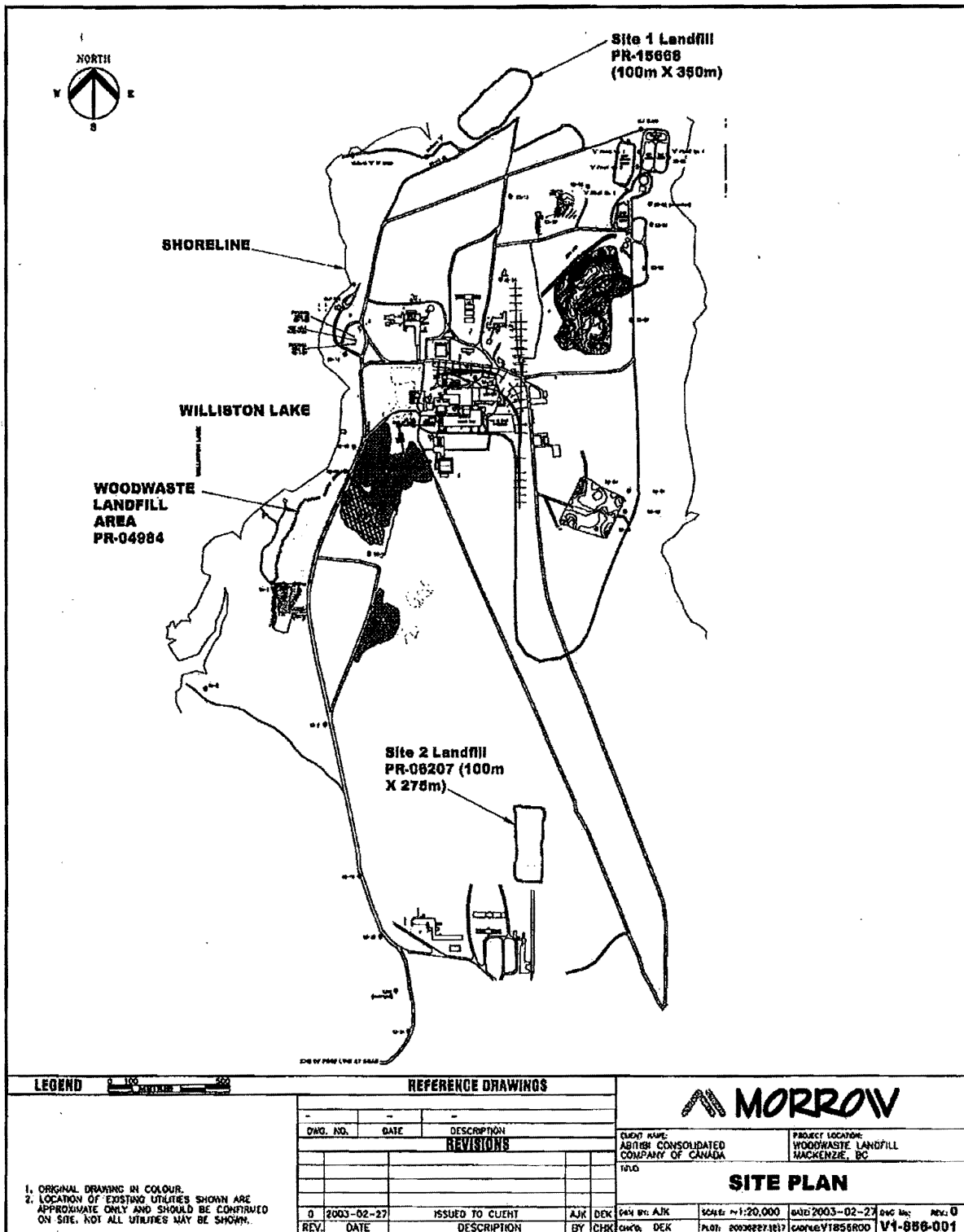


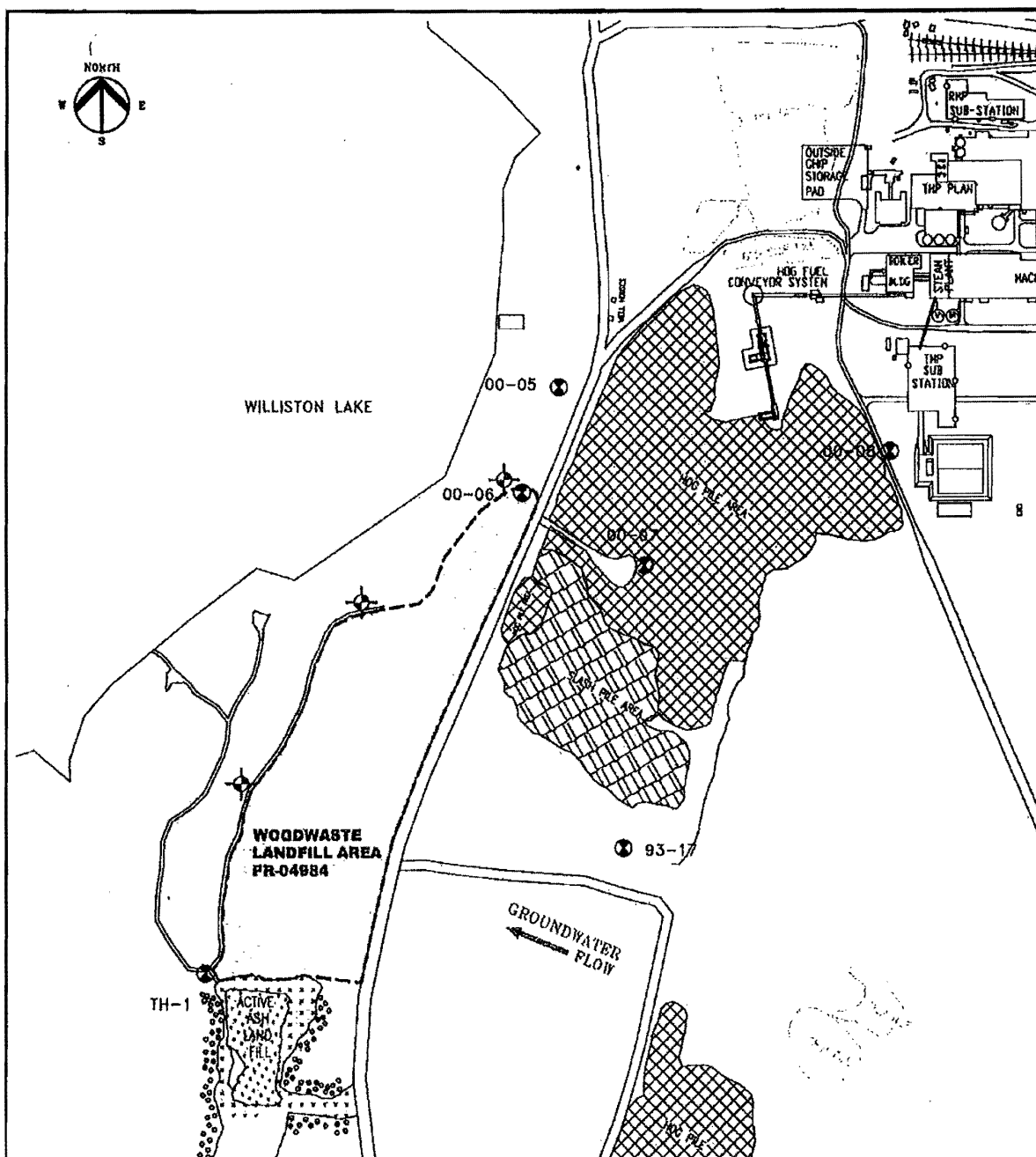
MORROW ENVIRONMENTAL CONSULTANTS INC.

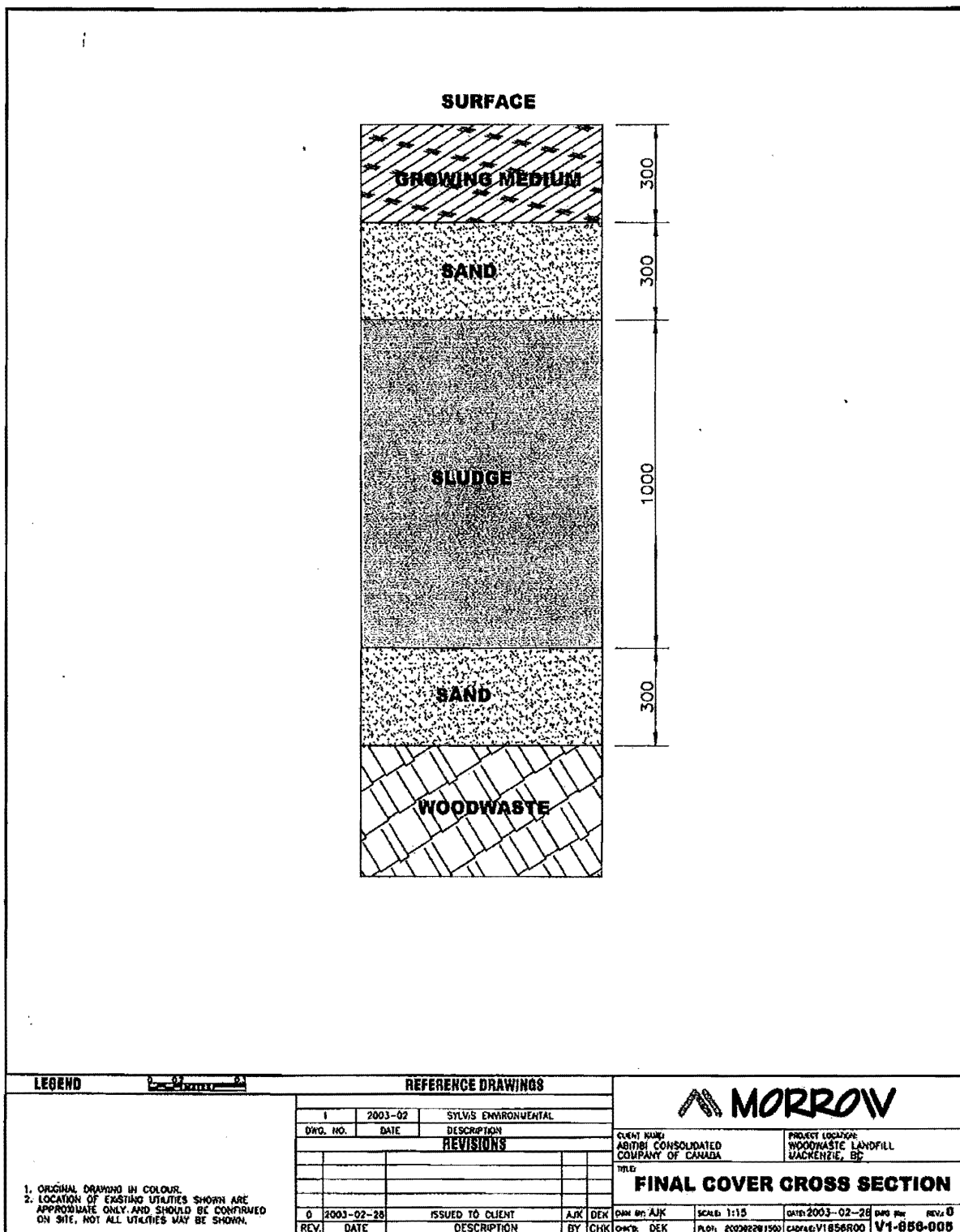
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ATTACHMENTS

- 1: Site Plan, Drawing V1-856-001
- 2: Wood Waste Landfill Area PR-04984, Drawing V1-856-003
- 3: Final Cover Cross-Section, Drawing V1-856-005
- 4: Borehole Log TH-1
- 5: Permit PR-04984







14

Finlay Forest Industries		Ash Landfill Site - Baseline Study		TEST HOLE NO: TH-1	
Mocker B.C.		Site 1 Sawmill Logyard		PROJECT NO: KX02612	
		South West side of Logyard		ELEVATION:	

SAMPLE TYPE ☒ TUBE		☒ NO RECOVERY		☒ SPLIT SPOON		☐ GRAB		☐ MUD RETURN		☐ CORE RETURN	
--	--	---	--	---	--	-------------------------------	--	-------------------------------------	--	--------------------------------------	--

DEPTH (m)	WELL INSTALLATION SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	ADDITIONAL INFORMATION	DEPTH (m)	
0.0		Organic soil and sand, grass roots. SAND, trace silt, sand is fine to medium, loose, trace roots decreasing with depth, light brown, moist.				0.0	
0.5						0.5	
1.0						1.0	
1.5						1.5	
2.0			SILT, little clay, trace fine sand, very low plasticity, dark grey, moist.	X			2.0
2.5							2.5
3.0			SILT, stiff	X			3.0
3.5							3.5
4.0							4.0
4.5			SILT, stiff, reddish and brown discolorations present in soil.	X			4.5
5.0							5.0
5.5							5.5
6.0			SILT, very wet.	X			6.0
6.5							6.5
7.0							7.0
7.5							7.5
8.0			SILT, stiff, very wet.	X			8.0
8.5							8.5
9.0			Drilling terminated at 9.14 m. Groundwater monitoring well installed to 9.14 m. 6.2 m of slotted pipe installed. 3.1 m section of plain pipe installed. Geosack installed over slotted section of pipe. Sand pack installed around slotted section of pipe. Bentonite installed between 2.7 m and 2.3 m. A 0.7 m stub up was installed at the top of the well inside an above ground steel casing. The steel casing was imbedded in concrete.				9.0
9.5						9.5	
10.0						10.0	
10.5						10.5	
11.0						11.0	
11.5						11.5	
12.0						12.0	
12.5						12.5	
13.0						13.0	
13.5						13.5	
14.0						14.0	
14.5						14.5	
15.0						15.0	

AGRA Earth & Environmental Limited
Prince George, B.C.

LOGGED BY: MJB	COMPLETION DEPTH: 9.1 m
REVIEWED BY: MJB	COMPLETE: 06/18/96
Fig. No:	Page 1 of 1

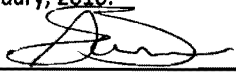
This is Exhibit "25"
referred to in the Affidavit
of Maureen Blawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 25



Corporate Head Office:
5151 CANADA WAY
BURNABY, BRITISH COLUMBIA
CANADA V5E 3N1

TELEPHONE: 604 515 5151
FACSIMILE: 604 515 5150

WWW.MORROWENV.COM
CORP@MORROWENV.COM

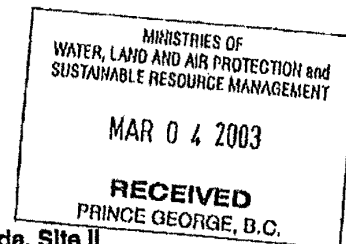
February 28, 2003

Project V1-856

Abitibi-Consolidated Company of Canada
Mackenzie Region
P.O. Box 250
MACKENZIE, BC
V0J 2C0

ATTENTION: Les Skaalid

REFERENCE: Abitibi-Consolidated Company of Canada, Site II
Active Sawmill and Planer Mill Landfill Closure Plan
PR-06207



INTRODUCTION AND BACKGROUND

The following presents the 2002 monitoring report for the Site II landfill at Abitibi-Consolidated Company of Canada, Mackenzie operations.

22. The landfill is operated under permit PR-06207, originally issued to Donohue Forest Products Inc. on June 26, 1975 and amended on June 25, 2001. The permit originally authorized the deposit of up to 22,000 m³/yr, which was amended in 2001 to 20,000 tonnes annually of log yard debris including, dirt, bark, wood residue, which is no greater than one (1) metre in length and combustion residue from the incineration of wood waste. The following describes the reporting requirements, as per Section 3.0 of the Ministry of Water, Land and Air Protection (MWLAP) amended permit, dated June 25, 2001 conditions attached to the permit:

"3.1. Environmental Monitoring and Assessment: The Permittee may be required to conduct monitoring and environmental impact assessment based on the results of visual monitoring as well as any other information collected by the Pollution Prevention staff in connection with the discharges.

3.2. Reporting Requirements: The Permittee shall maintain a record of the type, quantity and source of refuse discharged to the landfill site on a daily basis during discharge periods and shall make these records available for inspection by Pollution Prevention personnel. The Permittee shall compile and submit the data collected during the preceding calendar year to the Regional Pollution Prevention office by January 31st of each year.

- Included in the above submission, the Permittee shall also provide a discussion of site maintenance conducted during the year, and shall include but is not limited to:

➤ Approximate dates of the site compaction and intermittent soil cover."

The location of the landfill is shown on the attached Site Plan, Drawing V1-856-001.

Corporate Head Office:
Burnaby, British Columbia

Regional Offices:
BRITISH COLUMBIA

Burnaby
Victoria
Nanaimo

Kelowna
Cranbrook
Prince George

Terrace
Fort St. John

ALBERTA

Calgary
Edmonton

MANITOBA

Winnipeg

General Description

The Site II landfill was established in October 1981 and has received the following known estimated volumes of wood waste throughout the 23 years of landfill operation:

- October 1999 to December 1999 – 3,418 m³
- 2000 – 8,006 m³
- 2001 – 12,132 tonnes
- 2002 – 9,021 tonnes

does this include the time period bet. 1981-1999?

Abitibi reports that refuse was deposited between 1981 and 1999, but these volumes cannot be confirmed. Based on available records, a total of approximately 33,000 tonnes of log yard debris has been deposited on site. The landfilled materials consist of coarse log yard debris and log deck cleanup consisting of bark mixed with sand. The main wood species handled at the landfill is spruce and pine. Abitibi reports that none of the wood waste in this landfill contains wood preservatives.

The landfill is approximately 100 m by 275 m in area (Drawing V1-858-004). This site was developed in the pine flats by infilling a kettle depression. The total depth of refuse is less than 6 m. The kettle is filled almost level with the surrounding ground with a surface grade of less than 4 % away from the centre of the landfill. Semi-annual intermediate covers of native silty sand are applied to the landfill in the spring and fall of each year. Surface drainage is away from the centre of the landfill in all directions. There is no evidence of erosion and surface drainage controls are not presently required.

Abitibi intends to operate the landfill until 2004 at which time expansion to an adjacent area for an additional 10 years is contemplated. An amendment to the permit was submitted to the MWLAP in June, 2002 for the expansion and Abitibi is awaiting a reply.

Hydrogeology

The landfill footprint is approximately 1,500 m from the top of bank of Williston Lake. As such, Williston Lake is the nearest surface water receptor. Generally, the Mackenzie site is underlain by native sands and silts. The underlying silts are glaciolacustrine in origin and as such likely contain various percentages of sand and clay or sand/clay lenses. Abitibi maintains a network of ground water monitoring wells, but none are located in the vicinity of the Site II Landfill.

Groundwater flow is generally to the west towards Williston Lake. (Sentar Consultants, (Reference Drawing 102, Job Number 48-515-02-01, October 1993). However, the depth to groundwater is not accurately known in this area. Based on current hydrogeologic data, it is anticipated that groundwater is at least 9m below the ground surface.

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CLOSURE PLAN

Objectives

The objectives of the closure plan are to isolate wastes from terrestrial contact, protect surface water and groundwater by minimizing leachate production, protect the final cover from erosion using self-sustaining vegetation, control drainage and return productivity to equal or better than the surrounding area.

It is not intended to close any portion of this landfill in 2003. The final cover design, drainage considerations and erosion control etc. are dependent upon the final landfill configuration. A survey of the site will be completed before closure and the final design will be modified accordingly.

Final Cover and Slope

On behalf of Abitibi Consolidated Company of Canada, Mackenzie Region – Paper, Sylvis Environmental has completed a *Closure Plan for the Old Ash Landfill (Permit PR-15166)*. This work has included a comprehensive literature review and analytical testing to determine the suitability of an alternate cover design using paper sludge as part of a landfill cover. Paper sludge has unique low permeability attributes and, given that suitable native clays are not present locally, artificial covers are very costly, and the paper mill has a surplus of sludge, a study has been undertaken to identify the suitability of using sludge as part of a landfill cover.

As such, Sylvis has completed a water balance, final cover design (including vegetation cover) and post closure performance monitoring recommendations with respect to the cover design. Following review by the Ministry of Water Land and Air Protection, it is intended to include the recommendations of Sylvis and the MWLAP for cover design and post closure performance evaluation into a closure plan for the Site II wood waste landfill and integrate these into a final grading plan, drainage controls and post closure monitoring. Sylvis will complete the landfill cover design for the wood waste landfill in a manner similar to that done for the ash landfill. This will include

- confirmation of existing and final closure contours;
- use of sludge;
- vegetation cover; and
- numerical modelling using the HELP model to confirm infiltration characteristics and final cover design.

Final grading plan drawings as well as a cross-section of the final cover design will be included in the closure plan.

Landfill Gas

Prior to design of the final landfill cover, the potential of landfill gas generation from the wood waste will be assessed. Based on the make-up of the landfill, gas production is not considered likely. However, if present, a system will be designed to limit landfill gas migration by passive venting.

Proposed Use of Property After Closure

No activities are planned for this landfill after closure.

POST-CLOSURE ACTIVITIES

Inspections

Abitibi Consolidated will conduct monthly inspections of the landfill during snowmelt conditions to ensure that there is no damage to the cap from instability, erosion or other sources such as wildlife. Any damage will be repaired during the summer months. Vegetation growth will be closely monitored and any areas showing distress or no growth will be re-seeded and fertilized as required. Results of inspections will be documented and kept on file.

Monitoring

Monitoring Well Installation

It is recommended that a monitoring well be completed at the location shown on Drawing V1-856-002. This well should be sampled annually for groundwater quality and the depth to water should be measured quarterly for the first year.

The monitoring well will be constructed of 50 mm O.D. (outside diameter) Schedule 40 PVC, decontaminated and bagged by the supplier. Each well installation will consist of a typically 1.5 m long slotted screen section with blank riser pipe extending to surface. An inert silica sand filter pack will be installed around the screened section of each well and a bentonite seal typically 1 m thick placed above the filter pack to prevent downward migration of surface water within the annulus of the borehole. The remainder of the borehole will be backfilled with either clean sand found on site or with silica sand. Surface completions will consist of either locking protective steel stick-up boxes or flush mount steel road boxes with bolt down lids. Both types of completions will be concreted in place.

Monitoring Well Development and Sampling

At the completion of monitoring well installation, the well will be developed to remove fine grained material from the well screen and filter pack, equilibrate the filter pack with the groundwater geochemistry, and improve the hydraulic connection between the well and formation to allow entry of representative groundwater into the well.

Abitibi-Consolidated Company of Canada – Page 5 of 6
February 28, 2003
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The groundwater monitoring well will be sampled with dedicated sampling equipment. Prior to collecting the groundwater samples, each monitoring well will be purged with a minimum, three volumes of water in the well casing to ensure the collected groundwater is representative of formation conditions. Accordingly, purging protocols will consist of evacuating groundwater from the wells until conductivity measurements have stabilized.

Because standards are pH and temperature dependent, these will be monitored very closely in the field. All groundwater samples will be collected in laboratory supplied containers and preserved according to accepted protocols and procedures (CCME¹ EPC-NCS62E, 1993). A field quality assurance (QA) program will be conducted concurrently with the groundwater sampling program. Groundwater samples will be stored in coolers, on-ice, until transfer to the laboratory. Samples will be transferred to the laboratory within 48 hours of collection. Chain-of-custody (COC) forms will be filled out for all samples collected and will be included with the samples when they are transferred to the analytical laboratory.

The groundwater monitoring well development and purging water will be stored in steel drums on each site pending characterization. Surface and top of pipe elevations will be surveyed in the field to determine groundwater elevations. Field elevation data will be related to a local benchmark (if present), if not, a temporary benchmark will be established.

Groundwater monitoring and sampling should include the following parameters:

- Depth to water
- pH
- Conductivity
- Temperature
- Resins and Fatty acids
- Dissolved metals
- Total Phenols
- Biological oxygen demand (BOD)
- Total organic carbon (TOC)

Following installation, in situ hydraulic response testing will be undertaken to determine the hydraulic conductivity of the aquifer and confirm the groundwater flow velocity.

The results will be compiled annually and submitted to the Ministry. The report will include the analytical results compared to the *Contaminated Sites Regulation* (CSR)² groundwater aquatic life standards. Adjustments in monitoring will be recommended based on the results obtained.

¹ *Canadian Environmental Quality Guidelines* (CEQG), Canadian Council of Ministers of the Environment (CCME), Winnipeg MB, 1999.

² *Waste Management Act, Contaminated Sites Regulation* (CSR), BC Reg. 376/96, deposited December 18, 1996, O.C. 1480/96, effective April 1, 1997 (includes amendments BC Reg. 244/99, deposited July 19, 1999 and BC Reg. 17/2002, deposited February 4, 2002).

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An annual report will be submitted no later than January 31, 2004.

CONCLUSIONS

The landfill has been actively filled for approximately 20 years and is intended for closure in about two years. Semi-annual intermediate covers of native silty sand are applied to the landfill in the spring and fall of each year.

Abitibi intends to operate the landfill until 2004 at which time expansion to an adjacent area for an additional three years is contemplated. An amendment to the permit has been submitted to the MWLAP in June 2002 for the expansion and Abitibi is awaiting a reply.

The proposed initial groundwater monitoring program will identify if groundwater impacts are present at this time.

We trust this provides you with the information you currently require. If you have any questions, please contact the undersigned at your earliest convenience.


David E. Kneale, P. Geo.
Senior Hydrogeologist

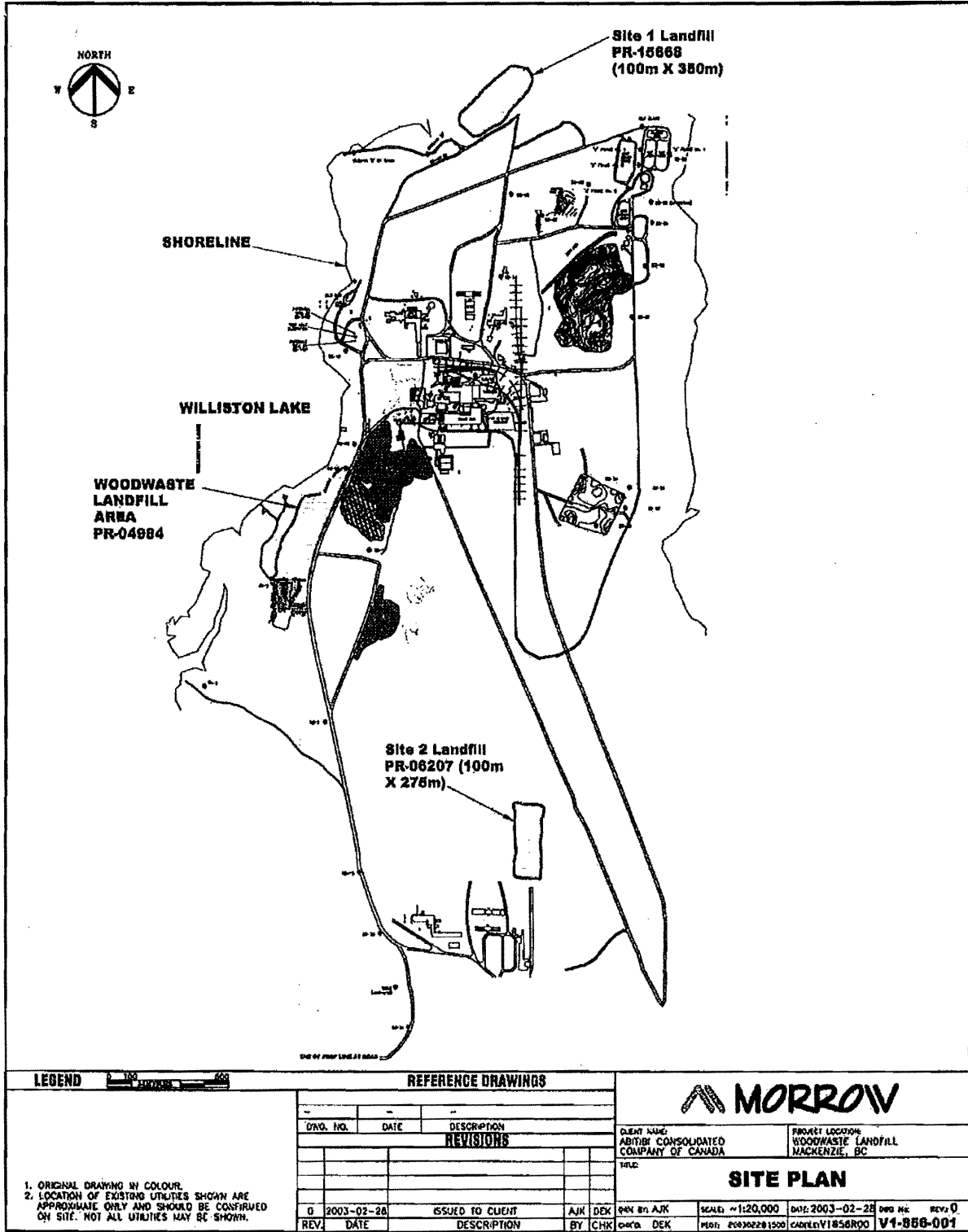


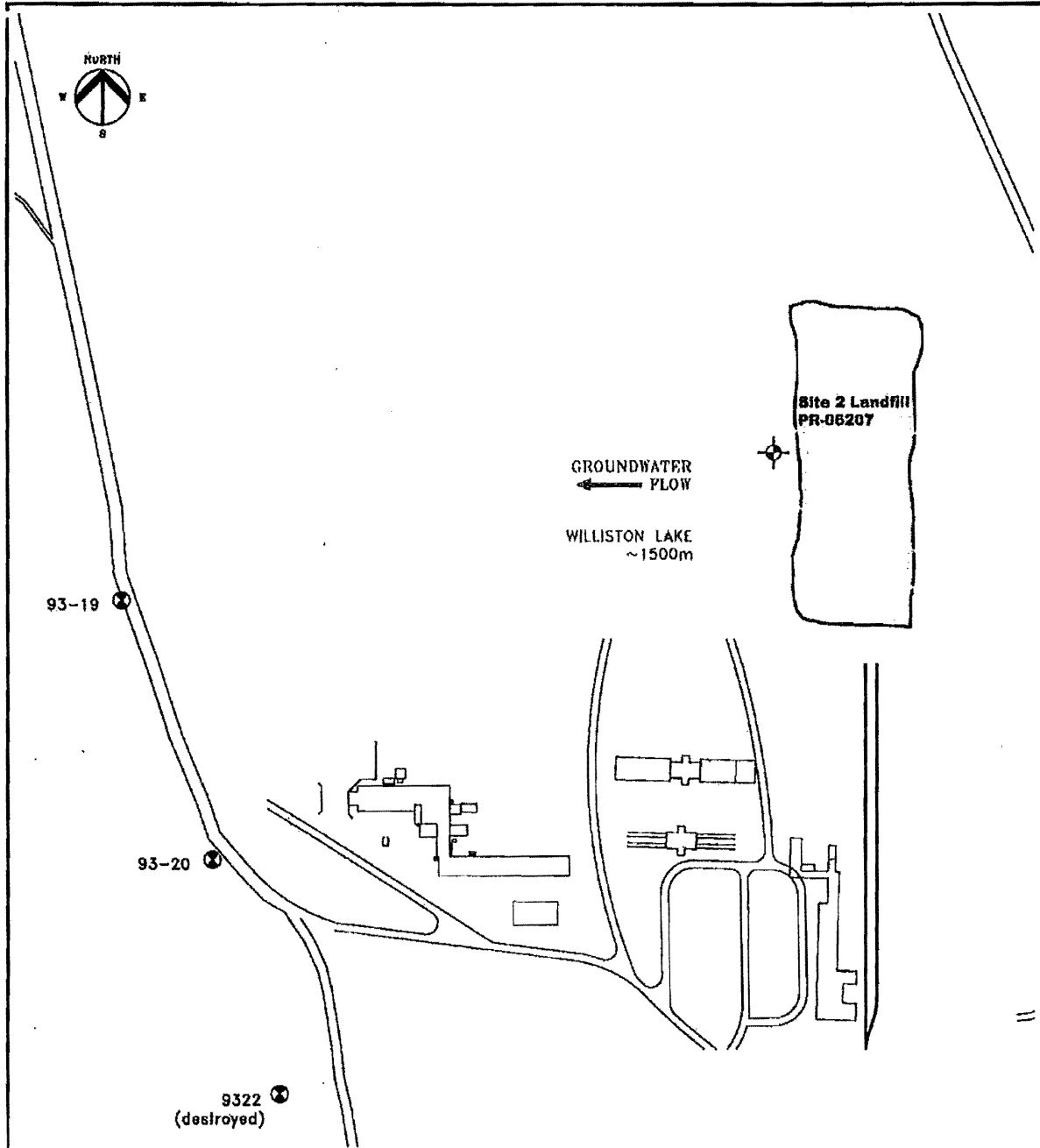
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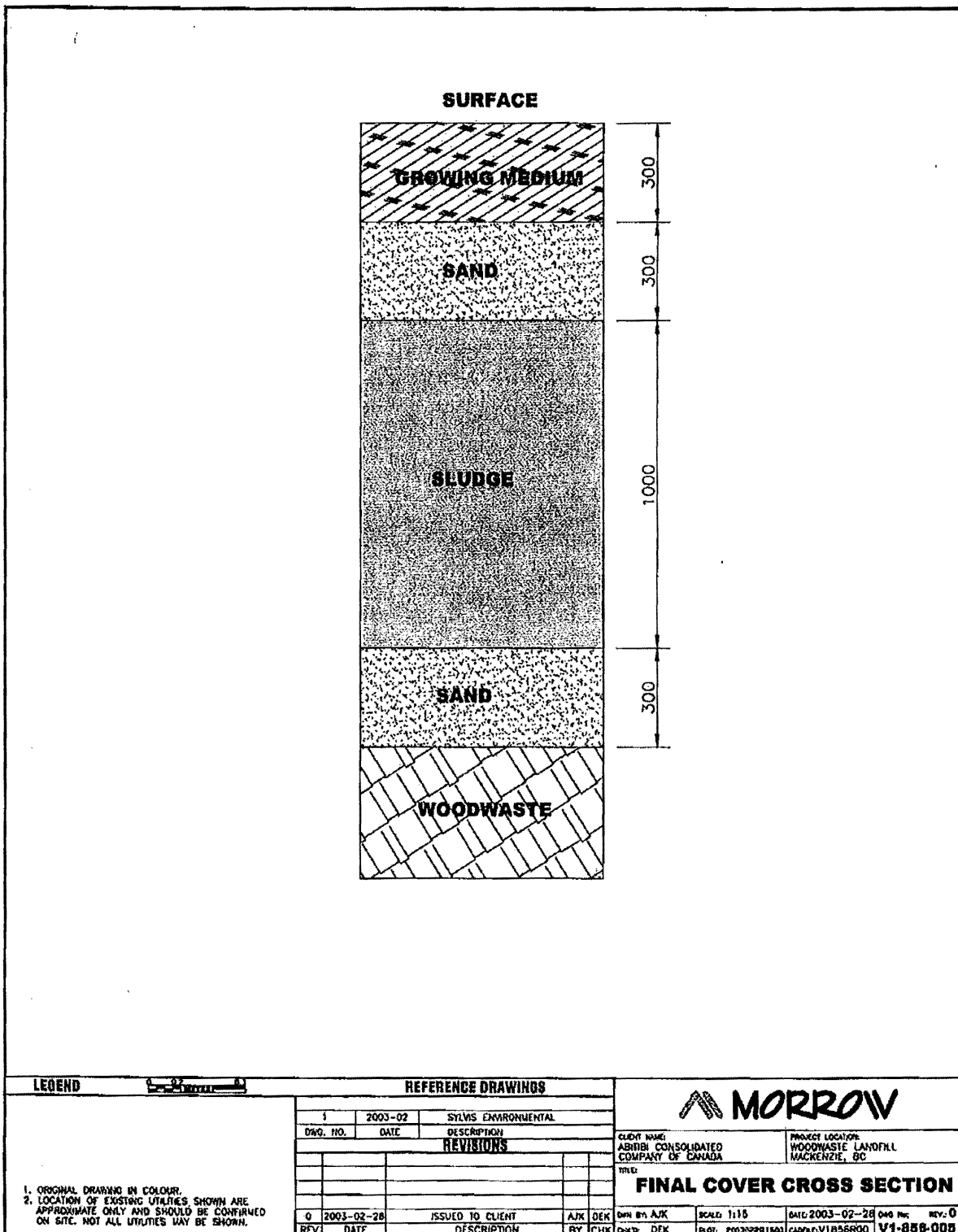
- 1: Site Plan, Drawing V1-856-001
- 2: Site 2 Landfill, Drawing V1-856-004
- 3: Final Cover Cross-Section, Drawing V1-856-005
- 4: Permit PR-06207





LEGEND		REFERENCE DRAWINGS				MORROW																																							
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1. ORIGINAL DRAWING IN COLOUR.
2. LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE ONLY AND SHOULD BE CONFIRMED ON SITE. NOT ALL UTILITIES MAY BE SHOWN.





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FAXED

File: PR-06207

SENT BY FAX TO: 250-997-2709

June 30, 2004

Abitibi-Consolidated Company of Canada
PO Box 250
Mackenzie BC V0J 2C0

Attention: Les Skaalid

Dear Les,

Re: Site Closure Plan for Wood Waste Landfill (PR-06207)

As per Section 4 of permit PR-06207, I hereby approve the closure plan dated February 28, 2003 for the wood waste landfill and the use of sludge as a final barrier cover for the wood waste landfill authorized by permit PR-06207. This approval, however, is provisional based on the following conditions:

- Intermediate cover of clean soil will provide cover for the closed portions of wood waste landfill until the evaluation of the barrier performance comparison test is complete;
- The understanding that if results of the barrier performance comparison test being performed by Abitibi Consolidated - Paper Mill indicate that the compacted sludge layer is not suitable as a barrier system for final cover for a landfill, or should other information indicate that the sludge layer is unsuitable, the Permittee will make the necessary changes to ensure that the groundwater and surface water is adequately protected and a contingency cover system will be installed for the site authorized by permit PR-06207;
- A groundwater monitoring program shall be established until otherwise specified in writing by the Regional Waste Manager. The program shall consist of at least two groundwater monitoring wells:
 - one in the immediate vicinity of the landfill and downstream of the receptor, and
 - one other well to be established as a control well.
- Sampling and analysis for all parameters, except for depth of water in the well which shall be measured quarterly for the first year, shall occur once per year. The first sampling year for the groundwater wells will be 2004 with the results reported by January 31, 2005. The minimum parameters to be tested include:
 - Elevations of water in well (depth of water in well) -- quarterly monitoring for the first year, and then annually thereafter.
 - Elevations of wells above sea level
 - pH
 - conductivity
 - resin and fatty acids
 - dissolved metals
 - total phenols
 - a determination of groundwater velocity at landfill site
- Well construction and subsurface water sampling shall be supervised by an experienced qualified professional. Details of well construction and field sampling procedures should be made available to Environmental Protection personnel upon request;

Ministry of
Water, Land and Air
Protection

Environmental Protection
Omineca & Peace
Regions

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6165
Facsimile: (250) 565-6629

- Along with the annual report submitted January 31 of each year, the Permittee shall submit to the regional Environmental Protection office a summary of groundwater data including QA/QC data. The results should be compared to the generic numerical water standards for the appropriate water usage specified in the *Contaminated Site Regulation* and the provincial water quality criteria. The annual report shall indicate if any tested parameters exceed the guideline values;
- The results must be supported with an appropriate quality assurance / quality control program consisting of duplicate and blank samples in the field and in the laboratory;
- Once each three years, with the first report due January 31, 2007, the Permittee shall include a discussion of results, trends, an assessment of the receiving environment and recommendations if further action is necessary to protect the environment.

Details associated with monitoring landfill gas, inspections, erosion control, and vegetative regrowth are as outlined in Morrow's report dated February 28, 2003.

This plan shall be updated annually on January 31 each year as specified in Section 4 of PR-06207 unless otherwise directed.

Please keep in mind that regular site maintenance and proper planning will minimize long term impacts associated with landfill practices. If you have any further questions, please feel free to contact me or Maureen Bilawchuk.

Yours truly,



Del Reinheimer, P.Eng.
Assistant Regional Waste Manager
Omineca & Peace Regions

:msb

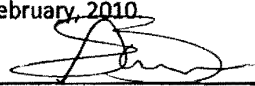
This is Exhibit 7126¹¹
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 26

Abitibi-Consolidated Active Ash, Sludge, Metal & Industrial Closure Plan

**Ministry of Water, Land and Air Protection
Permit PR-04133**

FEBRUARY 2003

Prepared for:

**Abitibi-Consolidated Company of Canada
Mackenzie Region – Paper Mill
Bag 2800
Mackenzie, BC
V0J 2C0**

Prepared by:

SYLVIS Environmental



growing with knowledge

1-800-778-1377

**In
conjunction
with**



**SPEARLING
HANSEN
ASSOCIATES**

MINISTRIES OF
WATER, LAND AND AIR PROTECTION and
SUSTAINABLE RESOURCE MANAGEMENT

FEB 20 2003

**RECEIVED
PRINCE GEORGE, B.C.**

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DOCUMENT # 633-03

DECLARATION

SYLVIS has prepared a Landfill Closure Plan (Report) for the purpose of final closure of the active ash, sludge, metal and industrial landfills operated under Ministry of Water, Land and Air Protection permit PR-04133. This Report is limited to the specific site, objectives and activities for the closure of these landfills located at Abitibi Consolidated Mackenzie Region Paper Mill, Mackenzie, British Columbia.

This Report sets forth all the assumptions and limiting conditions imposed by the terms of our engagement affecting the analysis, opinions and conclusions. The entire Report, including all conclusions and opinions, pertains only to the above-referenced property and landfill locations and is based on our present knowledge and information with respect to the current data for the property, as of September 1st, 2003. The findings in this Report may be subject to change as a result of the passage of time.

This Report provides the background and operational details for the closure of the active ash, sludge, metal and industrial landfills operated under regulatory permit PR-04133. The closure of this landfill is related in operations to the closure of associated Abitibi Consolidated landfills operating under separate permit. The reader is referred to these affiliated closure plans for details related to the operations therein. This closure plan is, however, considered a unique and separate document providing the closure details for the landfills authorized under PR-04133. This document is copyrighted. Reproduction or publication in whole or in part without the written permission of SYLVIS is unlawful.

This Report is valid only if it bears the original signature of the author.

I, Michael Van Ham, RPF, RPBio, PAg confirm by signature and seal below that the information contained in this Report is true to the best of my knowledge.

Professional Seal

Signature: _____

Date: _____

February 15/03

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List of unit abbreviations used in this document:

ha – hectares
km – kilometers
m – meters
cm – centimeters
m³ – cubic meters
Mg – megagrams (equivalent to 1 tonne)
kg – kilograms
mg – milligrams
µg – micrograms
µg g⁻¹ – µg/g
ppm – parts per million

List of general abbreviations used in this document:

DL – District Lot
BC MoWLAP – British Columbia Ministry of Water, Land and Air Protection
BC MoELP – British Columbia Ministry of Environment, Lands and Parks
FFI – Finlay Forest Industries (now Abitibi-Consolidated Company of Canada)
OMRR – Organic Matter Recycling Regulation
TKN – Total Kjeldahl Nitrogen
MSW – Municipal Solid Waste
TLV – Threshold Limit Value
LEL – Lower Explosive Limit
HELP – Hydrologic Evaluation of Landfill Performance
As – Arsenic
U – Uranium
SWLEP – Special Waste Leachate Extraction Procedure
CH₄ – Methane
N – Nitrogen
O₂ – Oxygen
CO₂ – Carbon dioxide
CO – Carbon monoxide
H₂S – Hydrogen sulphide

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EXECUTIVE SUMMARY

Abitibi-Consolidated Company of Canada owns and operates an integrated thermomechanical pulp and paper mill located in Mackenzie, BC. Boiler ash and spent sand, sludge, industrial wastes and non-recyclable metal generated from mill processes are discharged to four landfills - specifically referred to as the active ash landfill, sludge landfill, industrial landfill and metal landfill. These discharges occurred under regulatory authorization in the form of permit PR-04133. The permit requires that a landfill closure plan be submitted to the regulatory agency for approval prior to implementation.

One previous interim closure plan for these landfills was submitted to the regulatory agencies. This document is the final closure plan, and provides technical detail on the background, site characteristics, and landfill development and closure requirements specific to the four landfills under Permit PR-04133.

This closure plan conforms to the BC Landfill Closure Criteria. Based upon hydrological modelling specific to landfill design and closure and experience elsewhere, a closure system employing a compacted sludge barrier layer is proposed in conjunction with a manufactured soil cover created from mill derived waste materials and sand. Supporting documentation is provided including references to existing closure systems elsewhere.

Closure activities will not occur until 2006, allowing for an assessment of the performance of the compacted sludge barrier system on an associated ash landfill (PR-15166). Prior to closure activities commencing an assessment of the groundwater monitoring program will be completed and revised as required. Until closure activities commence, operations, monitoring and reporting activities will be completed as required by the Permit.

1 Background

Abitibi-Consolidated Company of Canada (Mackenzie) discharges wastes under regulatory authorization to several landfills on the mill site. These landfills serve to contain ash, sludge and other industrial and metal refuse as generated in the operation of the Mill and associated on-site activities. The Paper Mill has two active authorizations: PR-04133 and PR-15186. Conditions of these authorizations require that a closure plan be prepared by the waste generator, accepted by the permitting agencies, and implemented by the waste generator for the discharges that have, or are currently occurring, each under regulatory authorization.

This plan provides closure details for four landfills authorized under Permit PR-04133. These landfills are the active ash landfill, sludge landfill, industrial landfill and metal landfill.

2 Introduction

As per the requirements of Section 4.7.3 of Permit PR-04133 a closure plan must be submitted to the Regional Pollution Prevention Officer for approval. This document has been prepared to meet these requirements.

The closure system to be implemented in each of four landfills identified in this plan is based upon an innovative use of compacted sludge as a barrier layer. The closure system designed for the landfills under PR-04133 is similar to the system identified in the closure plan submitted for Abitibi-Consolidated's "old ash" landfill under PR-15186. For completeness the background information is duplicated, as deemed required, in this closure plan to provide sufficient documentation for a "stand alone" closure plan.

3 Closure Objectives

Each landfill will be closed in a manner that will reduce the impact of the landfill to the environment. Specifically the closure will isolate the discharged wastes from human or animal contact, minimize the potential for water infiltration and exfiltrate production, protect the cover from erosion and damage through the establishment of a self sustaining community of vegetation and return the landfill footprint to a terrestrial ecosystem equal to or surpassing the productivity of adjacent communities.

The closure objectives are consistent with the objectives of BC Ministry of Water, Land and Air Protection (BC MoWLAP) and Abitibi-Consolidated Company of Canada.

4 Ownership and Regulatory History

Permit PR-04133 (originally PR-4133) was first issued in September 1976. It has been amended several times, with the last amendment received in September 2000. The permittee was formerly Donohue Forest Products Inc. and is currently Abitibi-Consolidated Company of Canada. A copy of current permit is found in Appendix A.

5 Site Characteristics

An assessment of the application site characteristics includes the specific location, access, soils, water features (surface and groundwater) and vegetation. Where site characteristics

9

apply to all landfills under this plan (i.e. climate) these characteristics are presented as such. Specific information on each of the four landfills (i.e. area and location) is provided under each general site characteristic heading.

5.1 Site Orientation and Landfill Locations

The Abitibi-Consolidated Company of Canada Mackenzie Paper Mill and related landfills are located on the southeast shore of Williston Reservoir approximately 5 km west of Mackenzie and 180 km northeast of Prince George. The Mill and landfills are located on a finger of land bounded to the west by the main body of Parsnip Reach and to the east and north by Dahl Lake, Chichouyeny Creek and Lake – all part of Williston Reservoir.

A map, showing the location of the ash, sludge, industrial and metal landfills in relation to the mill is found in Figure 1. The legal description for all four landfills is Lot 12572, Cariboo Land District, British Columbia.

The active ash landfill is located approximately 600 m south and east of the power boiler and 300 m from Dahl lake. The BC MoWLAP site reference number for the active ash landfill is E240742.

The active ash landfill currently consists of one of four cells and covers approximately 4,000 m², approximately 200 m wide by 200 m long. A photograph of the active ash landfill is provided in Photograph 1. This photograph shows the recently deposited ash over monthly cover.

The sludge landfill is located approximately 300 m north and east of the mill, adjacent to the water treatment facility. The BC MoWLAP site reference number for the sludge landfill is E211257. The sludge landfill occupies approximately 9.1 ha, with irregular boundaries and a somewhat rectangular shape. Recently placed sludge in the sludge landfill is shown in Photograph 2.

The metal landfill is approximately 400 m north and east of the paper mill, north of the sludge landfill. It is very small, approximately 2000 m², and rectangular in size, about 22 m by 90 m. The BC MoWLAP site reference number for the metal landfill is E211259.

The industrial landfill is located adjacent to the metal landfill, approximately 500 m north and east of the mill and is larger than the metal landfill. It is approximately 5000 m² in size, and is roughly square in shape, 70 m by 70 m. The BC MoWLAP site reference number for the industrial landfill is E211258.

5.2 Climate

Assessing accurate climate data is important for closure system design. Precipitation affects drainage, erosion, slope stability, and most importantly, the potential for creation of exfiltrate and possibly ash leachate. Climate data is required for hydrogeological performance assessment of the closure and cover system.

The average annual rainfall for Mackenzie is 37.5 cm, with the average snowfall of 3.37 m. In January and July, the mean daily maximum temperatures are -9.8 and 21.7 °C respectively. The mean daily minimum temperatures for January and July are -18.7 and 8.0 °C respectively. Mackenzie receives 1,800 hours of sunshine annually, has approximately 75 frost-free growing days and an average growing season from June 1st to August 31st.

The climate data used in landfill performance modelling has been adopted from the Canadian Climatic normals from 1961 to 1990 by Environment Canada. The stations selected from the normals are Mackenzie A and Prince George A. The normals present all temperature and precipitation data from Mackenzie station except for the months January and February. For those months, data has been interpolated from the Prince George A station. The climate data is presented in Table 1.

5.3 Soil

An investigation into the soils at each of these four landfills was not completed as part of this closure plan. Previous consulting reports prepared for the assessment of the location of the old ash landfill and for the active ash landfill report on the soils for these specific landfills from test pit excavation and bore hole sampling. The soils described under the old ash landfill (see "Abitibi-Consolidated Old Ash Landfill Closure Plan, February 2003) are similar to those described in a report providing a conceptual design for the active ash landfill. From the test pits and borehole sampling completed in this report¹ the authors describe the soils around and under the active ash landfill as loose to compact poorly graded sand or sand fill to a depth of 9 to 15 m which is underlain by a stiff clay.

5.4 Surface Water

There are no surface water features in close proximity to any of the four landfills. Williston Reservoir is approximately 500 m west of the four landfills. Chicouenyly Creek is the closest surface water feature, located approximately 200 m east from the active ash and sludge landfills. The location of the landfills in relation to the surface water features is presented in Figure 1.

5.5 Groundwater

In the examination of the area now occupied by the active ash landfill the groundwater levels were assessed through borehole sampling and well installation and monitoring. The water table ranges from 10 to 15 m below the soil surface¹. This is similar to the level of groundwater observed at the old ash landfill. Keystone Environmental prepared a model of the groundwater contours under the mill site from sampling wells and borehole analysis². This diagram is presented in Figure 2.

5.6 Vegetation

From the vegetation growing adjacent to the landfill site and based upon the soil characteristics the pre-disturbance vegetation would have likely been a mature stand of *Pinus contorta* var. *latifolia* and *Picea engelmannii* x *glauca* as the dominant tree species with a small percentage of *Populus balsamifera* in the overstory. Similarly the understory plants likely consisted of *Amelanchier alnifolia*, *Shepherdia canadensis*, *Spiraea betulifolia*, *Rosa acicularis*, and *Actostaphylos uva-ursi*. Grass species are predominantly *Poa* spp. and *Agropyron trachycaulum*.

¹ Agra Earth and Environmental. 1998. Conceptual Landfill Design Finlay Forest Industries. 15 pp.

² Keystone Environmental Limited. 2002. Assessment of the Site Wide Groundwater Monitoring Program. 27 pp.

There is no vegetation present on the active ash landfill. This landfill has recently been developed and as a result of the design and periodic cover placement, vegetation is not present on the landfill itself.

In contrast to the active ash landfill, vegetation has established on portions of the sludge landfill and covered portions of the industrial and metal landfills. On the sludge landfill a dense community of grasses has established, consisting of predominantly agronomic species. Portions of the sludge landfill were hydroseeded with grasses, and these plants have re-seeded over large portions of the landfill not currently active.

6 Landfill Development and Lifespan

The sludge, metal and industrial landfills were developed in the mid-1970's, initiating Permit PR-04133. No information is provided on their siting and development. At current levels of use, the anticipated lifespan of the sludge landfill is 10 years, depending on mill operations and level of compaction. The anticipated lifespan of the industrial and metal landfills is 15 to 20 years. These lifespan estimates are based upon use patterns from 2001-2002.

In the development of the active ash landfill, conceptual plans and site evaluation reports were completed. The active ash landfill is designed as four cells, with each cell having the design capacity to hold five years of power boiler ash. The ash landfill started filling operations in November 2000, as such the approximate completion is 2020. The four-cell design of the landfill allows for progressive closure upon completed filling of each cell.

6.1 Waste Quality

6.1.1 Power Boiler Refuse

The waste deposited in the active ash landfill was generated by the power boiler and is composed of power boiler ash and spent sand from the fluidized bed boiler. The boiler burns wood waste and, depending on the moisture content, dewatered sludge generating approximately 3-4 truckloads of ash per day. The power boiler generates two ash products – bottom ash (typically 10% by volume) and fly ash (typically 90% by volume). A particle size analysis of the combined ash material places 96.7 % as a sand fraction with only 3.3% as a silt. Spent sand is generated when the sand bed is changed in the power boiler and contributes approximately 75% of the waste deposited in the landfill.

Based on analysis the ash generated has been determined to be greater than 99% inorganic in composition as is composed primarily of oxides of calcium (CaO, 50%), magnesium (MgO, 24%), silica (SiO₂, 10%), iron (Fe₂O₃, 7%) and aluminium (Al₂O₃, 3%). The ash is typically 10-20% moisture by weight and is caustic in nature³.

Section 4.3 of PR-04133 requires that a representative ash sample be collected once per annum while the landfill is operating and analyzed according to the special waste leachate extraction procedure (SWLEP). SWLEP test results typical of the ash placed in the old ash landfill are provided in Table 2.

³ Agra Earth and Environmental. 1997. Ash Metals Assessment, FFI Boiler Ash, Paper Division, Mackenzie BC. 6 pp.

In May 2001, an extensive ash characterization was completed in conjunction with an evaluation of the use of the ash in fabricated soil mixtures. The results of these analyses are found in Table 3 and Table 4.

6.1.2 Pulp and Paper Mill Sludge

The sludge is composed of waste from the primary clarifiers, settling ponds, and secondary treatment ponds. Depending on mill operations and the moisture content of the sludge as it is dewatered, the sludge is either combined with hog fuel and used in the power boiler or discharged to the landfill. The characteristics of the sludge are provided in Table 5 and Table 6.

The organic nature of the combined primary and secondary sludge, the physical characteristics under compaction and the concentrations of plant essential nutrients provide for opportunities to re-use this material in soil fabrication, fertilization and landfill closure opportunities.

6.1.3 Industrial and Metal Discharges

The material disposed of into the industrial landfill include wood, plastic and miscellaneous inert industrial wastes. The highly variable nature of the materials disposed of in this landfill preclude conducting a "typical" analysis. Putrescent wastes, including food wastes are not disposed of into the industrial landfill.

As with the industrial landfill an analysis of the composition of the metal and metallic wastes disposed of into the metal landfill was not completed.

6.2 Waste Quantity

From inception through to December 2002, 25,528 m³ of ash has been deposited into the active ash landfill. The volume of ash deposited by month is presented in Table 7. The volume of sludge disposed of in the sludge landfill from 1999 through to December, 2002 is 73,389 m³. Sludge volumes by month are presented in Table 8.

It is estimated that 5 to 10 m³ of industrial waste was deposited into the industrial landfill in 2000. In subsequent years (2001 and 2002) there has been no discharge of industrial waste to this landfill. With recycling initiatives implemented at the mill there have been no discharges of metal to the metal landfill in 2002. During 2000 and 2001 there has been an estimated 1 to 5 m³ of non-recyclable metal disposed in the landfill.

6.3 Waste Placement

At the active ash landfill the ash is hauled and tipped into piles over the landfill surface. The ash is covered each month. Several times during the year the ash is compacted and covered to maximize landfill space. A similar sequence of activities happens at the sludge landfill. The sludge piles, distributed over the landfill, are graded even and compacted at least once per year. Intermediate cover is not applied between sludge lifts.

As minimal industrial and metal have been disposed of in these respective landfills, little placement and covering work has been required. When used, newly added material is compacted and covered within two months.

6.4 Landfill Monitoring

While operational, weekly inspections are conducted of the active ash, sludge, industrial, and metal landfills. Increased awareness in the mill in the identification of authorized wastes, and recycling initiatives has resulted less of the appropriate material being disposed.

Approved groundwater testing was completed as per the Permit requirements.

7 Landfill Closure Plan

7.1 Previous Closure Plans

In February 2001 Abitibi Consolidated submitted a closure plan for the four landfills under PR-04133. This plan called for the use of sludge as a barrier system, with a drainage layer of sand above followed by a small mantle of sludge to act as a growing media. A copy of this closure plan is found in Appendix B. In September 2001 the BC MoWLAP requested clarification and additional information including:

- Cover and closure techniques
- Effectiveness of native sand as a barrier layer in final closure
- Landfill lifespan assessments
- Drainage and water management
- Relevance and need for landfill gas monitoring
- Groundwater monitoring

A copy of this correspondence is located in Appendix C. The current plan as presented in this document consolidates and supersedes the previously submitted plan dated February 2001 (Appendix B), and specifically addresses the aforementioned items.

7.2 End Use Following Closure

The end use of all landfills following closure will be idle industrial land and possibly wildlife habitat. The closed landfills will be seeded with agronomic or native grasses to establish a dense community of vegetation. A final soil cover of no less than 30 cm (as proposed below) over the landfill is not adequate to support tree establishment through to rotation, as such, a dense cover of native grasses will minimize natural tree ingress and serve to out compete any seedlings that do germinate. The use of low growing native vegetation will minimize the potential for possible conflagration, reducing fine fuel loading. This grass cover is similar to that established on the seeded portions of the sludge landfill.

7.3 Final Grading, Contours and Slope Stability

Landfill slope contours are important in the stability of the slope and to ensure proper drainage.

7.3.1 Final Grading and Contours

The Provincial Landfill Criteria specify a minimum landfill slope of 4% and a maximum slope of 33%. The proposed designs presented below are within these limits. The cover system to be employed in the closure of all for landfills is discussed in Section 7.5.

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Metal Landfill

A schematic final cover contour and section plan for the industrial landfill is presented in Figure 8. For minimal re-grading and to match the surrounding topography the front face (south face) for the closed landfill will be a longer slope at a 15% grade. As with the industrial landfill, the landfill crest will run in an east-west direction.

The footprint of the metal landfill is larger than the active landfill area, as such the closure system is proposed for use only on that area that will have received non-recyclable metal. The toe details and cover system used for the metal landfill is identical to that of the previous three landfills.

7.3.2 Slope Stability

The stability of the final landfill slopes has been reviewed. The proposed maximum side slope of 33% is within the standard guidelines for a long-term stable slope. It is noted that the sludge landfill currently has several stable side slopes that are greater than 33%.

The proposed final cover system consisting of a compacted sludge barrier layer, sand drainage layer and topsoil layer, will be stable on a maximum 33% slope. Refer to Section 7.5 on the cover system proposed.

7.4 Gas Generation Potential

In order to quantify the potential for gas generation from the ash landfill, SYLVIS conducted on-site gas monitoring on April 25th, 2002. This assessment was completed on the active ash landfill and on the sludge landfill. No landfill gas testing was completed on the industrial or metal landfills.

7.4.1 Gas Generation – Active Ash Landfill

A gas probe was inserted into the ash and the existing sand cover material on the active ash landfill. A photograph of the equipment used in the assessment is provided in Photograph 3. The results, presented in Table 9, indicate very low landfill gas values.

Typical gas from a MSW landfill has the following constituents:

Methane	55%
Carbon monoxide	40%
Nitrogen	4.9%
Oxygen	0.1%

The sampling results show no methane (CH₄), a zero reading on the CH₄ Lower Explosive Limit (LEL), and a high oxygen concentration (greater than 20%). Therefore, the gas from the active ash landfill is not at all like typical landfill gas from a MSW landfill. This result is not surprising given that the old ash waste is an inert residue from the fluidized bed boiler. Typical landfill gas is generated through the anaerobic decomposition of biodegradable matter. This material is not present in the old ash landfill.

The measured oxygen level more closely resembles that of ambient air that has an oxygen (O₂) content of about 21%. This compares to the value for all the surface samples, while most of the sub-surface samples were below this level. All of the surface samples indicated no landfill gases, including methane, carbon monoxide (CO), and hydrogen sulfide (H₂S).

This indicates that gases from the landfill are not migrating to the surface in quantities facilitating detection.

In the sub-surface samples, the H_2S and CO concentrations are higher than ambient air concentrations. H_2S is a hazardous gas that has a rotten egg type odour at a concentration of about 1 ppm. The allowable concentration for a working environment, the Threshold Limit Value (TLV), is 10 ppm. Two of the four sub-surface samples indicated the presence of H_2S at concentrations of 1 ppm and 2 ppm. These values are below the TLV and accordingly do not pose an immediate health or environmental risk, but should continue to be monitored periodically following closure. This is discussed under post closure gas monitoring in Section 8.4.

Carbon monoxide is another hazardous gas that can be toxic. It is colourless and odourless. Three of the nine samples recorded CO, with one measurement at 50 ppm and two at 160 ppm. Regulatory limits in the US Clean Air Act set an 8 hour exposure limit of 9 ppm and a 4 hour limit of 35 ppm.

The EPA carbon monoxide emission standard for the fluidized bed combustion of MSW is an average value of 100 ppm over 4 hours. The CO values recorded were from within the sand cover layer of the active ash landfill, and may be associated with combustion exhaust gases from recently deposited materials.

7.4.2 Gas Generation – Sludge Landfill

In order to quantify the potential for gas generation from the sludge landfill, SYLVIS conducted on-site gas monitoring at the sludge landfill. Sample locations 1, 2, 5, 6, and 13, through 15 were surface measurements. The gas probe was inserted into the sludge landfill for sample locations 3, 4, and 7 through 12. The results are presented in Table 10.

The sampling results show a slight presence of CH_4 , elevated CO, and H_2S for sample locations 6, 8 and 9 where the sludge was fresh and non compacted. Except for sample locations 6, 8 and 9, the measured O_2 level closely resembles ambient air, which has an O_2 content of about 21%.

All of the old non-compacted sludge and fresh compacted samples locations indicated no landfill gases, including CH_4 , H_2S and CO. This indicates that gases from the landfill are not migrating to the surface in quantities great enough to be detected. This is likely due to the sludge being stabilized or that conditions for anaerobic activity have diminished resulting no production of CH_4 , H_2S and CO.

The H_2S recorded values for sample locations 6 and 8, are 11 ppm and 17 ppm respectively. The values exceeded the allowable concentration for a working environment of 10 ppm (TLV). These values could pose a health or environmental risk, but would need to be sustained in the air around the landfill.

Sample 6 was from under the covering crust and sample 8 was from in a borehole. None of the surface samples indicated the presence of H_2S and therefore it does not represent a risk in the air above the landfill. Periodic monitoring could be conducted to verify this.

The recorded CO values for sample locations 6 and 8, were 35 ppm and 95 ppm respectively. The values exceed the regulatory limits in the US Clean Air Act that is set for 8

hour exposure limit of 9 ppm and for 4 hour limit of 35 ppm. The EPA carbon monoxide emission standard for the fluidized bed combustion of MSW is an average value of 100 ppm over 4 hours.

The elevated H_2S and CO values recorded at the sludge landfill were from the fresh and warm layer of sludge. By comparison the older stabilized sludge, or the compacted sludge, had non-detectable levels of these gases. This indicates that use of compacted old sludge for the cap does not pose a landfill gas risk. Likewise the sludge landfill should not produce elevated level of landfill gases.

7.5 Final Cover System Layers

Landfill closure is an important component in the operation of a modern landfill. A well-designed closure system provides the following benefits:

- Isolation of waste to prevent direct contact with humans and vectors.
- Minimization of infiltration and exfiltrate production through diversion of run-off.
- Prevention of any exfiltrate breakouts at landfill toe and on side slopes.
- Protection of the cover from erosion through maintenance of a sustainable vegetative community.
- Potential for redevelopment of the landfill for some beneficial end use.

In developing the cover systems for the four Abitibi-Consolidated landfills that will achieve these objectives, particular consideration was given to incorporating construction materials from local sources, including on-site sand for drainage and sludge for the barrier layer. While membranes such as polyvinyl chloride (PVC), geosynthetic clay liner (GCL) or linear low density polyethylene (LLDPE) are excellent barrier layers they are very expensive, labour intensive and are not in keeping with the objective of using native or natural materials where possible in an effort to re-use local materials.

A "Compacted Sludge Cover System" is proposed for use in the closure of the four landfills under PR-04133. Compacted sludge use as a barrier layer in landfill closure has been successful in many landfill closures and this is described in greater detail in Section 7.5.1 below. The most important characteristic of the sludge is hydraulic conductivity. The sludge is produced by Abitibi-Consolidated and was tested for hydraulic conductivity to assess its efficacy as the barrier layer. The compacted sludge was tested in the Golder Associates' laboratory and a hydraulic conductivity of $7 \times 10^{-7} \text{ cm s}^{-1}$ was achieved. A copy of the analysis results is found in Appendix D. This cover system consists of 300 mm of intermediate sand cover followed by 1,000 mm of compacted sludge, 300 mm of drainage sand and 300 mm of topsoil.

7.5.1 Barrier Layer

A low permeability layer forms the primary barrier layer of an effective cover system. To achieve this low level of permeability, soils or sludge must contain a significant percentage of very small sized particles, must be well compacted, and have an *in-situ* hydraulic conductivity of $1 \times 10^{-5} \text{ cm s}^{-1}$ or less. In this closure plan the use of compacted sludge as a barrier layer is proposed. This system is proposed in the closure plan for Abitibi-Consolidated's old ash landfill under Permit PR-15188. The closure plan for the old ash

landfill identifies a program of barrier system performance measures – a comparison to the use of clay as a barrier system. The closure of the four landfills will not commence until the two –year assessment on the old ash landfill is completed.

Pulp sludge has been used in the fabrication of soil products for use in reclamation and landfill closure throughout the Pacific Northwest, and additional information is provided in Section 7.5.3. Relatively new in British Columbia is the use of compacted paper mill sludge as a hydraulic barrier in the landfill cover design. WWTP residuals from the pulp and paper industry have been shown to possess engineering properties that are similar to clays. NCASI completed an extensive laboratory research and eight year long field study to evaluate the use of mill sludges as an alternative to clay⁴. Results of these studies indicated that the hydraulic performance of barrier layers constructed of paper mill residuals will be as good as or better than the performance barriers constructed with compacted clay. While the use of compacted sludge as a barrier system is relatively new, the test results indicate that the sludge barrier layers underwent no deterioration during their service life.

Other researchers have studied additional geotechnical properties of pulpmill sludge to characterize their use in hydraulic barriers.⁵ The shear strength is important in characteristics associated with slope stability and the ability of the sludge to support heavy equipment. Sludge with sufficiently high solids content, or sludge ash mixtures generally have shear strengths equal to or greater than clay, although results can vary depending on the constituent make up of the residual. Plasticity index (Atterberg limits), compaction, density, and consolidation have also been performed⁶, again demonstrating that sludge can be used to construct effective, long term hydraulic barriers.

In cold weather climates such as Mackenzie, the deleterious effects of multiple freeze thaw cycles on a compacted clay barrier is of concern. As the compacted clay cover temperature lowers the water in the clay freezes to form ice lenses that expand and cause microcracks in the barrier layer. Results of field and laboratory freeze thaw tests on three different sludges

⁴ National Council of the Paper Industry for Air and Stream Improvement. 1989. Experience with and laboratory studies of the use of pulp and paper mill solid wastes in landfill cover systems. Technical Bulletin # 559, Research Triangle Park NC.

National Council of the Paper Industry for Air and Stream Improvement. 1990. A field-scale study of the use of paper industry sludges in landfill cover systems: first progress report. Technical Bulletin # 595, Research Triangle Park NC.

National Council of the Paper Industry for Air and Stream Improvement. 1997. A field-scale study of the use of paper industry sludges in landfill cover systems: final report. Technical Bulletin # 750, Research Triangle Park NC.

⁵ Kraus, J.F., C.H. Benson, X. Wang. 1997. Geotechnical properties of three paper mill sludges. NCASI Special Report # 97-12, Research Triangle Park, NC.

⁶ Zimmie, T.F., H. Moo-Young, K. LaPlante. 1993. The use of waste paper sludge for landfill cover material in Green 93, Waste disposal by landfill an international symposium on geotechnics related to the environment. Bolton Institute, Bolton UK.

Indicated that multiple freeze thaw cycles may have a less significant effect on the formation of these microcracks⁷.

Additional research has shown that unlike clay, drying sludges to an optimum moisture content based on moisture content and hydraulic conductivity relationships resulted in approximately a two fold increase in hydraulic conductivity. Accordingly, paper mill sludge used as hydraulic barrier material should be placed at a typical "as-received" water content⁸.

The Mead Publishing Paper Division closed their industrial landfill in Escanaba, MI by using compacted sludge as a barrier layer in 1998⁹. Prior to using compacted sludge over the entire landfill, they evaluated the practical and performance considerations on a small test plot area. They placed the sludge on a 20% slope in three lifts to a total depth of 32 inches – slightly less than a meter in depth. Each lift was placed with low-ground pressure bulldozers and compacted prior to the next lift. After compaction they completed a hydraulic conductivity test to ensure performance requirements were met or exceeded – which they were. Following the test area the Mill proceeded in closing the entire landfill with a cover system composed of a topsoil layer to support vegetation growth and a lower drainage layer of sand over a compacted sludge layer. With the exception of the Mead Publishing Paper landfill requiring a gas collection system, this is identical to that proposed for use in closure of the old ash landfill. Post closure monitoring of the leachate production rates in the Mead publishing landfill have shown that the cover system effectively limits infiltration into the landfill, and thus associated leachate production.

At the Mead Publishing Landfill they also assessed the quality of the storm water running down and out of the sand drainage layer to assess if the compacted sludge layer was having any effect on water quality. Five different samples were collected after storm events and analyzed for trace elements, forms of nitrogen, pH, conductance and TOC. These were compared to samples collected from an adjacent landfill closed using a PVC barrier. There were no significant differences in the water quality between the two landfill closure systems.

There are numerous references and supporting information for the use of compacted paper mill sludge as a barrier layer. One such example is included in Appendix E. In the closure of the active ash, sludge, industrial and metal landfills it is proposed that compacted sludge is used as a barrier layer.

⁷ National Council of the Paper Industry for Air and Stream Improvement. 1998. Effect of freeze thaw on the hydraulic conductivity of three paper mill sludges: Laboratory and field evaluation. Technical Bulletin #759. Research Triangle Park NC.

⁸ Zimmie, T.F., H. Moo-Young, K. LaPlante. 1993. The use of waste paper sludge for landfill cover material in Green 93, Waste disposal by landfill an international symposium on geotechnics related to the environment. Bolton Institute, Bolton UK.

⁹ Malmstead, M.J., D.F. Bonistall, C. Van Matby. 1999. Closure of a nine acre industrial landfill using pulp and paper mill residuals. TAPPI Journal 82(2): 153-160.

McGee, S., M. Taylor, R.K. Nilsson. 1997. Closure of a 22 acre industrial landfill using paper industry sludge in NCASI Special Report 97-12, Triangle Park NC.

7.5.2 Drainage Layer

The purpose of a drainage layer on top of the barrier is to quickly convey water passing through the topsoil horizon down slope to the landfill toe ditch or other surface water management system. Without an effective drainage layer, the topsoil will become saturated during heavy rainfall events. This condition leads to excessive head build-up on the barrier layer and can lead to erosion and slumping problems on side slopes, and increased infiltration and exfiltrate production. Use of a high permeability topsoil medium could be considered, however, a high permeability topsoil layer would not achieve the same performance as a sand drainage layer and would likely become saturated during extreme precipitation events. It is therefore recommended that available on-site sand be used for the drainage layer. The depth of the drainage layer is 30 cm.

7.5.3 Growing Media Layer

The topsoil or growing media layer will consist of a fabricated soil product containing sand, pulpmill sludge, wood waste and ash. This soil product will be designed to meet the fertility and drainage requirements of the landfill cover system. The trace element concentration of the soil product will be equal to or better than the most stringent requirements of the BC Organic Matter Recycling Regulation, which derives maximum soil trace element concentration limits from the Contaminated Sites Regulation.

The fabricated soil will be free draining yet have sufficient organic matter and plant essential nutrients to allow for the establishment of a sustainable community of vegetation. The mix ratios of ash, sand, sludge and wood waste will be determined upon assessment prior to soil fabrication and background information can be found in associated documentation.¹⁰

7.5.4 Final Cover Performance - HELP Modelling

The compacted sludge cover system was evaluated using the Hydrologic Evaluation of Landfill Performance (HELP) model distributed by the US EPA. HELP is a quasi two-dimensional model that uses precipitation and temperature data specific to a given site to predict the various components of the landfill water balance including runoff, evapotranspiration, internal drainage and exfiltrate. For this study, the sludge cover system was assessed using a 10-year simulation based on climate data for Mackenzie and climate patterns from the Spokane area in Washington State. The climate pattern values are corrected to reflect the temperature and precipitation experienced in the Mackenzie area. An annual precipitation rate of 625 mm year⁻¹ was adopted based on interpolated data between the Mackenzie and Prince George climate stations. The HELP model results are summarized in Table 11 and Figure 9 shows the percentage break down of the water balance for this system. The detailed output of the HELP modelling is presented in Appendix F.

The compacted sludge cover system yields a water balance that includes 25 mm of leachate (4% of precipitation) and 363 mm of evapotranspiration (59% of precipitation). The

¹⁰ SYLVIS environmental, February 2003, Abitibi Consolidated Mill Site Beautification and Soil Fabrication. 26 pp.

remainder of the water balance includes 137 mm as run off (22%) and 94 mm (15%) of clean drainage intercepted by the internal sand layer.

The sludge will be placed over the sand layer in three lifts, and compacted after each lift. Installation QA/QC will be tested *in-situ* for hydraulic conductivity. In preparation for the re-contouring, sand and sludge placement and compaction documentation would be prepared identifying the operating procedures. This plan will contain the quality assurance/quality control measures in directing contractor activities and ensuring the correct slopes, material placement and compaction requirements are obtained.

7.6 Signage and Notification

Signs are currently posted at the perimeter of the active landfills, and will remain in place upon closure.

7.7 Water Diversion and Drainage

Effective surface water diversion and drainage controls are critical in minimizing the production of exfiltrate. The proposed cover system and slopes, including the compacted sludge barrier layer, drainage layer, and topsoil layer, will all work in shedding water and promoting evapotranspiration. On all landfills the proposed slopes will allow water to flow off the landfill surface or flow through the sand drainage layer to the perimeter of the landfill. Around the perimeter of the landfill itself the land will be gently graded away from the landfill toe. This will allow the diverted water to flow away from the landfill and seep into the surrounding native sands outside of the landfill footprint. This may require clearing trees in and around the active ash and sludge landfills.

7.8 Toe Berm Design

A toe berm will be provided at the base of the side slopes to separate exfiltrate and run-off. This is critical to the implementation of an effective final cover system. The schematic plans for each of the landfills presents the toe berm detail. The sand drainage layer will end in a more stable 25 to 50 mm crush toe berm. This will help to stabilize the base of the topsoil and sand layers, while permitting effective seepage out of the sand drainage layer.

The barrier layer overlaps the surrounding ground surface at the perimeter so that the drainage is moved away from the landfill edge. This will minimize seepage along the interface between the landfill and the native soils.

7.9 Leachate Management

Leachate management at the landfills will be based on the construction of an effective landfill cap that minimizes leachate generation. All the landfills under PR-04133 are unlined, as such the interception of any leachate is not practical. No further controls are deemed necessary. The minimal amount of leachate produced will seep into the underlying native sands. It is noted that the ash tends to solidify in time and this is expected to further reduce the amount of leachate generated. The proposed compacted sludge barrier layer is more impermeable than the minimum BC MoWLAP cover system, thus leachate generation will be minimized.

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7.10 Vegetation Establishment

Upon placement of the fabricated growing media layer the entire landfill area will be seeded with a low growing perennial grass cover consisting of fescues and clover species. Native grass species will be used if a local seed source is available, and the use of fall rye avoided. Depending on closure schedule and soil fabrication and placement seeding will occur in the spring. The site is small enough to facilitate hand seeding, and it is thought that an initial seeding, followed by an over-seeding the following spring will be required to achieve a dense cover of vegetation. A seed mixture similar to that used in previous trials on fabricated soil products will be used. An example of that seed mixture is provided below:

20% Creeping Red Fescue	20% Italian Ryegrass
23% Perennial Ryegrass	15% Tall Fescue
5% Orchardgrass	5% Timothy
10% Red Clover	2% White Clover

7.11 Rodent and Nuisance Wildlife

Rodent and nuisance wildlife control on the closed landfills should be driven by actual need. If it is observed that gophers or other burrowing animals become established and that these animals are burrowing through the barrier layer, then their populations will have to be controlled. Regular inspection of the landfill surface is recommended to monitor animal impacts. The lack of putrescent materials in the landfill minimizes vector attractiveness and associated wildlife problems.

8 Post Closure Activities

Post closure activities include physical inspections of the landfill cover system, vegetation assessments, and groundwater and landfill gas assessments.

8.1 Physical Inspection and Maintenance

Visual inspection and maintenance of the closed landfills will be required for an extended period into the future to ensure that cover system does not degrade, and to confirm that leachate and landfill gas are not negatively impacting on the surrounding environment. A post closure program for landfill inspection and maintenance will include:

- Maintaining vegetation on the cover system as required,
- Maintaining surface water diversion away from the landfill,
- Inspection for erosion and slope stability,
- Inspection for exfiltrate seeps,
- Inspection for wildlife damage, and
- Continued monitoring of all identified environmental parameters including landfill gas and groundwater (as per above).

It is recommended that this program be conducted in the spring following snow melt, mid summer and in the early fall.

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8.2 Vegetation Assessment

A periodic assessment of the overall vegetation growth on the closed landfills provides an "early warning" indication of a change in cover function. Once per year, prior to the vegetation senescing mid summer a visual inspection should be made of the cover vegetation. Maintenance would be completed as required.

8.3 Groundwater Monitoring

For the purposes of this closure plan and the schedule for closing the landfills the groundwater will be monitored in accordance with the Permit as specified in Section 4.2. These results will continue to be reported as required under Section 4.7.2. The location of these wells is shown in Figure 10.

Upon completion of the compacted sludge system comparison conducted under PR-15166, and prior to the closure of any landfill under PR-04133 a review of the groundwater monitoring with respect to these landfills will be completed. Building upon the information obtained through the evaluation, different sampling parameters, different sampling locations or additional groundwater well installation and monitoring may be required.

8.4 Gas Monitoring

Based upon the assessment of landfill gas generation potential (Section 7.4) no landfill gas monitoring is proposed following closure. Annual landfill gas monitoring of the old ash landfill will be used to confirm the lack of gas generation and no requirement for landfill gas monitoring upon closure.

9 Reporting

Reporting will be completed as per the existing permit requirements,, including waste discharge volumes, ash sample analysis, and groundwater analysis. In conjunction with a review and evaluation of the groundwater monitoring program prior to closure activities commence, ongoing monitoring and reporting activities to be completed post closure will be determined.

10 Schedule of Activities

A very preliminary schedule of activities is presented below. This schedule identifies major closure initiatives, and does not include routine ground water monitoring and reporting as required under permit.

Feb. 2003	Work with MoWLAP to obtain acceptance of closure plan for the active ash, sludge, industrial and metal landfills (PR-04133)
2003-2005	Re-contouring sludge landfill as required
2005	Assess performance of closure system under PR-15166. Review groundwater monitoring program, well suitability and analysis parameters. Planning for Cell 1 of active ash landfill closure.
2006	Begin closure activities on the active ash landfill cell 1.
2010	Closure of sludge landfill.

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2011	Closure of cell 2 of the active ash landfill.
2016	Closure of cell 3 of the active ash landfill.
2020	Closure of Industrial and metal landfills.
2021	Final Closure of cell 4 and all of the once-active ash landfill.

11 Estimated Costs

Closure costs for each of the landfills has not been provided as the closure schedule, closure system and mill activities preclude the determination of accurate closure costs.

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12 Tables

Table 1: Climate Norms for Mackenzie and Prince George, BC.

Months	Mackenzie Temperature (°C)	Prince George Temperature (°C)	Prince George Precipitation (mm)
January	-11.1	-9.9	56.1
February	-8.6	-5.4	35.1
March	-3.4	-0.7	42.6
April	2.9	4.7	22.8
May	8.3	9.4	43.7
June	12.5	13.1	61.8
July	14.9	15.3	63.6
August	14.0	14.6	51.0
September	9.0	9.8	49.4
October	3.6	4.8	62.3
November	-4.6	-3.1	65.1
December	-10.1	-8.4	68.7

Table 2: Typical Ash SWEP Test.

Parameter	Ash ⁽¹⁾	Units
Physical Tests		
Moisture	< 0.1	%
Initial SWEP pH	12.7	-
Final SWEP pH	7.08	-
Extractable Metals		
Arsenic	< 0.4	mg L ⁻¹
Barium	0.7	mg L ⁻¹
Boron	2	mg L ⁻¹
Cadmium	< 0.02	mg L ⁻¹
Chromium	0.02	mg L ⁻¹
Copper	< 0.02	mg L ⁻¹
Lead	< 0.1	mg L ⁻¹
Mercury	< 0.001	mg L ⁻¹
Selenium	< 0.4	mg L ⁻¹
Silver	< 0.02	mg L ⁻¹
Zinc	0.3	mg L ⁻¹

⁽¹⁾ Abitibi Consolidated collected the sample on August 28th, 2002 and directed ALS labs to conduct the analysis. Results are expressed as mg L⁻¹ as per the requirements of the Special Waste Regulation BC Reg.83/88

Table 3: Ash Nutrient Analysis.

Parameter	Ash ⁽¹⁾	Units
Nitrogen Total	0.03	%
Ammonium - N	0.95	$\mu\text{g g}^{-1}$
Nitrate - N	9	$\mu\text{g g}^{-1}$
Boron	5.23	$\mu\text{g g}^{-1}$
Calcium	17200	$\mu\text{g g}^{-1}$
Copper	1.27	$\mu\text{g g}^{-1}$
Iron	33	$\mu\text{g g}^{-1}$
Magnesium	934	$\mu\text{g g}^{-1}$
Manganese	0.0	$\mu\text{g g}^{-1}$
Phosphorus	59	$\mu\text{g g}^{-1}$
Potassium	>800	$\mu\text{g g}^{-1}$
Sodium	654	$\mu\text{g g}^{-1}$
Sulphate-S	>20	$\mu\text{g g}^{-1}$
Zinc	3.38	$\mu\text{g g}^{-1}$
C:N Ratio	110	-
Carbon Total Organic	2.74	%
Cation Exchange Capacity	7.95	$\text{meq } 100\text{g}^{-1}$
Organic Matter	5.49	%
Bulk Density	1.11	g mL^{-1}
Organic Matter (heated)	3.9	%
Moisture Wet Weight	20.8	%
Conductivity	54.9	dS m^{-1}
pH	12.8	-
Calcium Carbonate Equivalent	16.7	%

⁽¹⁾ The sample was a composite of 5 discrete and equal volume subsamples collected on May 9th, 2001. Analysis completed by Norwest Labs.

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Table 4: Ash Trace Element Analysis.

Parameter	Ash ⁽¹⁾	Units
Aluminum	1960	µg g ⁻¹
Antimony	< 10	µg g ⁻¹
Arsenic	2.7	µg g ⁻¹
Barium	3	µg g ⁻¹
Beryllium	< 1	µg g ⁻¹
Boron	2	µg g ⁻¹
Cadmium	4.1	µg g ⁻¹
Calcium	286	µg g ⁻¹
Chromium	9	µg g ⁻¹
Cobalt	< 1	µg g ⁻¹
Copper	8	µg g ⁻¹
Iron	115	µg g ⁻¹
Lead	3	µg g ⁻¹
Magnesium	169	µg g ⁻¹
Manganese	2	µg g ⁻¹
Mercury	0.005	µg g ⁻¹
Molybdenum	4	µg g ⁻¹
Nickel	3	µg g ⁻¹
Phosphorus	1300	µg g ⁻¹
Selenium	0.4	µg g ⁻¹
Silver	< 2	µg g ⁻¹
Sodium	< 5	µg g ⁻¹
Strontium	2	µg g ⁻¹
Tin	< 5	µg g ⁻¹
Titanium	2	µg g ⁻¹
Vanadium	< 1	µg g ⁻¹
Zinc	6	µg g ⁻¹

⁽¹⁾The sample was a composite of 5 discrete subsamples collected on May 9th, 2001. Analysis completed by CANTEST Ltd. All concentrations reported on a total dry weight basis.

Table 5: Sludge Trace Element Analysis.

Parameter	Sludge ⁽¹⁾	Units
Aluminum	256	$\mu\text{g g}^{-1}$
Antimony	< 10	$\mu\text{g g}^{-1}$
Arsenic	5.2	$\mu\text{g g}^{-1}$
Barium	108	$\mu\text{g g}^{-1}$
Beryllium	< 1	$\mu\text{g g}^{-1}$
Boron	23	$\mu\text{g g}^{-1}$
Cadmium	1.1	$\mu\text{g g}^{-1}$
Calcium	5650	$\mu\text{g g}^{-1}$
Chromium	16	$\mu\text{g g}^{-1}$
Cobalt	< 1	$\mu\text{g g}^{-1}$
Copper	14	$\mu\text{g g}^{-1}$
Iron	3160	$\mu\text{g g}^{-1}$
Lead	< 1	$\mu\text{g g}^{-1}$
Magnesium	1020	$\mu\text{g g}^{-1}$
Manganese	963	$\mu\text{g g}^{-1}$
Mercury	0.027	$\mu\text{g g}^{-1}$
Molybdenum	2	$\mu\text{g g}^{-1}$
Nickel	4	$\mu\text{g g}^{-1}$
Phosphorus	11400	$\mu\text{g g}^{-1}$
Selenium	< 0.2	$\mu\text{g g}^{-1}$
Silver	< 2	$\mu\text{g g}^{-1}$
Sodium	1430	$\mu\text{g g}^{-1}$
Strontium	36	$\mu\text{g g}^{-1}$
Tin	< 5	$\mu\text{g g}^{-1}$
Titanium	4	$\mu\text{g g}^{-1}$
Vanadium	10	$\mu\text{g g}^{-1}$
Zinc	101	$\mu\text{g g}^{-1}$

⁽¹⁾ The sample was a composite of 5 discrete and equal volume subsamples collected on May 9th, 2001. Analysis completed by CANTEST Ltd. All concentrations reported on a total dry weight basis.

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Table 6: Sludge Nutrient Analysis.

Parameter	Sludge ⁽¹⁾	Units
Total Kjeldahl Nitrogen	2.34	%
Ammonia Nitrogen	2730	$\mu\text{g g}^{-1}$
Nitrate & Nitrite	77	$\mu\text{g g}^{-1}$
Boron	0.35	$\mu\text{g g}^{-1}$
Calcium	615	$\mu\text{g g}^{-1}$
Copper	0.77	$\mu\text{g g}^{-1}$
Iron	31	$\mu\text{g g}^{-1}$
Magnesium	93.7	$\mu\text{g g}^{-1}$
Manganese	41.1	$\mu\text{g g}^{-1}$
Phosphorus	>60	$\mu\text{g g}^{-1}$
Potassium	110	$\mu\text{g g}^{-1}$
Sodium	214	$\mu\text{g g}^{-1}$
Sulphate-S	>200	$\mu\text{g g}^{-1}$
Zinc	4.16	$\mu\text{g g}^{-1}$
Total Solids	20.4	%
Volatile Solids	94.6	%
Moisture	79.6	%
Total Organic Carbon	29	% dry wt.
pH	5.7	pH units

⁽¹⁾ Sample is a composite of a minimum of five discrete subsamples collected May 8th, 2001. Analysis completed by Norwest Labs with the exception of the dioxin and furan value that was provided by Abitibi-Consolidated.

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Table 7: Waste Volume (m³) Deposited into the Active Ash Landfill by Month and Year.

Month	2000	2001	2002
January		1237	1219
February		914	879
March		891	1087
April		991	785
May		938	996
June		727	316
July		662	891
August		1336	1190
September		504	961
October		1348	1168
November	352	1319	1348
December	1117	1143	1231
Total	1,469	12,010	12,049

Table 8: Waste Volume (m³) Deposited into the Sludge Landfill by Month and Year.

Month	1999	2000	2001	2002
January	538	1143	3381	3686
February	48.3	621	3767	3051
March	0	141	743	1100
April	1415	13	945	965
May	738	627	824	1593
June	386	2984	992	1161
July	0	2018	493	2032
August	328	3321	628	1357
September	493	776	4698	1053
October	2710	1829	1688	2066
November	1242	2707	2498	1688
December	1184	3389	1971	1438
Total	9,082	19,469	22,628	21,190

30

Table 9: Landfill Gas Generation Assessment Results – Active Ash Landfill.

Parameter	Sample Code								
	1	2	3	4	5	6	7	8	9
CH ₄ (% vol.)	0	0	0	0	0	0	0	0	0
CH ₄ LEL	0	0	0	0	0	0	0	0	0
O ₂ (% vol.)	20.9	20.9	20.9	20.9	20.9	19.2	20.9	20.6	20.2
CO (ppm)	0	0	0	0	0	160	0	50	160
H ₂ S (ppm)	0	0	0	0	0	0	0	2	1

CH₄ is methane.

LEL is Lower Explosive Limit (5% for methane).

O₂ is oxygen.

CO is carbon monoxide.

H₂S is hydrogen sulfide.

Sample Codes:

1. surface; at ash interface lower pile; not compacted
2. surface; top of ash landfill; not compacted
3. surface; top of ash landfill; compacted
4. surface; outside perimeter of ash landfill; not compacted
5. surface; lower ash landfill; compacted
6. borehole; top of ash landfill; compacted; replicate 1
7. borehole; top of ash landfill; compacted; replicate 2
8. borehole; top of ash landfill; compacted; replicate 3
9. borehole; top of ash landfill; not compacted

Table 11: HELP Model Results on the Compacted Sludge System.

SLUDGE COVER	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Precipitation	57.35	36.85	43.95	20.53	47.50	50.72	60.77	67.05	52.30	51.15	65.99	71.37	625.53
Run off	0.00	0.51	34.05	88.50	6.84	0.00	1.48	0.20	0.00	0.00	4.69	0.05	136.32
Evapotranspiration	7.26	8.95	9.70	7.46	64.26	56.88	53.26	63.27	56.80	17.40	10.84	6.38	362.47
Lateral Drainage	0.00	0.00	0.00	0.00	80.80	1.85	0.82	3.09	2.78	1.45	2.67	0.00	93.45
Leachate	0.00	0.00	0.00	0.00	12.85	3.31	0.66	1.93	1.88	0.97	3.57	0.00	25.16

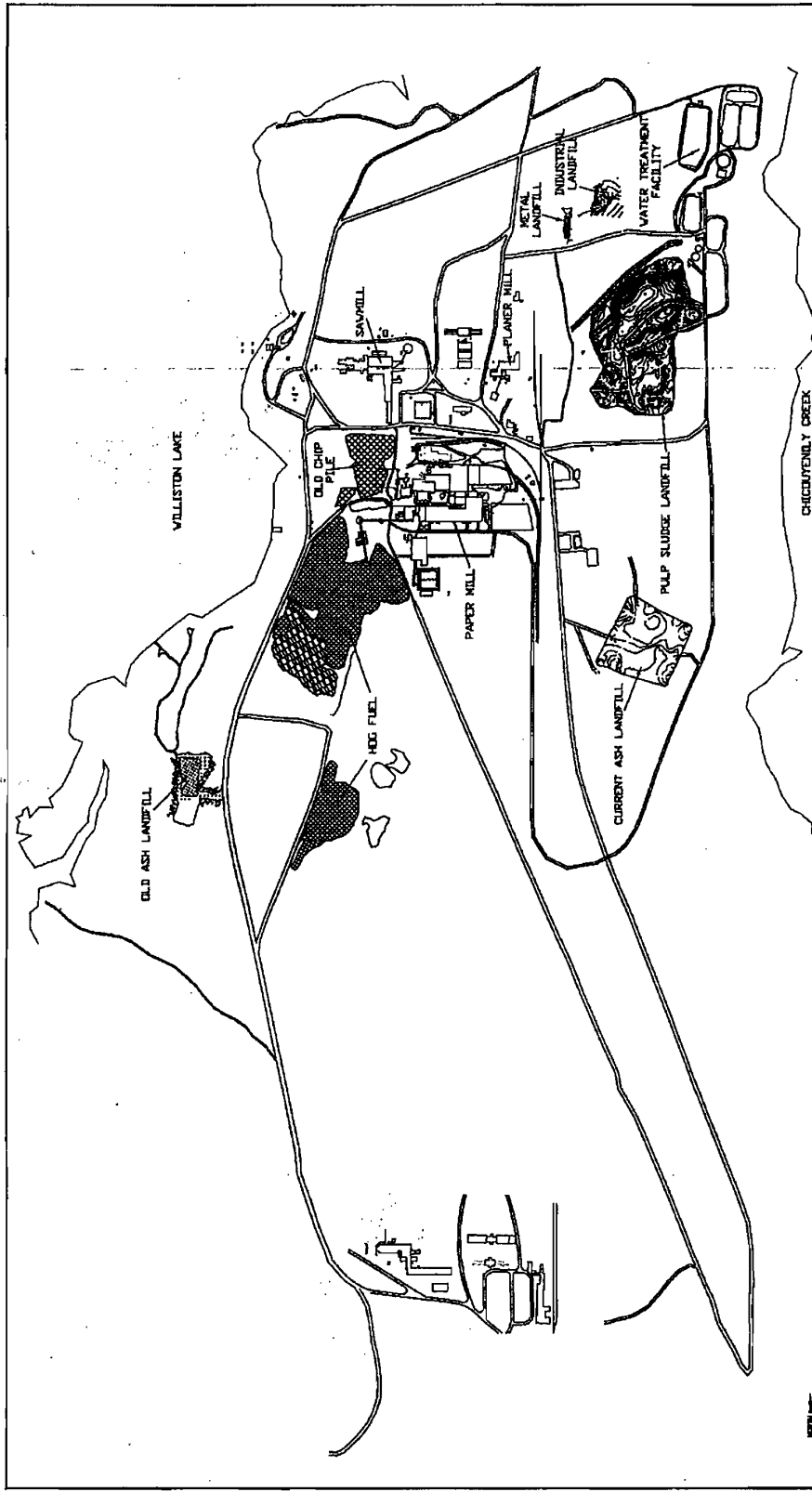
All units are presented in mm.

Note: Lateral Drainage = Lateral Drainage Collected From Drainage Layer

13 Figures

Figure 1: Location of the Active Ash, Sludge, Industrial and Metal Landfills in Relation to the Abitibi Consolidated Mill and Other Adjacent Infrastructure.

This Figure is an insert found on the following page.



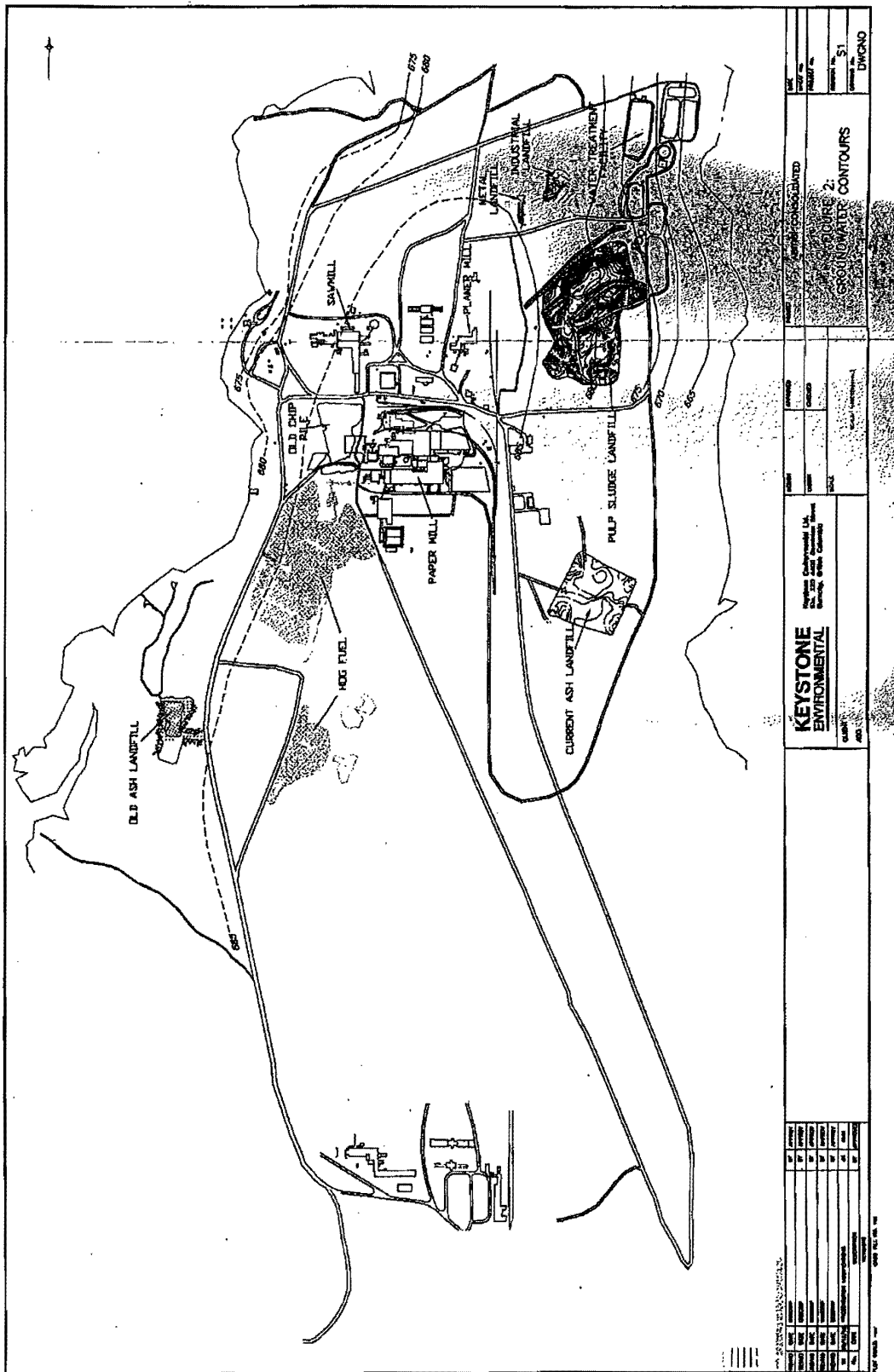
LEGEND — WATER ROUTE — ROAD ROUTE — FENCE	CHANGES REVISIONS ARE PROVIDED BY ABITIBI CONSOLIDATED AND NOT VERIFIED BY SYLVIS REVISIONS ARE PROVIDED FOR GENERAL REFERENCE ONLY.	SYLVIS ENVIRONMENTAL 3656 PANDORA STREET, VANCOUVER BRITISH COLUMBIA, V6K 1X2 TEL: 604-278-1377 INFO@SYLVIS.COM	FIGURE 1 LOCATION OF ACTIVE ASH, PULP SLUDGE, INDUSTRIAL AND METAL LANDFILLS	DATE 2002	REVISION 616-02	DATE 1

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Figure 2: Estimated Groundwater Contours Under the Mill Site.

This Figure is an insert found on the following page.



KEYSTONE ENVIRONMENTAL

Project: Cedarvale, IL
Site: 200 Cedarvale, IL
County: Cedar, IL
Date: 10/15/01

FIGURE 2:
GROUNDWATER CONTOURS

DATE: 10/15/01
DRAWN BY: S1
DWGNO: DWGNO

NO.	DATE	BY	CHKD.	APP.
1	10/15/01	...	...	...
2	...	...	...	...
3	...	...	...	...
4	...	...	...	...
5	...	...	...	...
6	...	...	...	...
7	...	...	...	...
8	...	...	...	...
9	...	...	...	...
10	...	...	...	...

36

Figure 3: Schematic Final Cover Contour Plan for the Active Ash Landfill.

This Figure is an insert found on the following page

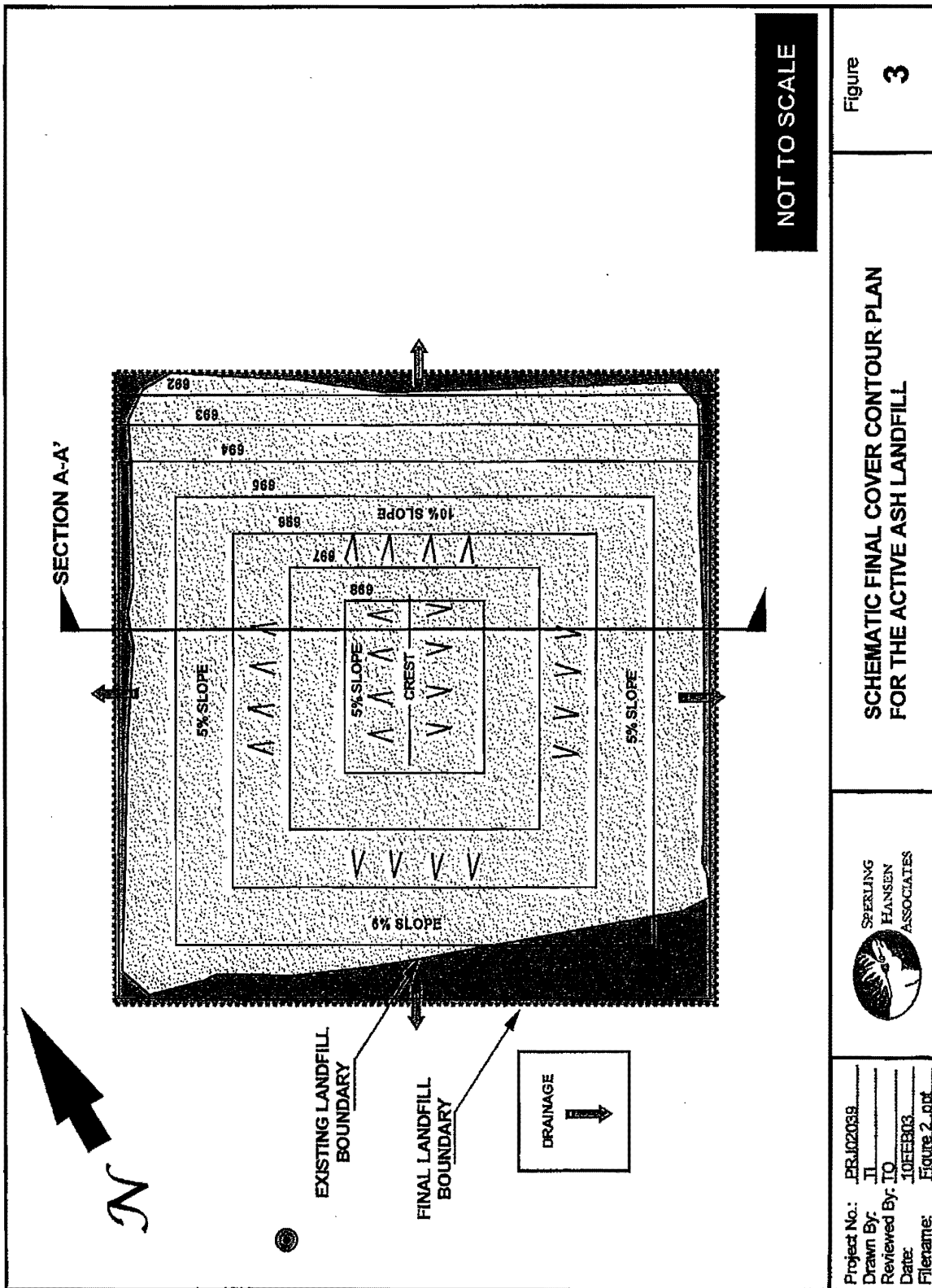


Figure 3

SCHEMATIC FINAL COVER CONTOUR PLAN
FOR THE ACTIVE ASH LANDFILL

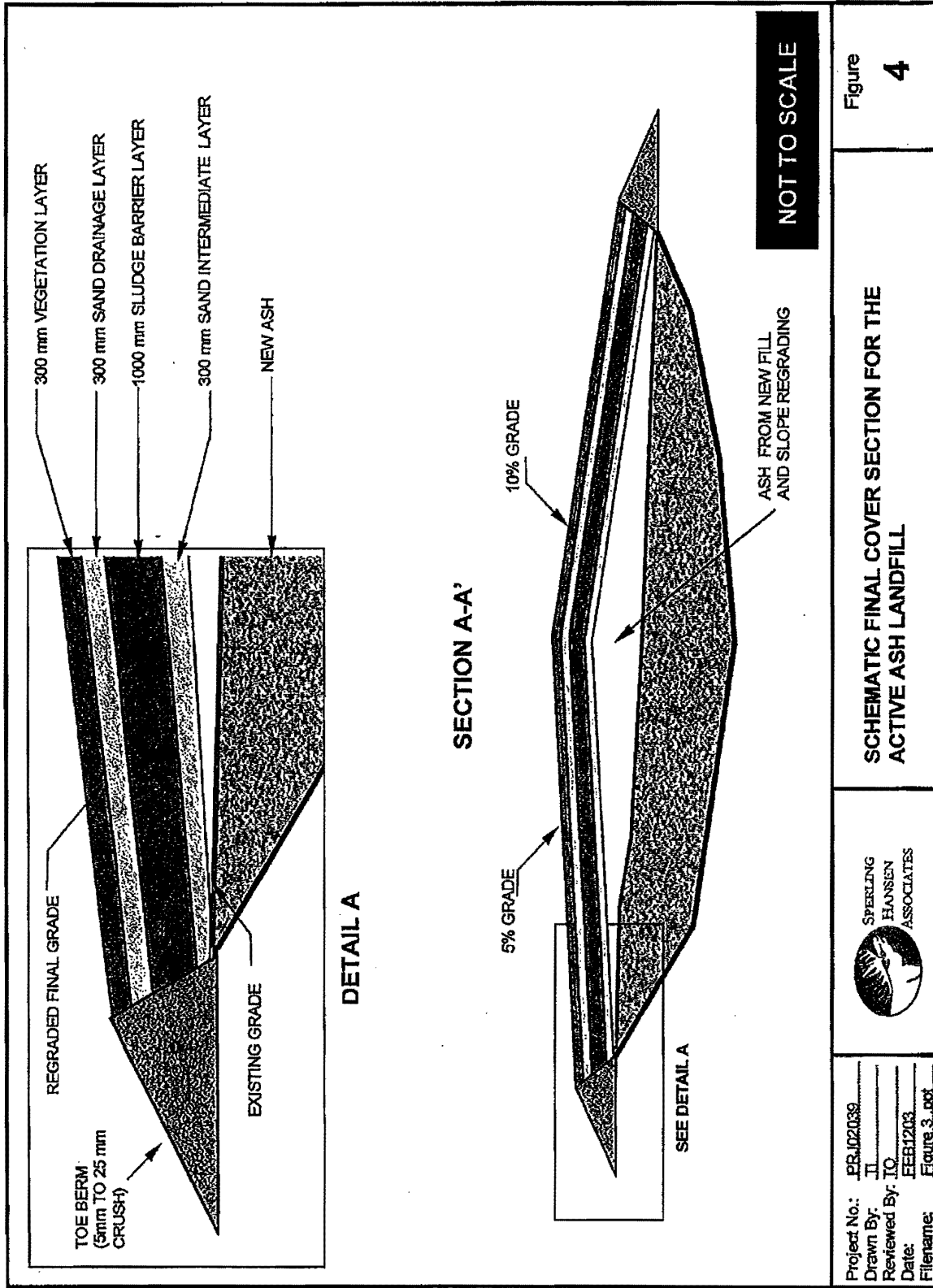


Project No.: JBR-102039
 Drawn By: JT
 Reviewed By: IO
 Date: 10/08/03
 Filename: Figure 2.dwg

38

Figure 4: Schematic Final Cover Section for the Active Ash Landfill.

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Figure

4

**SCHEMATIC FINAL COVER SECTION FOR THE
ACTIVE ASH LANDFILL**

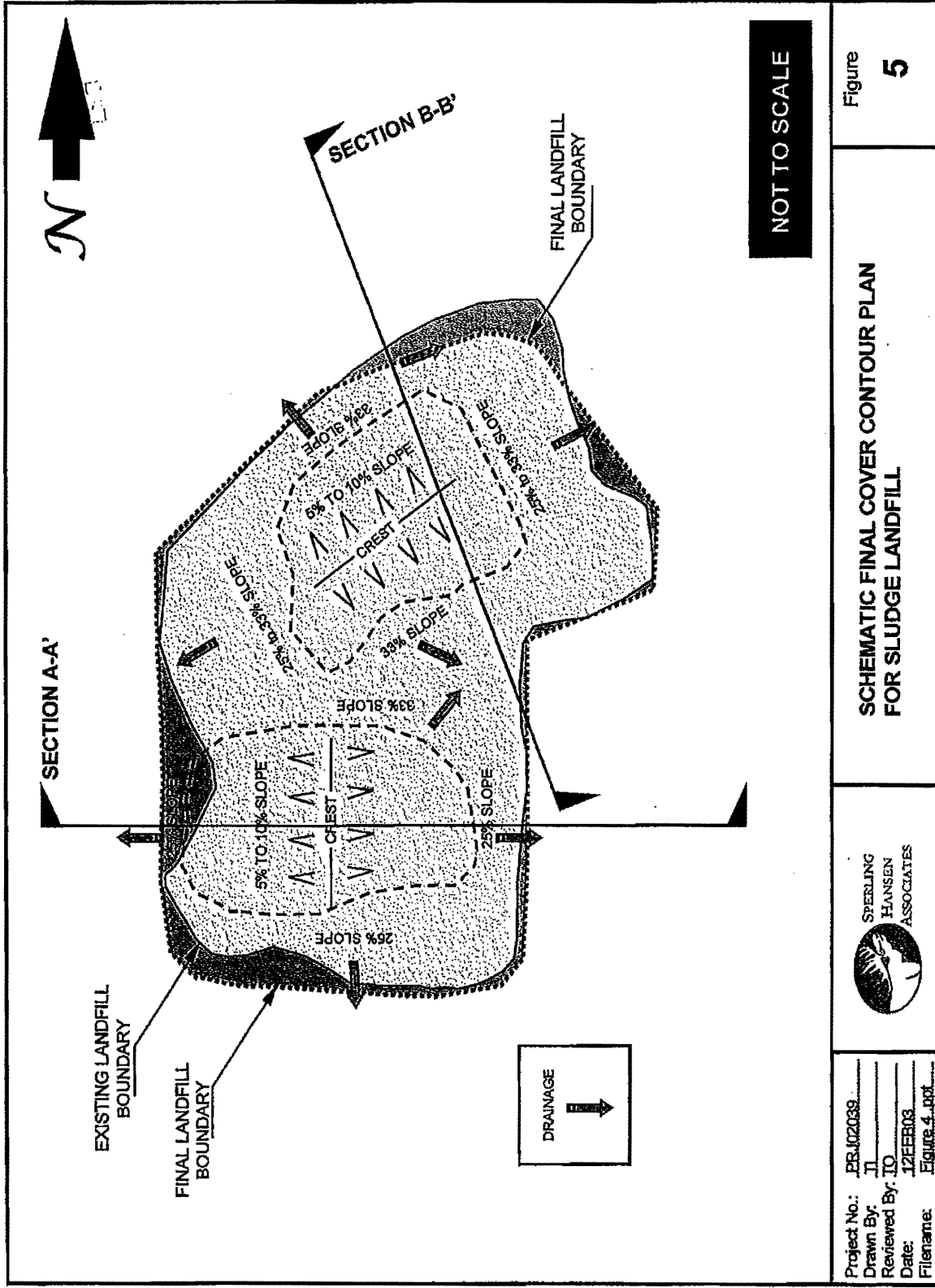


Project No.: PRJ02039
 Drawn By: JH
 Reviewed By: JH
 Date: FEB12/03
 Filename: Figure.3.dwg

40

Figure 5: Schematic Final Cover Contour Plan for the Sludge Landfill.

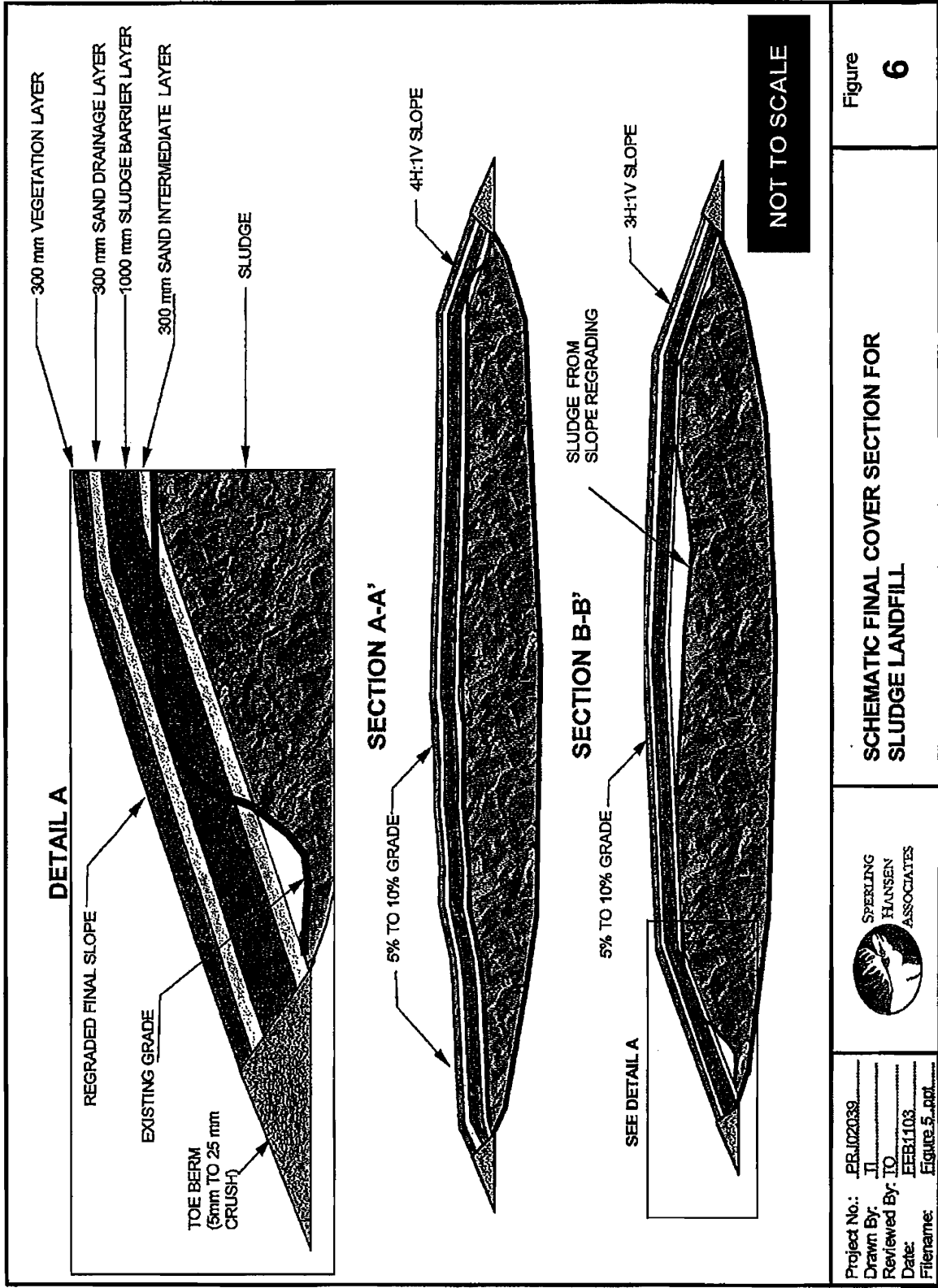
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Figure 6: Schematic Final Cover Section for the Sludge Landfill.

This Figure is an Insert found on the following page



Figure

6

**SCHEMATIC FINAL COVER SECTION FOR
SLUDGE LANDFILL**

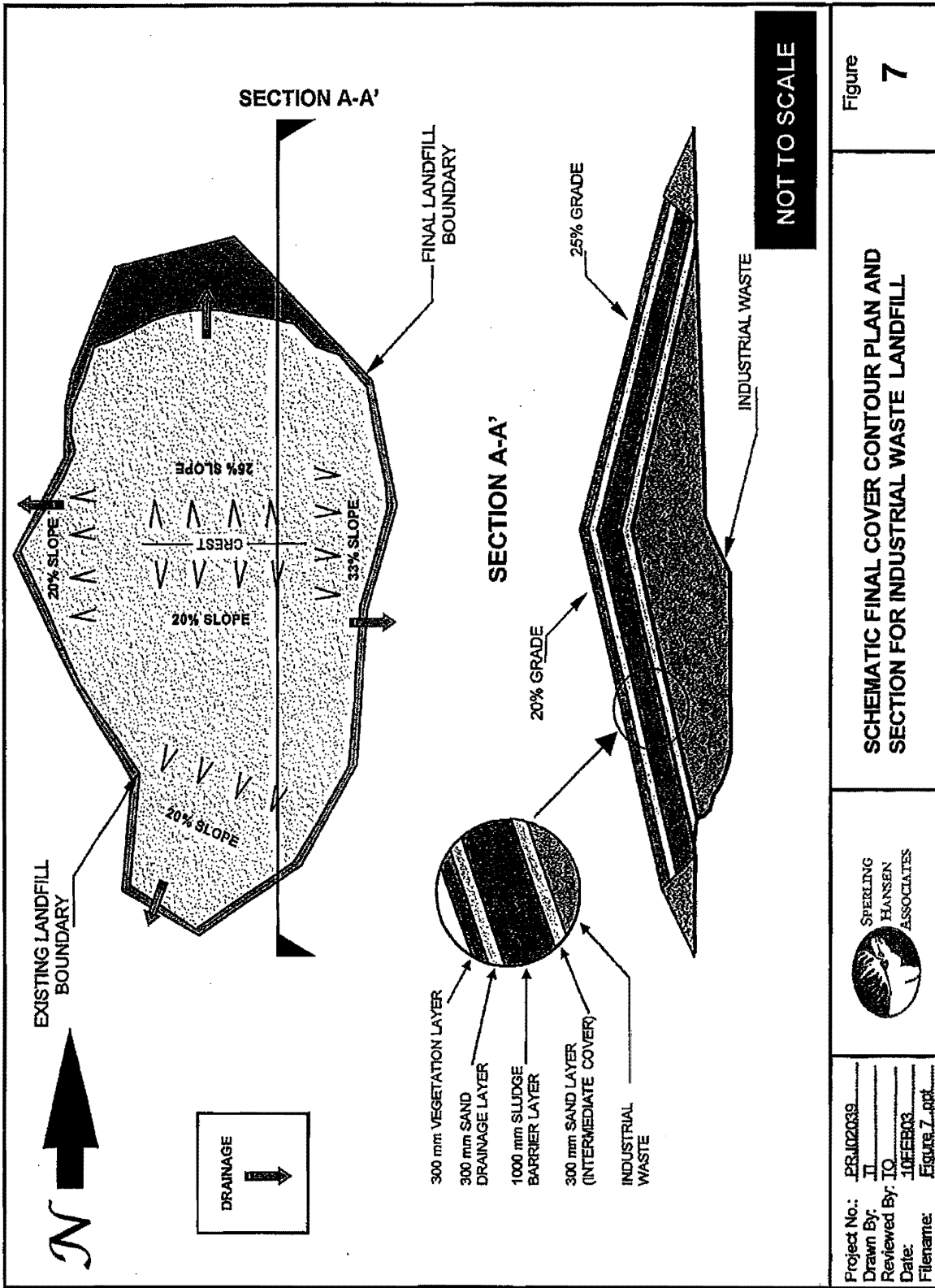


Project No.: PR-02039
 Drawn By: IT
 Reviewed By: IO
 Date: FEB1103
 Filename: Figure 5.dwg

44

Figure 7: Schematic Final Cover Contour and Section Plan for the Industrial Landfill.

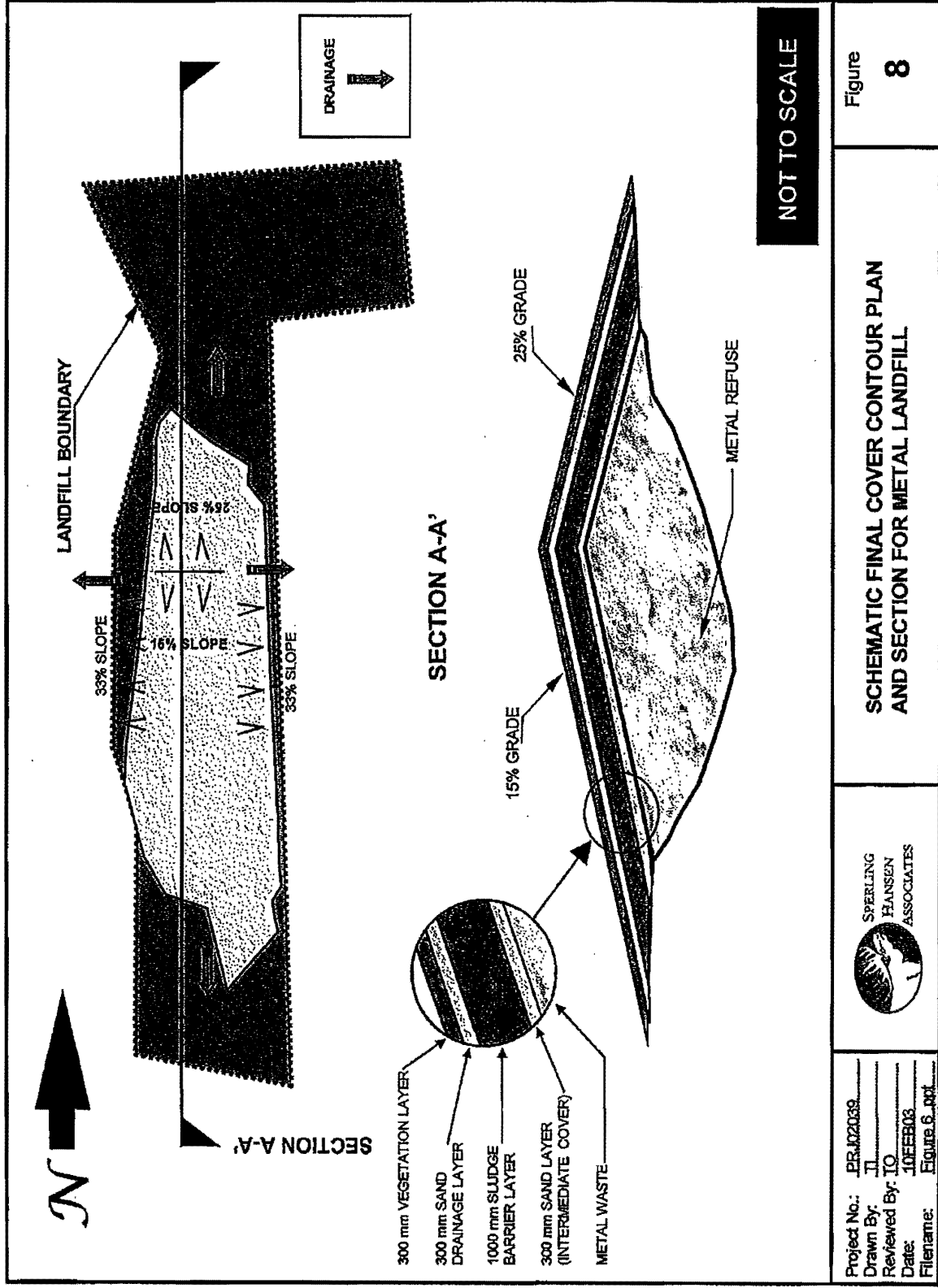
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Figure 8: Schematic Final Cover Contour and Section Plan for the Metal Landfill.

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Figure 9: HELP Model Results for the Compacted Sludge System.

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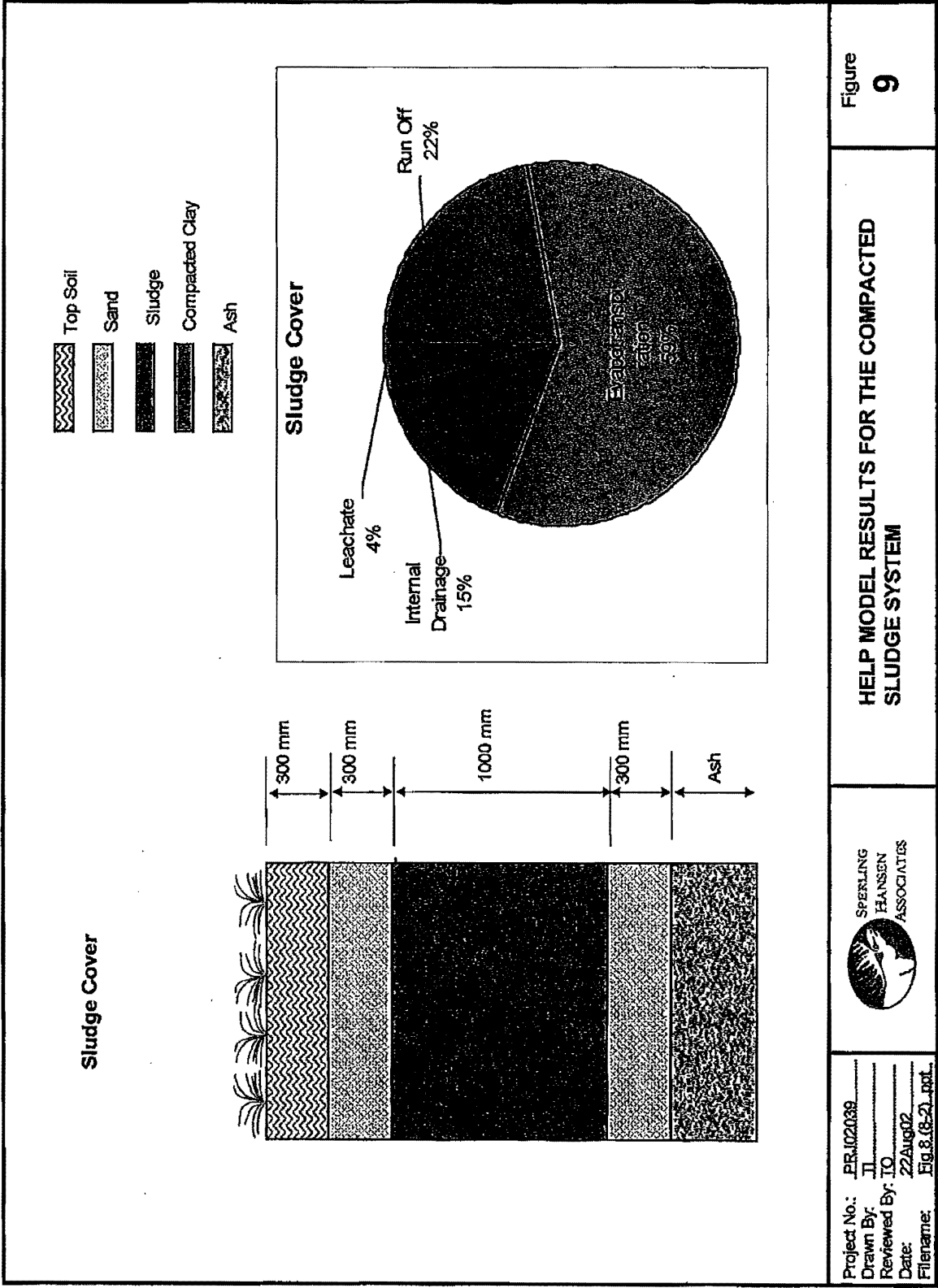
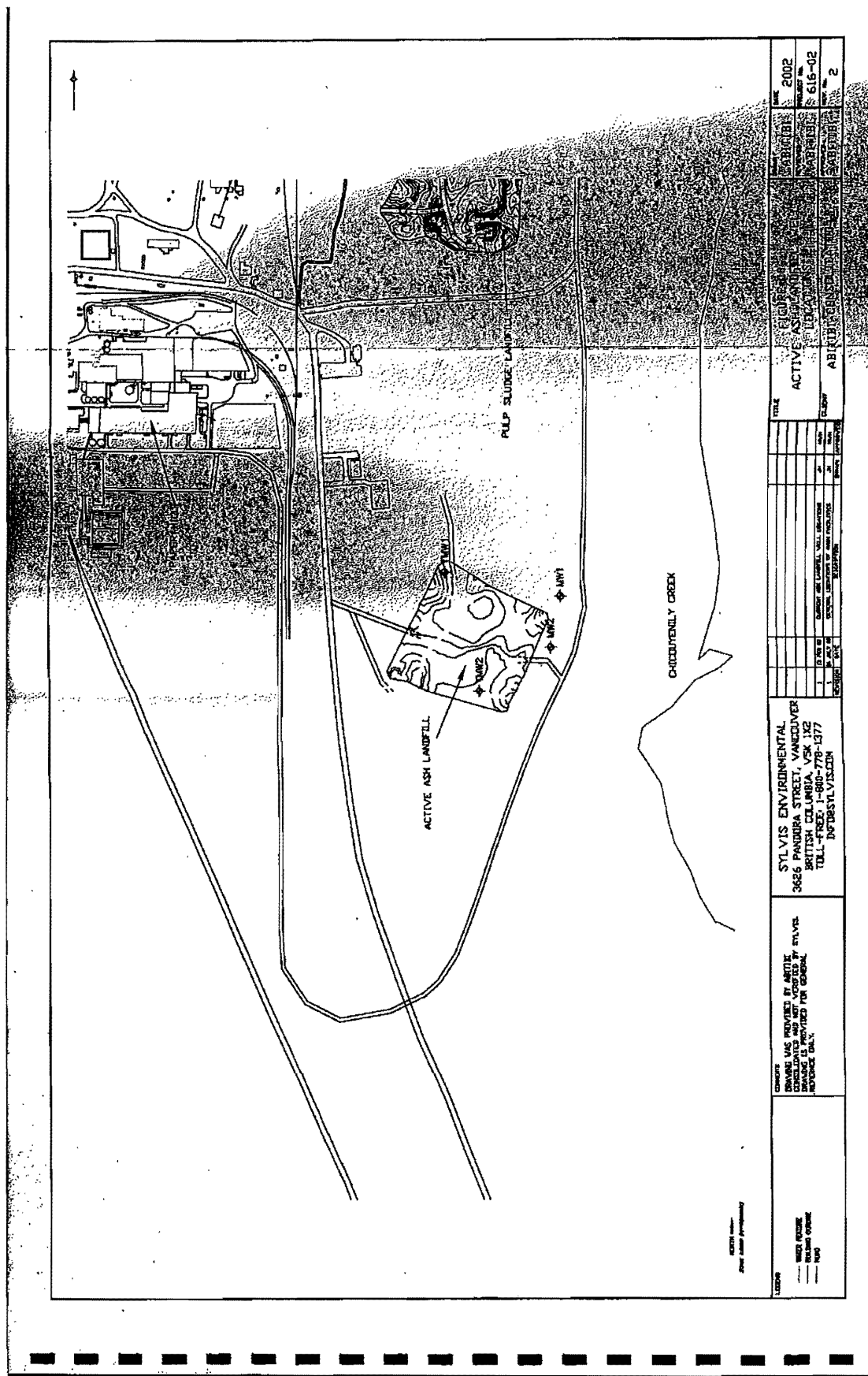


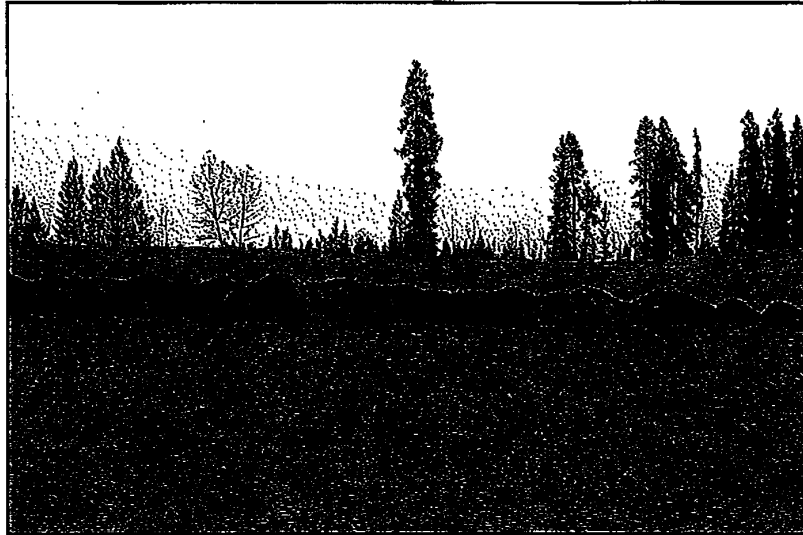
Figure 10: Location of Existing Groundwater Permit Sampling Locations.

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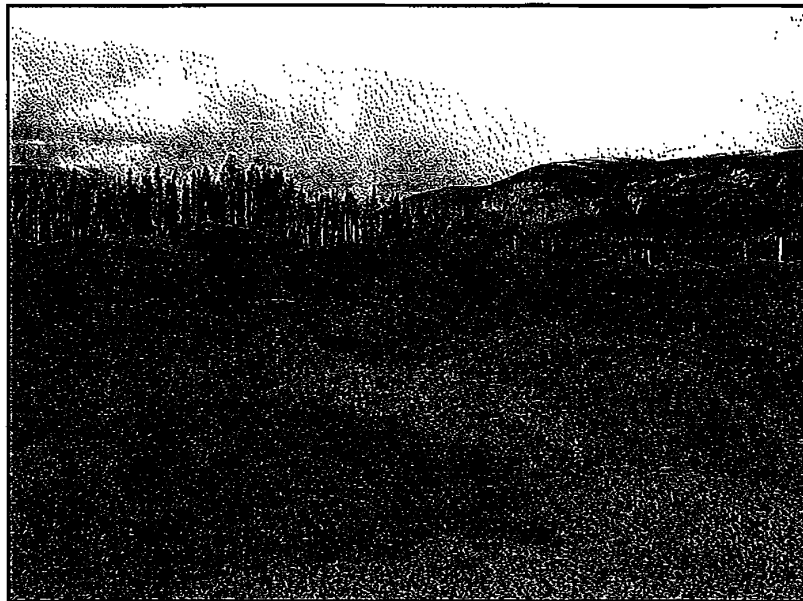


14 Photographs

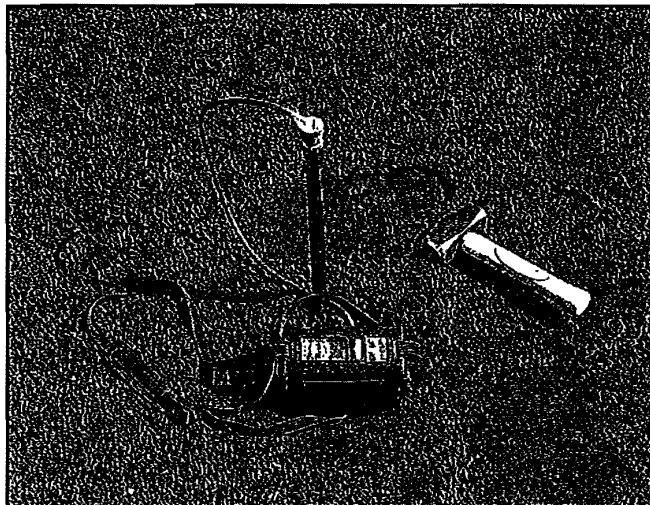
Photograph 1: Filling Cell 1 of the Active Ash Landfill.



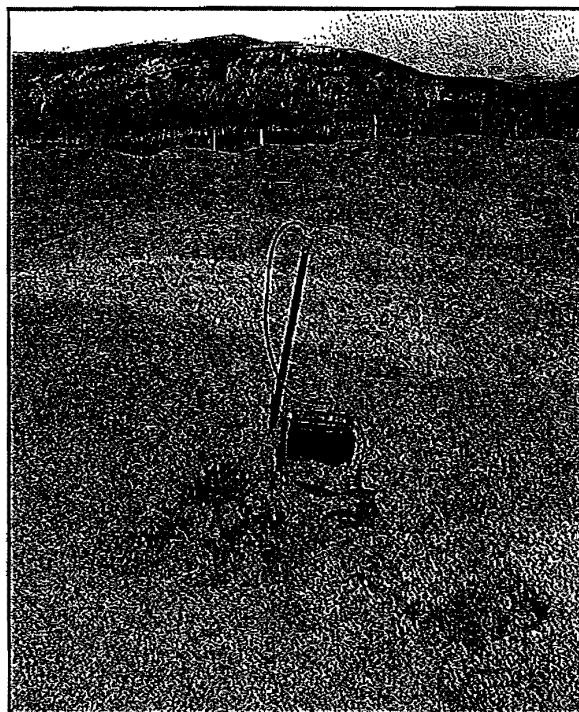
Photograph 2: Recently Deposited Sludge in the Sludge Landfill.



Photograph 3: Equipment used in Evaluation of Landfill Gas Generation Potential.



Photograph 4: Assessing Landfill Gas at the Sludge Landfill.



15 Report Closure

SYLVIS has prepared this closure plan for the purpose of landfill closure. The closure plan is limited to the specific site, development and design objectives for the landfills under British Columbia Ministry of Water Land and Air Protection Permit PR-04133 located at Abitibi Consolidated Inc. Paper Mill in Mackenzie, British Columbia.

This closure plan is intended for use by persons or companies familiar with landfills, their closure and management, real property such as the subject property, and persons or companies that are familiar with land use terminology, methodology, and reporting. Any questions about the closure plan, its use, terms, scope, research or the analytical methodology used should be directed to its author.

This closure plan must not be used partially but only in the context in which it is presented. We cannot monitor changes to our reports once they leave our office, nor can we prevent changes, additions or deletions in copies of our reports. We recommend that people intending to rely on our report do so only after reading an original report in its entirety.

The only party who may rely on the opinions expressed in this closure plan is the client. As this closure plan has been prepared exclusively for Abitibi Consolidated Inc. It is assumed that only the addressee will rely upon it, and only for the intended use stated herein. No one else may rely on this closure plan without the written consent of the author, which we may not provide retroactively. We expressly deny any legal liability for unauthorized reliance and for any other use.

Possession of this closure plan, or a copy of it, does not carry with it the right to reproduction or publication, in full or in part. No one other than the recipient may use this closure plan for any purpose without the written consent of this company. Exceptions exist when required by due process of law, or if subject to confidential review by the BC Ministry of Water, Land and Air Protection.

The analysis contained in this closure plan and the basis of the opinions and estimates relies upon written and verbal information obtained from a variety of sources we considered reliable. This closure plan has not been prepared for court purposes or for arbitration, as such some of the information set out in this plan may not have been fully documented or confirmed by reference to primary sources. Information provided by the client has not been verified with other parties unless so indicated in the plan. The information provided to us by the client is believed to be correct and reliable. General market and environmental information is derived from various public sources, as well as from various individuals believed to be knowledgeable in these matters. Information from others is believed to be correct, but accuracy cannot be guaranteed. The veracity of information provided to us by others has been accepted unless we have specific reason for doubt, in which case further confirmation is usually sought. Soil quality predictions are predicated upon laboratory analysis of the soil and amendments. We cannot assume responsibility for the accuracy of such analyses where the basis was third party sources. We have included plans and sketches for visual reference only. We cannot assume responsibility for the accuracy of such illustrations where the basis was third party sources.

We did not complete technical investigations such as:

- a. Contaminated Site Assessments
- b. Hydrogeological Assessments
- c. Terrain Stability Assessments

We undertook no investigation with the BC Ministry of Water, Land and Air Protection or any other government regulatory agency except as expressly described in this closure plan. The subject property must comply with such government regulations. Any non-compliance may affect the closure plan. Confirming compliance could require further investigations.

Unless otherwise stated in this plan, the existence of any contaminants or hazardous materials, which may or may not be present on the property, was not observed. No one provided hazardous materials or contaminated land studies to us or authorized us to commission such a study. We have no knowledge of the existence of such materials on or in the property. We were not retained to detect such substances, the presence of which may materially affect the value of the property. No responsibility is assumed for any such conditions, or for any specialized expertise or engineering knowledge required to discover them or to remove or eliminate them.

Attendance at any legal proceedings with respect to this plan, and any fees and expenses for preparation and attendance, are to be agreed upon in advance. However, neither this nor any other of these limiting conditions is an attempt to limit the use that might be made of this plan should it properly become evidence in a judicial proceeding. In such a case, it is acknowledged that it is the judicial body that will decide the use of the plan that best serves the administration of justice.

**17 Appendix B: Abitibi-Consolidated's PR-04133 Closure Plan –
February 2001**

A copy of the closure plan submitted by Abitibi-Consolidated for the closure of landfills under PR-04133 is found overleaf.

This Appendix is an insert found on the following pages.



**ABITIBI
CONSOLIDATED**

Abitibi-Consolidated Inc.
Mackenzie Region - Paper
Bag 2800
Mackenzie, BC, Canada V0J 2C0
Tel. 250-997-2800 Fax. 250-997-6723

February 9, 2001

PR-04133

Ministry of Environment, Lands and Parks
325 - 1011 Fourth Avenue
Prince George, B.C.
V2L 3H9

Dear Maureen:

Please find enclosed a closure plan for the ash, sludge, metal and industrial landfills operated by Donohue Forest Products Inc as per Section 4.7.3 of permit PR-04133.

The permit authorizes Donohue Forest Products Inc. to discharge refuse to the ground from its pulp and paper mill. The waste products generated from the fluidized bed boiler [sand and combustion residues (ash)] are landfilled in the "ash" landfill and covered monthly. The "sludge" landfill contains waste from the primary clarifiers, settling ponds and secondary treatment ponds which is covered annually. Industrial refuse such as wood, plastic and miscellaneous inert industrial waste is discharged into the "Industrial" landfill. The "metal" landfill is strictly used for metal that cannot be recycled. The industrial and metal landfills are covered once every two months.

CLOSURE PLAN

The landfills identified in the keyplan will be closed in a manner that:

- Strives to reduce the impacts of waste to the environment
- Makes use of locally available materials
- Is aesthetically pleasing.

The components of the closure plan are as described in the sections below.

Final Grading

The waste material will be graded to promote run-off of precipitation from the surface to prevent pooling of water on the top of the landfills. Building up the waste and shaping it to provide side slopes that range from a minimum of 4% to a maximum of 30% will ensure that precipitation will tend to run off the surface of the landfills and not infiltrate into it.

Attached are topographic plan views of the proposed final surface elevation contours of each of the landfills. It is proposed that the filling of the landfills be continued to achieve these elevations. At the current rate of waste generation per month, the filling operation will continue for at least another:

- 5 years for Cell #1 of the ash landfill
- 12 years for the sludge landfill (this volume does not include compaction which could effectively increase the capacity by 40% to 16.8 years)

Surface Water Diversion and Drainage Controls

The ground surface around the limits of the landfill will be graded to slope away from the edge of the landfill to promote run-off in the spring when the ground may still be frozen. Drainage will be directed by surface swales so as not to be channeled towards Chichouenyly Creek.

Final Cover

Once the landfills have reached their capacity, it is proposed that 1.0m of an impermeable layer of pulp and paper mill residual (7×10^{-7} cm/s) will be applied and compacted frequently. A 0.5m layer of sand will be applied over the impermeable layer to promote drainage and help to further protect the impermeable layer from root penetration. The final cover material will be a 0.30m layer of pulp and paper residual (sludge) to support vegetation and discourage any potential for leachate collection. Areas of the "sludge" and "ash" landfills will be decommissioned once they are no longer in use in order to avoid closing the site all at once.

The final attachment shows a section through the landfills with the cap in place.

Drainage Layers

It is not proposed to incorporate a specific drainage layer into the final cap. Throughout the application of the final cover, Abitibi Consolidated will ensure that the landfills are graded and contoured to ensure that the final cover is constructed with slopes around 10% to control erosion and provide adequate drainage of the landfill surface so that pooling of the surface water is avoided.

Vegetative Cover

Once the sludge has been placed over the entire landfill, seeding will take place when the weather and ground conditions permit. The seed mixture listed below has been used successfully on other areas throughout the site.

NON-COMPETITIVE LANDFILL SEED MIX	
%	SPECIES
12	Perennial Rye
12	Orchardgrass
10	Tall Fescue
10	Hard Fescue
5	Timothy
1	Canada Bluegrass
2	Red Top
5	White Clover
5	Alsike Clover
5	Single Cut Red Clover
8	Alfalfa
25	Fall Rye
100	

The seeding will be applied at a rate of 75 kg/ha and will be completed by either hydroseeding or mechanical broadcasting. A standard fertilizer will also be applied at a

rate of 400 kg/ha. Seeding will be conducted in early Spring, at the beginning of the growing season, to prevent damage to the seed or in late Fall allowing the seeds to remain dormant until the Spring.

Vegetation growth will be closely monitored over the first year and any areas showing distress or no growth will be re-seeded with fertilizer as required.

Erosion Prevention Controls

The slopes on the sludge landfill cap will not be steep or long; the maximum slope will be approximately 10%. The final cover slope on the industrial and ash landfills will be 5%. Any areas that have been found to show signs of erosion will be repaired and re-seeded.

Proposed Use of Property After Closure

No activities are planned for any of the landfills after closure.

Groundwater Monitoring and Pollution Abatement Works

Groundwater will be monitored in accordance with the sampling frequency and parameters specified in Section 4.2 of permit PR-04133 for the ash landfill until closure. These results will continue to be reported as per Section 4.7.2 of the permit.

As the landfills were not constructed with leachate collection and treatment systems, there will be no need for future operations of such systems.

Post-Closure Activities

Abitibi Consolidated will conduct monthly inspections of the landfill in the non-snow covered months to ensure that there is no damage to the cap from erosion or other sources such as wildlife. Any damage will be repaired as quickly as possible. The inspections will also view the state of vegetation growth on the cap. Any areas where the grass is not growing well will be re-seeded.

Schedule of Implementation of Actions and Plans

A schedule for the implementation of any action plans will be submitted within three (3) months of determining the need for any form of remedial action.

CONCLUSION

With this submission, Abitibi Consolidated requests approval of the following:

- Deposition of 69,213 m³ of waste in Cell #1 of the ash landfill
- Deposition of 182,900 m³ of waste in the sludge landfill
- Deposition of 8,400 m³ of waste in the industrial waste landfills.

In addition, Abitibi Consolidated requests approval of this closure plan, which involves the following components:

- Grading of the landfills to promote run-off to the sides and eliminate any direct runoff to surface streams.
- Application of an impermeable cap consisting of pulp and paper mill residual (sludge).

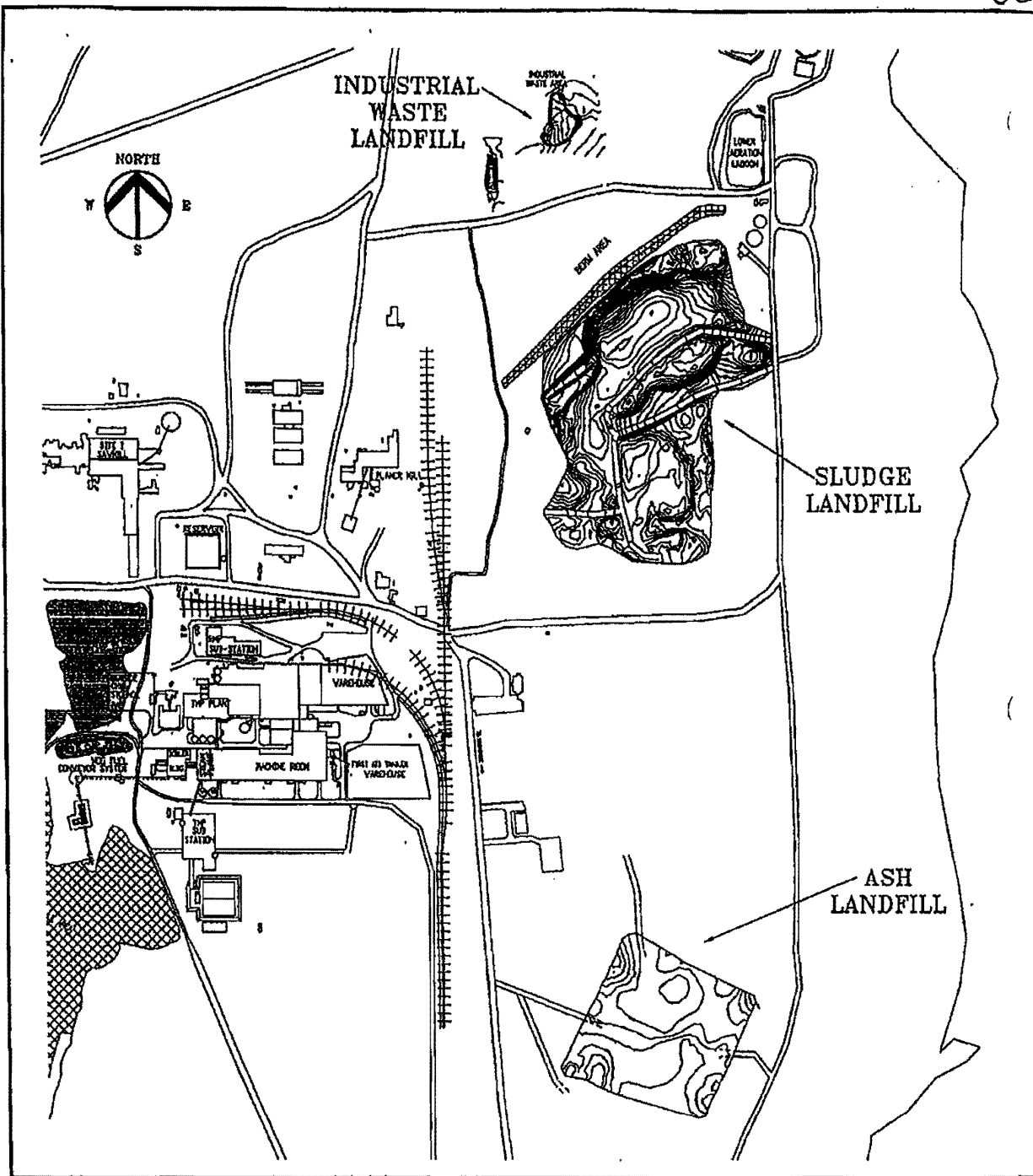
I trust that this satisfies the requirements for the submission of a closure plan as per Permit PR-04133 Section 4.7.3. If you have any further questions or concerns regarding this matter, please do not hesitate to contact me at (250) 997 - 2809.

Sincerely,

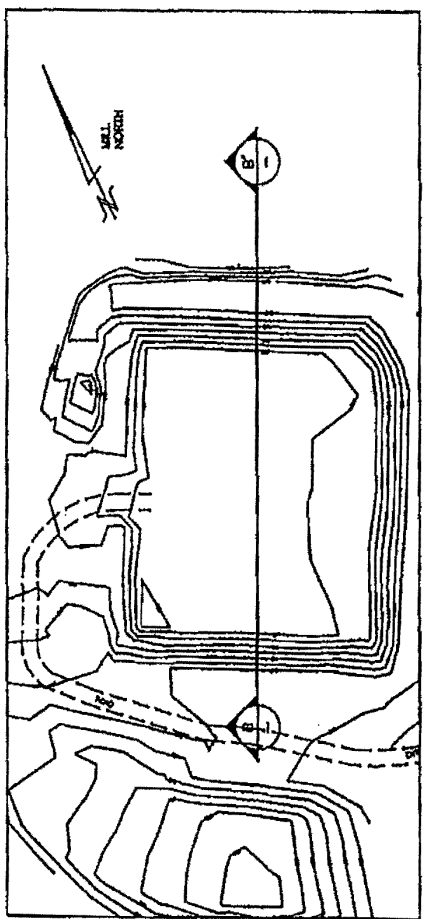
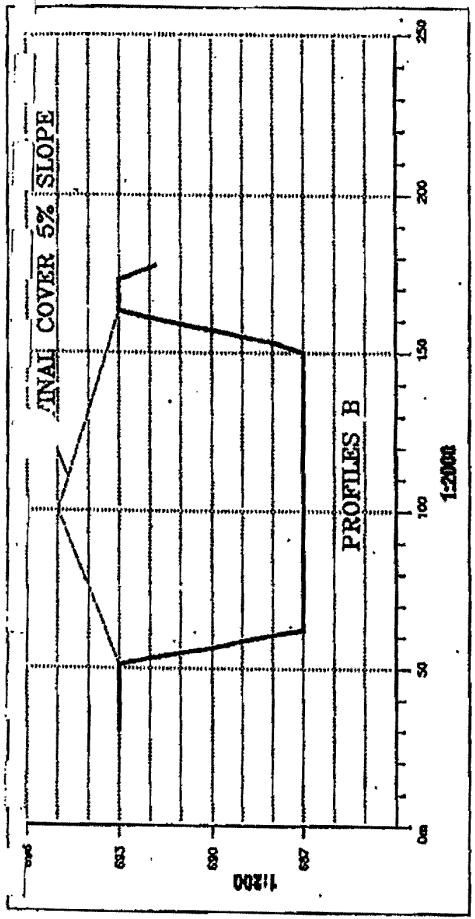
A. Muller.

Sophie Mullen
Environmental Co-ordinator

CC: Catherine Levis
Harold Norlund
Ernie St. Onge

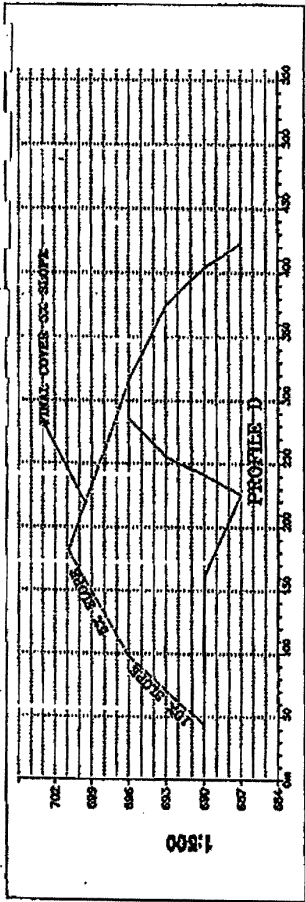


LEGEND		REVISIONS				MORROW ENVIRONMENTAL CONSULTANTS INC.			
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						ISSUED TO CLIENT	BY: AJK	CHECKED: DEX	
						DATE: 2001 02 09			
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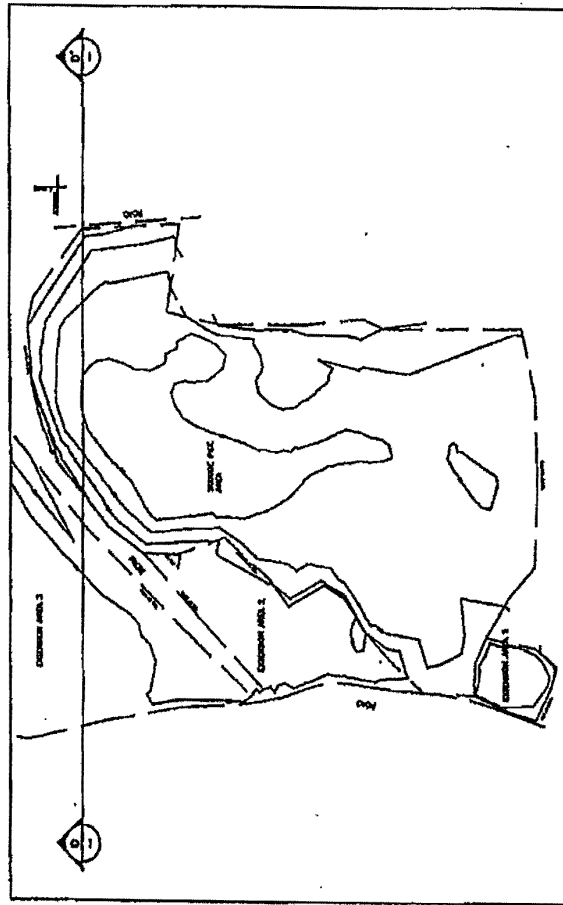


REVISIONS	
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ISSUED TO CLIENT	
AK	CHK
BY	CHK

MORRAN ENVIRONMENTAL CONSULTANTS INC.	
SCALE	AS NOTED
DATE	2001 02 08
PROJECT NAME	ARTIST CONSOLIDATED
CLIENT NAME	ARTIST CONSOLIDATED
PROJECT LOCATION	WICKENHEE, BC
DESIGNED BY	AK
CHECKED BY	DEX
ASH LANDFILL	
PROJECT NO. VO-0022601	
DRAWING NO. VO-0022601-005	
SCALE: 1:2000	



1:5000



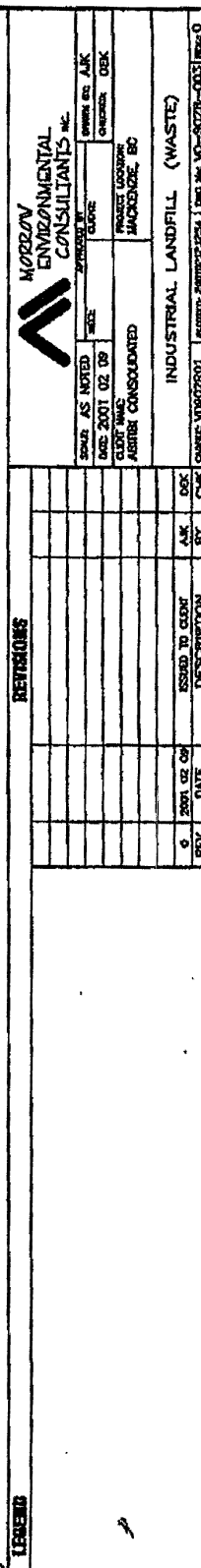
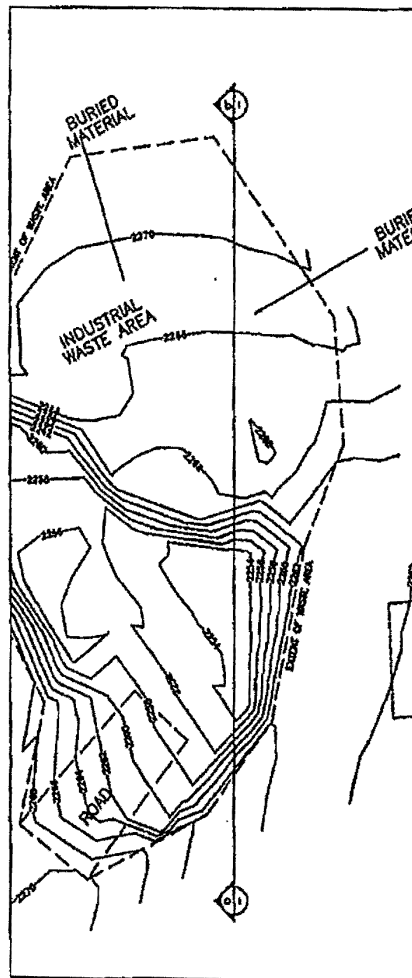
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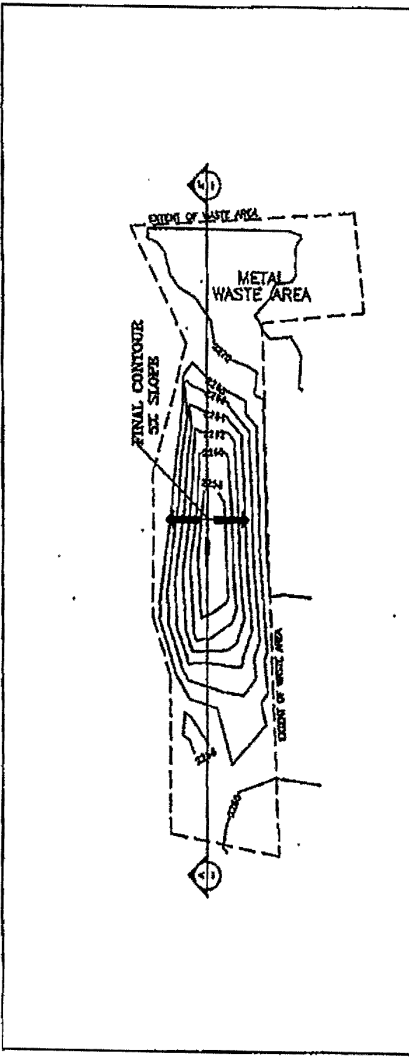
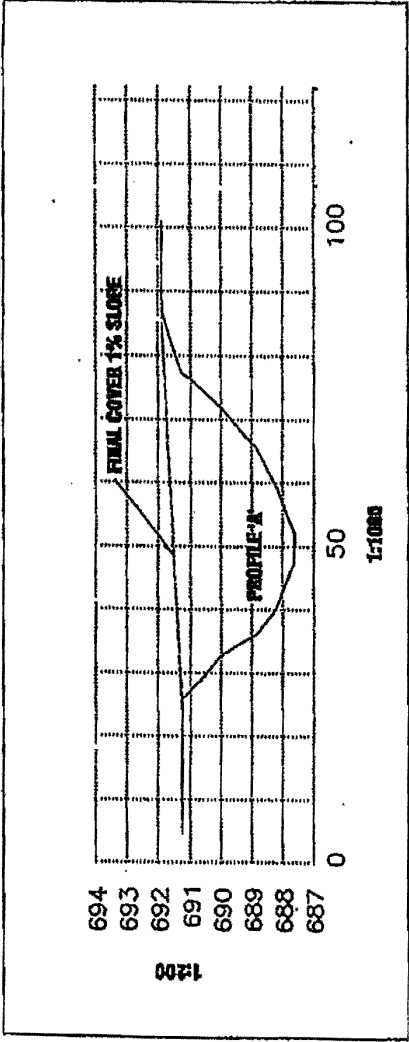
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REVISIONS

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SCALE: AS NOTED	DATE: 2001 02 09
CLIENT: ARTHUR CONSIDERED	PROJECT LOCATION: MACKENZIE, BC
DATE: 2001 02 09	PROJECT NO: 00218-0014
PROJECT NO: 00218-0014	PROJECT NO: 00218-0014
SLUDGE LANDFILL	





PLAN 1:1000

LEGEND

REVISIONS

MORRISON ENVIRONMENTAL CONSULTANTS INC.	
DATE AS NOTED	DATE
DATE 2001 02 09	DATE 2001 02 09
CLIENT NAME	PROJECT LOCATION
ARBOR CONSOLIDATED	MACKENZIE, BC
INDUSTRIAL LANDFILL (METALS)	
DRAWN: V0002801 REVISED: 20010209 SHEET NO: V0-9028-006 REV: 0	

REV.	DATE	ISSUED TO CLIENT	DESCRIPTION	BY	CHK
0	2001 02 09	ARBOR			

64

65



66
FAXED

File: PR-04133

SENT BY FAX TO: 250-997-6723

September 14, 2001

Products Forestiers Donohue Inc. - Donohue Forest Products Inc.
PO Box 2800
Maackenzie BC V0J 2C0

Attention: Sophie Mullen

Dear Sophie,

Re: Site Closure Plans for Landfills (PR-04133)

Thank you for the opportunity to comment on your closure plan for PR-04133 dated February 9, 2001. I apologize for the delay in responding. After reviewing the plan I have the following comments:

- In the opening paragraphs, the "sludge" landfill is described as being covered annually. This is not entirely correct since recent operations have been authorized to compact the site annually but additional cover is only required at the Regional Waste Manager's discretion. Should the mill want to add additional cover material on the site on their own initiative, this can be included in their closure plan activities.
- You have anticipated the life span of the ash and sludge landfill sites, but not estimated the life span of the metal or industrial landfills.
- The mill has proposed that 1 m of pulp and paper residual (sludge) be used as an impermeable layer over all the landfills. As per my letter dated August 16, 2001 the use of sludge as an impermeable layer is not authorized or approved. The mill will have to review its plan for an impermeable barrier on the various landfill sites. The criteria, established in the guidance document *Landfill Criteria for Municipal Solid Waste* dated June 1993, recommends the use of a material with a permeability of less than 1×10^{-8} cm/s. The native sand in the area does not meet the recommended criteria. The mill will have to review its plan for closure in view of the recommended criteria. Generally, where there is a deviation from the criteria, there must be justifying rationale presented for the alternative capping design.
- The use of a drainage layer (i.e. 0.5 m native sand) between an impermeable layer and top cover has been proposed. This may assist in minimizing water penetration into the site, but there is no mention of where or how collected water is channelled or gathered within the drainage layer. If the native sand is meant to make up part of the topsoil cover rather than a drainage layer, this should be made clear.
- The use of sludge as a final topsoil cover has also been proposed in the mill's plan. The use of sludge as a soil amendment has been authorized under certain conditions in the

Ministry of
Water, Land and Air
Protection

Pollution Prevention
Environment and Lands
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past (refer the Ministry's letter dated June 18, 2001). I am waiting for the results of the work that will be submitted by January 31, 2002 before endorsing similar land applications. However, please note that the use of sludge in past applications was as a *soil amendment*, the current plan does not mention the tilling or incorporation of sludge into the top layer of sand prior to seeding. Have the mill's plans changed based on the most current sludge application work authorized at the mill site?

- No statement or reference to the relevance of landfill gas monitoring was included in the closure plan for any of the landfill sites.
- No proposal for any groundwater monitoring at any of the sites is included. Groundwater monitoring is one method of verifying the impact of the landfills on the immediate area. For landfills where the risk of leachate generation is high, this tool should not be overlooked. Collection of baseline data for wells is extremely useful. I know that the mill independently has set up a series of wells around the site, perhaps some of these wells and data could be useful in establishing a need for further monitoring. Monitoring especially in areas like the sludge landfill area is incredibly important given the application of a separate cover material has not been required.

Given the above information, please review your closure plan activities at each of the landfills authorized under PR-04133. An updated closure plan shall be submitted to this office by January 31, 2002. Please refer to Section 8.1 in the document *Landfill Criteria for Municipal Solid Waste* for additional information. Should the mill's closure plans for the landfill differ significantly from the recommended criteria, supporting and detailed justification for the rationale for the deviations is necessary. Economic and technical comparisons between the use of natural and native caps versus synthetic materials may be useful. As per my letter concerning closure activities for the ash landfills, the use of modelling to numerically evaluate the expected performance of the landfills over the years and its potential impact on the surrounding receptors is a useful assessment tool.

Good site maintenance and closure methods, along with post-closure strategies are essential to minimizing long term problems. If you have any questions, please feel free to contact me or Maureen Bilawchuk.

Yours truly,



Del Reinheimer, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

:msb / enclosure "Landfill Criteria for Municipal Solid Waste"

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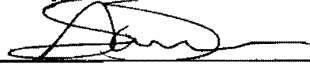
This is Exhibit "27"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 27



environmental



February 14th, 2003

3626 Pandora St., Vancouver, BC, Canada V5K 1X2

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BC Ministry of Water, Land and Air Protection
Attn: Maureen Bilawchuk
325 1011 Fourth Avenue
Prince George, BC
V2K 3H9

Re: Abitibi-Consolidated Old Ash Landfill Closure Plan (PR-15166)

Dear Ms. Bilawchuk:

Thank you and Larry Gardner for reviewing the draft closure plan for Abitibi-Consolidated, Mackenzie Paper Division's "Old Ash Landfill" operated under Permit PR-15166. We appreciate the thorough review and subsequent comments and suggestions to further clarify and where necessary, correct the landfill closure plan. Your patience in awaiting these changes is also very much appreciated. Please find enclosed the final closure plan.

This closure plan has been modified with reference to the comments and questions you provided in your November, 2002 correspondence. Specifically:

- The yard beautification project report has been extracted from this report and submitted as a separate document.
- Terminology related to leachate, exfiltrate and soil water has been clarified.
- Reporting requirements in the closure assessment have been specifically identified.
- A misunderstanding regarding the acceptance of previous closure plans has been corrected.
- Additional detail on the experimental design and evaluation are provided, including additional testing hydraulic conductivity testing on the compacted sludge layer.

In the implementation of this closure plan we look forward to our continued synergistic and amiable relationship in the assessment of this closure system. Through drawing upon the knowledge and experience of your staff together with SYLVIS, Sperling Hansen and Associates and Abitibi-Consolidated this closure plan provides the opportunity to increase our knowledge and understanding of closure systems while ensuring protection of the environment.

Yours truly,

M.D. (Mike) Van Ham, RPF, RPBio, PAg
Senior Environmental Scientist

SYLVIS ENVIRONMENTAL

encl: Abitibi-Consolidated Old Ash Landfill Closure Plan - PR-15166 February, 2003
cc: Sophie Mullen, Abitibi-Consolidated Mackenzie

Abitibi-Consolidated Old Ash Landfill Closure Plan

Ministry of Water, Land and Air Protection
Permit PR-15166

FEBRUARY 2003

Prepared for:

Abitibi-Consolidated Company of Canada
Mackenzie Region – Paper Mill
Bag 2800
Mackenzie, BC
V0J 2C0

Prepared by:

SYLVIS Environmental



growing with knowledge

1-800-778-1377

In
conjunction
with



SPERLING
HANSEN
ASSOCIATES

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DOCUMENT # 632-03

DECLARATION

SYLVIS has prepared a Landfill Closure Plan (Report) for the purpose of final closure of the old ash landfill operated under Ministry of Water, Land and Air Protection Permit PR-15166. This Report is limited to the specific site, objectives and activities for the closure of an ash landfill located at Abitibi Consolidated Mackenzie Region Paper Mill, Mackenzie, BC.

This Report sets forth all the assumptions and limiting conditions imposed by the terms of our engagement affecting the analysis, opinions and conclusions. The entire Report, including all conclusions and opinions, pertains only to the above-referenced property and is based on our present knowledge and information with respect to the current data for the property, as of September 1st, 2002. The findings in this Report may be subject to change as a result of the passage of time.

This Report provides the background and operational details for the closure of the old ash landfill operated under regulatory permit PR-15166. The closure of this landfill is related in operations to the closure of associated Abitibi Consolidated landfills operating under separate permit. The reader is referred to these affiliated closure plans for details related to the operations therein. This closure plan is, however, considered a unique and separate document providing the closure details for the old ash landfill. This document is copyrighted. Reproduction or publication in whole or in part without the written permission of SYLVIS is unlawful.

This Report is valid only if it bears the original signature of the author.

I, Michael Van Ham, RPF, RPBio, PAg confirm by signature and seal below that the information contained in this Report is true to the best of my knowledge.

Professional Seal

Signature: COPY

Date: _____

List of unit abbreviations used in this document:

ha – hectares
km – kilometers
m – meters
cm – centimeters
m³ – cubic meters
Mg – megagrams (equivalent to 1 tonne)
kg – kilograms
mg – milligrams
µg – micrograms
µg g⁻¹ – µg/g
ppm – parts per million

List of general abbreviations used in this document:

DL – District Lot
BC MoWLAP – British Columbia Ministry of Water, Land and Air Protection
BC MoELP – British Columbia Ministry of Environment, Lands and Parks
FFI – Finlay Forest Industries (now Abitibi-Consolidated Company of Canada)
OMRR – Organic Matter Recycling Regulation
TKN – Total Kjeldahl Nitrogen
MSW – Municipal Solid Waste
TLV – Threshold Limit value
HELP – Hydrologic Evaluation of Landfill Performance
As – Arsenic
U – Uranium
SWLEP – Special Waste Leachate Extraction Procedure
CH₄ – Methane
N – Nitrogen
O₂ – Oxygen
CO₂ – Carbon dioxide
CO – Carbon monoxide
H₂S – Hydrogen sulphide

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EXECUTIVE SUMMARY

Abitibi-Consolidated Company of Canada owns and operates an integrated thermomechanical pulp and paper mill located in Mackenzie, BC. Boiler ash and spent sand generated from the mill processes were discharged to a landfill, specifically referred to as the Old Ash Landfill from September, 1997 through November 2000. These discharges occurred under regulatory authorization in the form of permit PR-15166. The permit requires that a landfill closure plan be submitted to the regulatory agency for approval prior to implementation.

Several iterations of a closure plan for the Old Ash Landfill have been submitted to the regulatory agencies. This document is the final closure plan, and provides technical detail on the background, site characteristics, landfill development and closure requirements specific to the Old Ash Landfill.

This closure plan conforms to the BC Landfill Closure Criteria. In the development of the plan three different cover systems were assessed using hydrological modelling specific to landfill design and closure. Based upon this evaluation and experience elsewhere, a closure system employing a compacted sludge barrier layer is recommended in conjunction with a manufactured soil cover created from mill derived waste materials and sand. Supporting documentation is provided including references to existing closure systems elsewhere and specific demonstration and research completed at the mill site.

As this system of closure is relatively new in BC, the Old Ash Landfill is ideal to assess the performance of this closure system. This closure plan describes a monitoring program to assess the barrier system performance, and identifies a back-up contingency system. Through an assessment of the performance of the cover system over two years in conjunction with ongoing groundwater monitoring this plan will result in (1) the closure of the Old Ash Landfill and (2) an assessment of the closure efficacy.

The performance of the closure system will be reported to the regulatory agencies annually, and a comprehensive review completed in conjunction with an examination of the environmental monitoring program by December 31st (2005) as specified by the Permit.

Based upon the acceptance of this closure plan and performance of the closure system for the Old Ash Landfill similar closure plans will be developed for other landfills operated under permit at the Abitibi-Consolidated Company of Canada's Mackenzie mill site.

← change
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time?

1 Background

Abitibi-Consolidated Company of Canada (Mackenzie) discharges wastes under regulatory authorization to several landfills on the mill site. These landfills serve to contain ash, sludge and other industrial and metal refuse as generated in the operation of the Mill and associated on-site activities. The Paper Mill has two active authorizations: PR-04133 and PR-15166. Conditions of these authorizations require that a closure plan be prepared by the waste generator, accepted by the permitting agencies, and implemented by the waste generator for the discharges that have, or are currently occurring, each under regulatory authorization.

This plan is unique in that it addresses the closure of one small landfill location concurrent with an evaluation of the performance of this closure system proposed for use in the closure of other currently active landfills.

2 Introduction

Ash and spent sand from a fluidized bed boiler was discharged into an authorized landfill (referred to as the "old ash landfill") at Abitibi-Consolidated's Mackenzie paper mill from March 1997 through October 2000. As per the requirements of Section 4.7.3 of the authorizing Permit PR-15166 a closure plan must be submitted to the Regional Pollution Prevention Officer for approval. This document has been prepared to meet these requirements.

3 Closure Objectives

The old ash landfill will be closed in a manner that will reduce the impact of the landfill to the environment. Specifically the closure will isolate the discharged wastes from human or animal contact, minimize the potential for water infiltration and exfiltrate production, protect the cover from erosion and damage through the establishment of a self sustaining community of vegetation and return the landfill footprint to a terrestrial ecosystem equal to or surpassing the productivity of adjacent communities.

The closure objectives are consistent with the objectives of BC Ministry of Water, Land and Air Protection (BC MoWLAP) and Abitibi-Consolidated Company of Canada.

In addition to the closure objectives identified above, this closure plan includes a detailed assessment of the performance of the capping system to be employed at this site. This evaluation will validate the system performance prior to proposed implementation on larger landfills on the Abitibi-Consolidated property.

4 Ownership and Regulatory History

In March 1997, Findlay Forest Industries (FFI) commenced the operation of a fluidized bed boiler fuelled by hog fuel and sludge from the activated sludge treatment system. This operation resulted in the production of spent sand from the fluidized bed and ash. To prepare for the disposal of these wastes, the BC Ministry of Environment Lands and Parks (BC MoELP, now BC MoWLAP) issued an Approval (AR-14694) for this discharge. The Approval was in effect from September 1996 through October 1997. A copy of this Approval is found in Appendix A. Section 2.8 of this Approval required that a Closure Plan be

submitted to the Regional Waste Manager. The Approval specified the closure plan requirements in keeping with the Closure and Post Closure Criteria identified in the June 1993 BC MoELP Landfill Criteria for Municipal Solid Waste guidance document.

In February 1997, FFI submitted the first closure plan for this landfill. A copy of the closure plan and BC MoELP letter of receipt is found in Appendix B. In August 1997, FFI submitted an application for a Permit to continue the discharge of ash and spent sand to this landfill. In October 1997 FFI informed the BC MoELP that after the expiration of Approval AR-14694, and while the permitting process was ongoing, they would continue to stockpile ash and spent sand at this site with the intentions of either relocating it should a Permit not be issued, or seek permission to leave the waste in place upon receipt of the Permit.

Permit PR-15166 superseded Approval AR-14694 in March 1999, and was to expire in October 1999. The Permit was amended several times for the purpose of adding additional material to meet final contour objectives and extending the final closure date while a new landfill was being sited, permitted and built. The most current copy of the Permit (August 23rd, 2000 revision) is found in Appendix C. The most recent closure plan and regulatory correspondence is located in Appendix D.

5 Site Characteristics

An assessment of the application site characteristics includes the specific location, access, soils, water features (surface and groundwater) and vegetation.

5.1 Site Orientation

The Abitibi-Consolidated Company of Canada Mackenzie Paper Mill and old ash landfill are located on the southeast shore of Williston Reservoir approximately 5 km west of Mackenzie and 180 km northeast of Prince George. The Mill and landfill are located on a finger of land bounded to the west by the main body of Parsnip Reach and to the east and north by Dahl Lake, Chichouenyly Creek and Lake – all part of Williston Reservoir. The landfill is located approximately 1 km south and east of the Mill and approximately 200-400 m from Williston Lake. The BC MoWLAP site reference number for the landfill is E223785, and the legal description is Lot 12572, Cariboo Land District, British Columbia. A map, showing the location of the old ash landfill in relation to the mill is found in Figure 1.

The old ash landfill covers approximately 6600 m², averaging 60 m wide by 110 m long. Photographs of the old ash landfill taken in 2001 are found in Photograph 1 through Photograph 4.

5.2 Climate

Assessing accurate climate data is important for closure system design. Precipitation affects drainage, erosion, slope stability, and most importantly, the potential for creation of exfiltrate and possibly ash leachate. Climate data is required for hydrogeological performance assessment of the closure and cover system.

The average annual rainfall for Mackenzie is 37.5 cm, with the average snowfall of 3.37 m. In January and July, the mean daily maximum temperatures are -9.8 and 21.7 °C respectively. The mean daily minimum temperatures for January and July are -18.7 and 8.0 °C respectively. Mackenzie receives 1,800 hours of sunshine annually, has approximately 75 frost-free growing days and an average growing season from June 1st to August 31st.

The climate data used in landfill performance modelling has been adopted from the Canadian Climatic normals from 1961 to 1990 by Environment Canada. The stations selected from the normals are Mackenzie A and Prince George A. The normals present all temperature and precipitation data from Mackenzie station except for the months January and February. For those months, data has been interpolated from the Prince George A station. The climate data is presented in Table 1.

5.3 Soil

The soil under and around the old ash landfill was assessed during preliminary siting studies completed in 1995¹ from five boreholes. The solum consists of layers of sand with traces of silt to a depth of 12 m. A dense silt layer occurs under these sand strata. Figure 2 shows the approximate location of the five boreholes used to assess the solum. The associated drill logs providing detail on the soil and subsoil strata are provided in Appendix E.

5.4 Surface Water

Williston Reservoir is approximately 200 m northwest of the landfill. The next closest water feature is Chicouenyly Creek and is located approximately 1.5 km to the east.

5.5 Groundwater

The initial elevation of the old ash landfill site varied, but on average was approximately 696 m. The groundwater elevation in test wells established in the boreholes installed in 1995 was approximately 686 m, or 10 m below the soil surface. The surface elevation of Williston Reservoir is 671 m, or 25 m below the pre-existing soil contours. Agra Earth and Environmental (1995)¹ estimated the average time for the "particle transport" of water from the elevation of the ground water (686 m) to Williston Reservoir to take approximately 10.3 years assuming similar sub soil conditions (hydraulic conductivity of $3 \times 10^{-3} \text{ cm s}^{-1}$) and straight-line water movement to the Reservoir.

5.6 Vegetation

There is no record of the existing vegetation on the old ash landfill prior to development. From the vegetation growing adjacent to the landfill and based upon the soil characteristics pre landfill development the vegetation would have likely been a mature stand of *Pinus contorta* var. *latifolia* and *Picea engelmannii* x *glauca* as the dominant tree species with a small percentage of *Populus balsamifera* in the overstory. Similarly the understory plants likely consisted of *Amelanchier alnifolia*, *Shepherdia canadensis*, *Spiraea betulifolia*, *Rosa acicularis*, and *Actostaphylos uva-ursi*. Grass species are predominantly *Poa* spp. and *Agropyron trachycaulum*.

There is no vegetation growing on the site at present.

6 Landfill Development

Landfill siting and evaluation studies were completed in 1995 and 1996. An evaluation of the ash generated from the beehive burner on site and a comparison with similar ash products at other sites was completed through special waste leachate toxicity testing and

¹ Agra Earth and Environmental. 1995. Proposed Boller Ash Landfill. 4 pp.

trace element analysis². Based on these test results and the regulatory requirements and guidelines in effect at that time it was deemed that a leachate collection and liner were not required for the old ash landfill.

The first load of ash was placed in the old ash landfill in September 1997, and the last load deposited on November 21st, 2000.

In 1997 the regulatory agencies expressed concerns regarding the pH of the ash and the proximity of the landfill to Williston Reservoir. A request was made to assess the permeability of the ash, permeability of the soil and a trace element analysis and determination of the buffering capacity of the sand beneath and adjacent to the landfill. In a study completed by AGRA³ they identified that the ash in the landfill reacted with water to form a dense cemented material in some portions of the landfill. They completed three test pits into the landfill. The approximate location of these test pits is shown in Figure 3. A schematic diagram of the landfill constituents observed in these test pits is presented in Figure 4.

Cemented ash and alternating layers of cemented ash and sand were found in all the test holes within the landfill. The trace element concentration in the sand beneath the landfill and adjacent to the landfill was similar, with no increased concentration of arsenic (As) or uranium (U), which can occur under as a result of increased mobility under high pH conditions. All three sand samples were acidic and had little to no buffering capacity as expected from a soil texture resembling washed sand. This study confirmed that the ash undergoes hydration as it becomes wet, forming a dense mass that showed no signs of slaking. This study suggests that the ash would become harder and less permeable over time as a result of the "curing" processes, reducing the generation of landfill derived leachate.

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6.1 Waste Quality

The waste deposited in the old ash landfill was generated by the power boiler and is composed of power boiler ash and spent sand from the fluidized bed boiler. The boiler burns wood waste and, depending on the moisture content, dewatered sludge generating approximately 3-4 truckloads of ash per day. The power boiler generates two ash products – bottom ash (typically 10% by volume) and fly ash (typically 90% by volume). A particle size analysis of the combined ash material places 96.7 % as a sand fraction with only 3.3% as a silt. Spent sand is generated when the sand bed is changed in the power boiler and contributes approximately 75% of the waste deposited in the landfill.

Based on analysis the ash generated has been determined to be greater than 99% inorganic in composition as is composed primarily of oxides of calcium (CaO, 50%), magnesium (MgO, 24%), silica (SiO₂, 10%), iron (Fe₂O₃, 7%) and aluminum (Al₂O₃, 3%). The ash is typically 10-20% moisture by weight and is caustic in nature⁴.

² Agri Earth and Environmental. 1996. Boiler Ash Report, FFI Mackenzie BC. 13 pp.

³ Agri Earth and Environmental. 1997. Properties of Native Soils in an Ash Storage Area. 6 pp.

⁴ Agri Earth and Environmental. 1997. Ash Metals Assessment, FFI Boiler Ash, Paper Division, Mackenzie BC. 6 pp.

Section 4.3 of PR-15166 requires that a representative ash sample be collected once per annum while the landfill is operating and analyzed according to the special waste leachate extraction procedure (SWLEP). SWLEP test results typical of the ash placed in the old ash landfill are provided in Table 2.

In May 2001, an extensive ash characterization was completed in conjunction with an evaluation of the use of the ash in fabricated soil mixtures. The results of these analyses are found in Table 3 and Table 4. The use of this ash in the fabrication of a growing media is discussed further in Section 7.5.3.

6.2 Waste Quantity

From inception to closure it is estimated 29,873 m³ of ash and sand were deposited in the old ash landfill. During this period, the annual permitted volume of waste placed in the old ash landfill never exceeded the permit maximum. The volume of waste deposited each month, and yearly subtotals are found in Table 5. These estimates are based upon records of daily truckloads delivered to the landfill.

6.3 Waste Placement

The landfill was created by excavating a series of trenches into the native soil. Each trench was approximately 30 m long and 1.5 m deep. As the waste was backfilled and the level raised to that of the native soil the trench was extended. As the trenches were filled the operations at the landfill changed to facilitate closure. The ash and sand was unloaded into the middle of the landfill and was pushed downward to each end to form a peak in the middle sloping towards both the north and south. The western edge, closest to Williston Reservoir, was left covered with native sand and at angle of repose.

Native soil (sand) was used to cover the ash landfill periodically (every 20 days) and dust control through watering was completed as required.

6.4 Landfill Monitoring

While operational, weekly inspections were conducted of the ash landfill. Approved groundwater testing was completed as per the Permit requirements.

7 Landfill Closure Plan

7.1 Previous Closure Plans

In April 1999, FFI submitted another closure plan to the BC MoWLAP for consideration and acceptance for the old ash landfill under PR-15166. A copy of this closure plan is provided in Appendix D. This plan identified a cover of native sand over the landfill overlain by 30 cm of "mature" primary and secondary sludge to promote vegetation growth. In August, 1999 the BC MoWLAP requested clarification and additional information on four items. These items are:

- Confirmation of final closure contours
- Effectiveness of native sand as a barrier layer in final closure
- Use of sludge as a growing media
- Relevance and need for landfill gas monitoring

A copy of this correspondence is located with the permit in Appendix D. The current plan as presented in this document consolidates and supersedes the previously submitted plan dated April, 1999 (Appendix D), and specifically addresses the aforementioned items.

7.2 End Use Following Closure

The end use of the landfill following closure will be idle industrial land and possibly wildlife habitat. The closed landfill will be seeded with native grasses to establish a dense community of vegetation. A final soil cover of no less than 30 cm (as proposed below) over the landfill is not adequate to support tree establishment through to rotation, as such a dense cover of native grasses will minimize natural tree ingress and serve to out compete any seedlings that do germinate. The use of low growing native vegetation will minimize the potential for possible conflagration, reducing fine fuel loading. A - h.p.c

7.3 Final Grading, Contours and Slope Stability

Landfill slope contours are important in the stability of the slope and to ensure proper drainage.

7.3.1 Final Grading and Contours

The previous Closure Plan proposed grading the ash landfill to produce side slopes ranging from a minimum of 10% to a maximum of 15%. Filling at the landfill continued beyond 1999 through to November 2000. This resulted in new base contours, and therefore MoWLAP was concerned that the final contour plan would be different from that proposed in the 1999 Closure Plan. This is the case, and an updated final contour plan has been developed as shown in Figure 5.

The proposed final contours have been adjusted to suit contemporary site conditions. The landfill has some fairly steep slopes around its perimeter and a relatively flat top. It is therefore proposed to re-grade the site prior to placement of the final cover system.

The west perimeter slope, which is steepest, is to be cut back to a 33% (3H:1V) slope. The rest of the perimeter slopes will be graded at 25% (4H:1V). The excess material from re-grading will be placed on top of the landfill to create about a 10% slope. The top of the landfill will be graded from a central north-south ridge, with a 10% slope to the crest of the side slopes. The minimum top slope will be 5%. Figure 6 shows a cross-section of the landfill with the proposed slopes.

The Provincial Landfill Criteria specify a minimum landfill slope of 4% and a maximum slope of 33%. The proposed design is within these limits.

The proposed top slope of 10% is fairly shallow, but considered acceptable. Achieving a much steeper slope may not be possible without depositing additional ash or sand on top of the landfill. Also, minimal differential settlement within the landfill is anticipated which otherwise could reduce the final slope on the crest. By comparison, a municipal solid waste landfill would have increased settlement in the thicker central portion of the landfill. This would cause flattening of the final top slopes of a MSW landfill. In contrast, the ash tends to form a fairly solid mass, which would have nominal consolidation properties. As well, the landfill is shallow, with a total depth of only about 4 meters, which does not allow much total settlement. Another factor limiting future settlement is that the landfill has stabilized since it was last used in November 2000.

On the east side of the site the ash waste has been deposited very close to the surrounding trees. Thus, in that area and any other areas where the landfill encroaches on the forest, the waste will be pulled back and/or trees removed to provide enough space for the cover system.

7.3.2 Slope Stability

The stability of the final landfill slopes has been reviewed. The proposed maximum side slope of 33% is within the standard guidelines for a long-term stable slope. It is noted that the old ash landfill currently has stable side slopes that are greater than 33%.

The proposed final cover system consisting of a compacted sludge barrier layer, sand drainage layer and topsoil layer, will be stable on a maximum 33% slope. Refer to Section 7.5 on the evaluation and details on the cover system proposed.

7.4 Gas Generation Potential

In order to quantify the potential for gas generation from the ash landfill, SYLVIS conducted on-site gas monitoring on April 25th, 2002. While no assessment was made of the gas generation at the old ash landfill site, an assessment was completed at the new ash landfill, and results deemed portable to this location. A gas probe was inserted into the existing sand cover material on the new ash landfill. A photograph of the equipment used in the assessment is provided in Photograph 5. The results, presented in Table 6, indicate very low landfill gas values.

Typical gas from a MSW landfill has the following constituents:

Methane	55 %
Carbon monoxide	40%
Nitrogen	4.9%
Oxygen	0.1%

The sampling results show no methane (CH₄), a zero reading on the CH₄ LEL, and a high oxygen concentration (greater than 20%). Therefore, the gas from the new ash landfill is not at all like typical landfill gas from a MSW landfill. This result is not surprising given that the old ash waste is an inert residue from the fluidized bed boiler. Typical landfill gas is generated through the anaerobic decomposition of biodegradable matter. This material is not present in the old ash landfill.

The measured oxygen level more closely resembles that of ambient air that has an oxygen content of about 21%. This compares to the value for all the surface samples, while most of the sub-surface samples were below this level. All of the surface samples indicated no landfill gases, including methane, carbon monoxide (CO), and hydrogen sulfide (H₂S). This indicates that gases from the landfill are not migrating to the surface in quantities facilitating detection.

In the sub-surface samples, the H₂S and CO concentrations are higher than ambient air concentrations. H₂S is a hazardous gas that has a rotten egg type odour at a concentration of about 1 ppm. The allowable concentration for a working environment, the threshold limit value (TLV), is 10 ppm. Two of the four sub-surface samples indicated the presence of H₂S at concentrations of 1 ppm and 2 ppm. These values are below the TLV and accordingly do not pose an immediate health or environmental risk, but should continue to be monitored

periodically following closure. This is discussed under post closure gas monitoring in Section 8.3.

Carbon monoxide is another hazardous gas that can be toxic. It is colourless and odourless. Three of the nine samples recorded carbon monoxide, with one measurement at 50 ppm and two at 160 ppm. Regulatory limits in the US Clean Air Act set an 8 hour exposure limit of 9 ppm and a 4 hour limit of 35 ppm.

The EPA carbon monoxide emission standard for the fluidized bed combustion of MSW is an average value of 100 ppm over 4 hours. The CO values recorded were from within the sand cover layer of the new ash landfill, and may be associated with combustion exhaust gases from recently deposited materials.

7.5 Final Cover System Layers

Landfill closure is an important component in the operation of a modern landfill. A well-designed closure system provides the following benefits:

- Isolation of waste to prevent direct contact with humans and vectors.
- Minimization of infiltration and exfiltrate production through diversion of run-off.
- Prevention of any exfiltrate breakouts at landfill toe and on side slopes.
- Protection of the cover from erosion through maintenance of a sustainable vegetative community.
- Potential for redevelopment of the landfill for some beneficial end use.

In developing the preliminary closure plan for the Abitibi-Consolidated old ash landfill that will achieve each of these objectives, particular consideration was given to incorporating construction materials from local sources, including on-site sand for drainage and sludge for the barrier layer (refer to Section 7.5.1).

Three final cover design concepts were evaluated as part of this closure plan. The first system reflects the "Sand Cover System" originally proposed by Abitibi-Consolidated. This cover system consists of 300 mm of intermediate cover of local sand, followed by 1,000 mm of sand cover and then 300 mm of topsoil.
10 mm of clay
100 mm of topsoil

The second design option is a "Compacted Sludge Cover System". Compacted sludge use as a barrier layer in landfill closure has been successful in many landfill closures and this is described in greater detail in section 7.5.1 below. The most important characteristic of the sludge is hydraulic conductivity. The sludge is produced by Abitibi-Consolidated and was tested for hydraulic conductivity to assess its efficacy as the barrier layer. The compacted sludge was tested in the Golder Associates' laboratory and a hydraulic conductivity of $7 \times 10^{-7} \text{ cm s}^{-1}$ was achieved. A copy of the analysis results is found in Appendix F. This cover system consists of 300 mm of intermediate sand cover followed by 1,000 mm of compacted sludge, 300 mm of drainage sand and 300 mm of topsoil.

The third cover design consists of the MoWLAP minimum standard for a cover system with a drainage layer. The regulation stipulates that a final cover must consist of a 1,000 mm thick compacted clay barrier with a minimum hydraulic conductivity of $1 \times 10^{-6} \text{ cm s}^{-1}$. This system consists of a 300 mm sand intermediate cover followed by a 1,000 mm compacted clay

barrier layer, 300 mm sand drainage layer and a topsoil layer. A schematic comparison of these three cover systems is presented in Figure 7.

These three systems were identified for HELP model evaluation as they represent the range of closure options available using natural materials (non-synthetic). The use of sand alone as a cover system is not a generally accepted closure method, but assessed as similar to the existing conditions. The clay system is the MoWLAP minimum "standard" cover system. The compacted sludge system was evaluated and compared with these systems. *Geosynthetic barrier layer systems are not considered in this report.* While membranes such as PVC (polyvinyl chloride), GCL (geosynthetic clay liner) or LLDPE (linear low density polyethylene) are excellent barrier layers they are very expensive, labour intensive and are not in keeping with the objective of using native or natural materials where possible in an effort to re-use local materials.

7.5.1 Barrier Layer

A low permeability layer forms the primary barrier layer of an effective cover system. To achieve this low level of permeability, soils or sludge must contain a significant percentage of very small sized particles, must be well compacted, and have an *in-situ* hydraulic conductivity of $1 \times 10^{-6} \text{ cm s}^{-1}$ or less. In this closure plan three barrier layers are evaluated. Specifically, local sand, industry produced sludge and a clay barrier. The mean hydraulic conductivity of local sand is $1.3 \times 10^{-2} \text{ cm s}^{-1}$. The proposed compacted sludge layer has a hydraulic conductivity of $7 \times 10^{-7} \text{ cm s}^{-1}$ and hydraulic conductivity of the compacted clay barrier has a hydraulic conductivity of $1 \times 10^{-6} \text{ cm s}^{-1}$. *compacted*

Pulp sludge has been used in the fabrication of soil products for use in reclamation and landfill closure throughout the Pacific Northwest, and additional information is provided in Section 7.5.3. Relatively new in BC is the use of compacted paper mill sludge as a hydraulic barrier in the landfill cover design. WWTP residuals from the pulp and paper industry have been shown to possess engineering properties that are similar to clays. NCASI completed an extensive laboratory research and eight year long field study to evaluate the use of mill sludges as an alternative to clay⁵. Results of these studies indicated that the hydraulic performance of barrier layers constructed of paper mill residuals will be as good as or better than the performance barriers constructed with compacted clay. While the use of compacted sludge as a barrier system is relatively new, the test results indicate that the sludge barrier layers underwent no deterioration during their service life.

⁵ National Council of the Paper Industry for Air and Stream Improvement. 1989. Experience with and laboratory studies of the use of pulp and paper mill solid wastes in landfill cover systems. Technical Bulletin # 559, Research Triangle Park NC.

National Council of the Paper Industry for Air and Stream Improvement. 1990. A field-scale study of the use of paper industry sludges in landfill cover systems: first progress report. Technical Bulletin # 595, Research Triangle Park NC.

National Council of the Paper Industry for Air and Stream Improvement. 1997. A field-scale study of the use of paper industry sludges in landfill cover systems: final report. Technical Bulletin # 750, Research Triangle Park NC.

Other researchers have studied additional geotechnical properties of pulpmill sludge to characterize their use in hydraulic barriers.⁶ The shear strength is important in characteristics associated with slope stability and the ability of the sludge to support heavy equipment. Sludge with sufficiently high solids content, or sludge ash mixtures generally have shear strengths equal to or greater than clay, although results can vary depending on the constituent make up of the residual. Plasticity Index (Atterberg limits), compaction, density, and consolidation have also been performed⁷, again demonstrating that sludge can be used to construct effective, long term hydraulic barriers.

In cold weather climates such as Mackenzie, the deleterious effects of multiple freeze thaw cycles on a compacted clay barrier is of concern. As the compacted clay cover temperature lowers, the water in the clay freezes to form ice lenses that expand and cause microcracks in the barrier layer. Results of field and laboratory freeze thaw tests on three different sludges indicated that multiple freeze thaw cycles may have a less significant effect on the formation of these microcracks⁸.

Additional research has shown that unlike clay, drying sludges to an optimum moisture content based on moisture content and hydraulic conductivity relationships resulted in approximately a two fold increase in hydraulic conductivity. Accordingly, paper mill sludge used as hydraulic barrier material should be placed at a typical "as-received" water content⁹.

The Mead Publishing Paper Division closed their industrial landfill in Escanaba, MI by using compacted sludge as a barrier layer in 1998¹⁰. Prior to using compacted sludge over the entire landfill, they evaluated the practical and performance considerations on a small test plot area. They placed the sludge on a 20% slope in three lifts to a total depth of 32 inches – slightly less than a meter in depth. Each lift was placed with low-ground pressure bulldozers and compacted prior to the next lift. After compaction they completed a hydraulic conductivity test to ensure performance requirements were met or exceeded – which they were. Following the test area the Mill proceeded in closing the entire landfill with a cover system composed of a topsoil layer to support vegetation growth and a lower drainage layer of sand over a compacted sludge layer. With the exception of the Mead Publishing Paper landfill requiring a gas collection system, this is identical to that proposed for use in closure

⁶ Kraus, J.F., C.H. Benson, X. Wang. 1997. Geotechnical properties of three paper mill sludges. NCASI Special Report # 97-12, Research Triangle Park, NC.

⁷ Zimmie, T.F., H. Moo-Young, K. LaPlante. 1993. The use of waste paper sludge for landfill cover material in Green 93, Waste disposal by landfill an International symposium on geotechnics related to the environment. Bolton Institute, Bolton UK.

⁸ National Council of the Paper Industry for Air and Stream Improvement. 1998. Effect of freeze thaw on the hydraulic conductivity of three paper mill sludges: Laboratory and field evaluation. Technical Bulletin #759. Research Triangle Park NC.

⁹ Zimmie, T.F., H. Moo-Young, K. LaPlante. 1993. The use of waste paper sludge for landfill cover material in Green 93, Waste disposal by landfill an International symposium on geotechnics related to the environment. Bolton Institute, Bolton UK.

¹⁰ Malmstead, M.J., D.F. Bonistall, C. Van Malby. 1999. Closure of a nine acre industrial landfill using pulp and paper mill residuals. TAPPI Journal 82(2): 153-160.

McGee, S., M. Taylor, R.K. Nilsson. 1997. Closure of a 22 acre industrial landfill using paper industry sludge in NCASI Special Report 97-12, Triangle Park NC.

of the old ash landfill. Post closure monitoring of the leachate production rates in the Mead publishing landfill have shown that the cover system effectively limits infiltration into the landfill, and thus associated leachate production.

At the Mead Publishing Landfill they also assessed the quality of the storm water running down and out of the sand drainage layer to assess if the compacted sludge layer was having any effect on water quality. Five different samples were collected after storm events and analyzed for trace elements, forms of nitrogen, pH, conductance and TOC. These were compared to samples collected from an adjacent landfill closed using a PVC barrier. There were no significant differences in the water quality between the two landfill closure systems.

There are numerous references and supporting information for the use of compacted paper mill sludge as a barrier layer. One such example is included in Appendix G. In the closure of the old ash landfill it is proposed that compacted sludge is used as a barrier layer, and the performance of this barrier layer assessed through an on site evaluation of cover performance. This evaluation is further described in Section 8.1.1.

7.5.2 Drainage Layer

The purpose of a drainage layer on top of the barrier is to quickly convey water passing through the topsoil horizon down slope to the landfill toe ditch or other surface water management system. Without an effective drainage layer, the topsoil will become saturated during heavy rainfall events. This condition leads to excessive head build-up on the barrier layer and can lead to erosion and slumping problems on side slopes, and increased infiltration and exfiltrate production. Use of a high permeability topsoil medium could be considered, however, a high permeability topsoil layer would not achieve the same performance as a sand drainage layer and would likely become saturated during extreme precipitation events. It is therefore recommended that available on-site sand be used for the drainage layer. This drainage layer is included in all three cover systems assessed. The depth of the drainage layer for all three systems is 30 cm.

7.5.3 Growing Media Layer

The topsoil or growing media layer will consist of a fabricated soil product containing sand, pulpmill sludge, wood waste and ash. This soil product will be designed to meet the fertility and drainage requirements of the landfill cover system identified. The trace element concentration of the soil product will be equal to or better than the most stringent requirements of the BC Organic Matter Recycling Regulation, which derives their maximum soil trace element concentration limits from the Contaminated Sites Regulation.

The fabricated soil will be free draining yet have sufficient organic matter and plant essential nutrients to allow for the establishment of a sustainable community of vegetation. Supporting information for the fabricated soil design can be found in associated BC MoWLAP submissions¹¹.

¹¹ SYLVIS environmental, February 2003, Abitibi Consolidated Mill Site Beautification and Soil Fabrication, 26 pp.

7.5.4 Final Cover Performance - HELP Modeling

The three final cover designs were evaluated using the Hydrologic Evaluation of Landfill Performance (HELP) model distributed by the US EPA. HELP is a quasi two-dimensional model that uses precipitation and temperature data specific to a given site to predict the various components of the landfill water balance including runoff, evapotranspiration, internal drainage and exfiltrate. For this study, the three final cover profiles were assessed using a 10-year simulation based on climate data for Mackenzie and climate patterns from the Spokane area in Washington State. The climate pattern values are corrected to reflect the temperature and precipitation experienced in the Mackenzie area. An annual precipitation rate of 625 mm year⁻¹ was adopted based on interpolated data between the Mackenzie and Prince George climate stations. The HELP model results are summarized in Table 7 and Figure 8 shows the percentage break down of the water balance for all three options. The detailed output of the HELP modelling is presented in Appendix H.

The scenarios associated with the Sand Cover design suggests that approximately 125 mm (20%) of precipitation would infiltrate through the cover and possibly generate leachate. The remainder of the water balance includes run-off (124 mm or 20% of precipitation) and evapotranspiration (372 mm or 60% of precipitation).

The Sludge Cover scenario yields a water balance that includes 25 mm of leachate (4% of precipitation) and 363 mm of evapotranspiration (59% of precipitation). The remainder of the water balance includes 137 mm as run off (22%) and 94 mm (15%) of clean drainage intercepted by the internal sand layer.

The third scenario was the MoWLAP minimum standard cover system. The model suggests that 80 mm (13% of precipitation) of leachate would be generated. Under this scenario, 363 mm (59%) of precipitation would return to the atmosphere through evapotranspiration, 137 mm (22%) would runoff the landfill and 39 mm (9%) would be intercepted as internal drainage above the clay barrier.

The results of the HELP modelling suggest that a sludge cover system would provide the best performance in terms of rainfall diversion and minimizing leachate production. The modelling predicts only 4% of the precipitation becoming leachate, versus 13% with the clay cover and 20% with the sand cover. It also has the added benefit of utilizing an on-site waste material in a beneficial manner.

The compacted sludge cover system is recommended for closure of the old ash landfill. The sludge will be placed over the sand layer in three lifts, and compacted after each lift. Samples will be collected of the final compacted sludge *in-situ* and tested for hydraulic conductivity. In preparation for the re-contouring, sand and sludge placement and compaction documentation would be prepared identifying the operating procedures. This plan will contain the quality assurance/quality control measures in directing contractor activities and ensuring the correct slopes, material placement and compaction requirements are obtained.

7.6 Signage and Notification

Signs will be posted at the perimeter of the closed old ash landfill. These signs will inform persons of the presence of a closed landfill and provide contact names and numbers for additional information.

7.7 Water Diversion and Drainage

Effective surface water diversion and drainage controls are critical in minimizing the production of exfiltrate. The proposed cover system and slopes, including the compacted sludge barrier layer, drainage layer, and topsoil layer, will all work in shedding water and promoting evapotranspiration. The proposed slopes will allow water to flow off the landfill surface or flow through the sand drainage layer to the perimeter of the landfill. Around the perimeter of the landfill itself the land will be gently graded away from the landfill toe. This will allow the diverted water to flow away from the landfill and seep into the surrounding native sands outside of the landfill footprint. This may require clearing several trees in the eastern portion of the landfill.

7.8 Toe Berm Design

A toe berm will be provided at the base of the side slopes to separate exfiltrate and run-off. This is critical to the implementation of an effective final cover system. Figure 6 presents the toe berm detail. The sand drainage layer will end in a more stable 25 to 50 mm crush toe berm. This will help to stabilize the base of the topsoil and sand layers, while permitting effective seepage out of the sand drainage layer.

The barrier layer overlaps the surrounding ground surface at the perimeter so that the drainage is moved away from the landfill edge. This will minimize seepage along the interface between the landfill and the native soils.

7.9 Leachate Management

Leachate management at the old ash landfill will be based on the construction of an effective landfill cap that minimizes leachate generation. As it is an unlined landfill, leachate interception is not practical. No further controls are deemed necessary. The minimal amount of leachate produced will seep into the underlying native sands. It is noted that the ash tends to solidify in time and this is expected to further reduce the amount of leachate generated. The proposed compacted sludge barrier layer is more impermeable than the minimum MoWLAP cover system, thus leachate generation will be minimized.

7.10 Vegetation Establishment

Upon placement of the fabricated growing media layer the entire landfill area will be seeded with a low growing perennial grass cover consisting of fescues and clover species. Native grass species will be used if a local seed source is available, and the use of fall rye avoided. Depending on closure schedule and soil fabrication and placement seeding will occur in the spring. The site is small enough to facilitate hand seeding, and it is thought that an initial seeding, followed by an over-seeding the following spring will be required to achieve a dense cover of vegetation. A seed mixture similar to that used in previous trials on fabricated soil products will be used. An example of that seed mixture is provided below:

20% Creeping Red Fescue	20% Italian Ryegrass
23% Perennial Ryegrass	15% Tall Fescue
5% Orchardgrass	5% Timothy
10% Red Clover	2% White Clover

7.11 Rodent and Nuisance Wildlife

Rodent and nuisance wildlife control on the closed landfill should be driven by actual need. If it is observed that gophers or other burrowing animals become established and that these animals are burrowing through the barrier layer, then their populations will have to be controlled. Regular inspection of the landfill surface is recommended to monitor animal impacts. The lack of putrescent materials in the landfill minimizes vector attractiveness and associated wildlife problems.

8 Post Closure Activities

Post closure activities include an assessment of the performance of the compacted sludge cover system, fabricated soil nutrient analysis, vegetation assessments, groundwater and landfill gas assessments and physical inspections.

8.1 Final Cover System – Assessment of Performance

While the use of compacted sludge has been used elsewhere with success in the closure of landfills its use is relatively new in BC. The use of compacted sludge at this relatively small old ash landfill provides an opportunity to assess the efficacy of the barrier system, and the fabricated growing media as required.

8.1.1 Cover System Performance Comparison

Given that the barrier layer and final cover is a relatively unique system to this site, it is proposed to conduct an assessment of its performance prior to the implementation of this system in other closure operations at the Abitibi Consolidated mill site. This will be used to both validate the effectiveness of the cover system, as well as promote the application of this system on other landfills at the Abitibi site.

The objective of the assessment will be to determine if there is any difference in the quantity and quality of the exfiltrate that is collected under different closure options. The effectiveness of the barrier systems in preventing water movement into the landfill contents will be compared. The assessment will compare the compacted sludge system with a clay barrier layer.

The final cover system performance monitoring will be based on actual measurements of seepage through the compacted sludge and clay cover systems. This will be completed through the construction of PVC lined test pads on the old landfill or adjacent area suitable for the test pad construction. Each of the compacted sludge and clay barrier layers will be examined. The sand as a barrier system is not included in the test pad treatments as this is not an accepted closure system. The size of each test pad will be determined, in part on the HELP model estimated exfiltrate production and also based upon site logistics. The remaining portion of the old ash landfill (that area not used in this assessment) would be closed in accordance with this closure plan – identical to that of the compacted sludge barrier test pad.

comparing 2 tests
more info. required

Figure 9 presents a schematic representation of one test pad, presented at 15m by 15m in size. As discussed previously, the actual size will be determined based upon hydraulic conductivity, HELP modelling and site logistics. The liner would be placed on the graded landfill slope, covered by a seepage collection layer, and then covered by the compacted sludge barrier layer or clay layer (depending on the pad) and then the fabricated topsoil. Any exfiltrate moving through the cover system would collect on the PVC liner prior to moving through the ash and flow to a perforated collection pipe at the base of the liner. The perforated pipe would be placed in a lined trough. The seepage would be piped through a sealed opening in the liner through the wall and piped to a precipitation gauge for measurement. It would then flow to a storage container for sampling.

Does
clay
layer
exist?

space
between
test's
or
separate
pools.
so that
one test
does not
affect the
other?

A precipitation gauge is proposed for measuring the seepage through each test pad. This type of gauge is able to accurately measure small amounts of water and can be connected to a data logger for easy data retrieval. A second precipitation gauge would be installed at the mill site. This will facilitate a direct correlation regarding the amount of rainfall and seepage through the cover system. The rainfall data will also be beneficial for all future planning and design of landfill closures at the mill site.

It is possible that the fabricated growing media layer and associated vegetation will effectively store and transpire a large portion of the rainfall, limiting the ability to compare the effectiveness of the two different barrier systems. Previous research designed to assess possible effects of the fabricated growing media on soil water as collected from monolith lysimeters failed to produce a water sample under natural conditions. Simulated intense and severe one-time storm events were required to fully saturate the solum and obtain gravimetric water samples.

It is also possible that given logistical site constraints, and to facilitate a statistically meaningful comparison of barrier performance that the test pads would need to be re-created at a separate location. Access to electricity, a supply of additional water and a "more controlled" operational research environment may facilitate a more rigorous and cost effective comparison.

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The assessment of the hydraulic conductivity of the compacted sludge was determined upon a single sample analyzed using a modified version of method ASTM D2434-88 (1993). Accurate determination of the saturated hydraulic conductivity is important to ensure that a compacted sludge barrier layer meets the appropriate guidelines. Laboratory determination of the hydraulic conductivity must be representative of field installation and compaction operations. Prior to any site work being conducted replicate samples of sludge representative of the consistency and moisture content of the sludge to be used at the old ash landfill will be assessed for constant head hydraulic conductivity. One sludge sample will be analyzed for saturated hydraulic conductivity using the triaxial methodology (ASTM D5084). These measurements will be included in a detailed experimental design document as described in the following section.

These possibilities and their contingencies will be included in the layout and experimental design of barrier comparison.

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8.1.2 Cover System Performance – Design and Evaluation

Each barrier system will be designed to allow for a temporal comparison using a simple t-test of significant difference. Exfiltrate volumes will be collected on a routine basis and these volumes treated as measurement units within a given time period, allowing for the calculation of a variation and thus a statistical comparison. If natural precipitation fails to allow for a comparison of the barrier performance, a comparison between replicated individual irrigation events will be conducted.

The test pads will be monitored for a two-year period. This will include a determination of the *in situ* hydraulic conductivity of the barrier layer, collection of seepage volume data from the test pads and an assessment of water quality. A data logger attached to the precipitation gauge can be used to quantify water volume, with the data downloaded at a frequency based on the memory capacity of the data logger. A separate rainfall precipitation gauge with its own data logger will concurrently be downloaded. Each winter the monitoring data will be processed to determine the amount of seepage through the compacted sludge barrier layer and compared to the rainfall data.

Water samples collected in the storage container will be analyzed for forms of nitrogen, phosphorus, carbon, trace elements, pH, and conductivity. Water volume will be determined.

The long-term assessment of the compacted sludge barrier will be completed through groundwater monitoring and periodic excavations to the barrier layer.

Upon approval of the closure plan and prior to the start of re-contouring and materials placement an experimental design and evaluation document will be authored. This document will summarize the research questions, experimental design, location, sample collection frequency, analytes and evaluation criteria. It will contain the results of the sludge hydraulic conductivity testing and the design criteria and specifications for the fabrication of the growing media using ash, sludge, wood waste and sand. This document will be submitted to the BC MoWLP for comment and suggestion prior to implementation. Having the actual experimental design and statistical methodology in a stand-alone document allows for a degree of flexibility required in field research experiments.

8.1.3 Contingency Cover System

Should the compacted sludge cover system not perform to a standard equal to or greater than the standard clay barrier system then a contingency cover system would be installed. The contingency cover system would be the Landfill Criteria 1 meter of low permeability soil (clay-type) or geomembrane cover system (PVC or HDPE). This would be assessed as required.

comparison
to
Neoprene?

This contingency plan can be implemented as required if there are identified problems in the integrity and function of the cover.

8.2 Groundwater Monitoring

Following closure, groundwater wells TH1 and TH2 will be monitored as per the permit requirements for the next two years – concurrent with the evaluation of the cap performance. This includes a quarterly assessment of pH and conductivity and a twice-annual assessment

of trace metals as identified in the permit. For the purposes of monitoring the landfill closure system performance arsenic and uranium will be added to the analytes for these specific wells.

The permit requires a summary report to be submitted on the environmental monitoring no later than December 31st, 2005. Following a review of the water quality and cover performance data the requirement for ongoing monitoring can be determined in cooperation with the regulatory agencies.

8.3 Gas Monitoring

As appreciable CO levels were measured, although only at a third of the sample locations, (see Section 7.4) ongoing CO monitoring should be conducted with particular attention to ambient air concentrations over the ash landfill. In conjunction with monitoring the performance to the cover system a third party gas assessment would be completed once each year for two years following closure. The results of these assessments would be included in the annual reports (see below Section 9).

8.4 Physical Inspection and Maintenance

Visual inspection and maintenance of the closed landfill will be required for an extended period into the future to ensure that cover system does not degrade, and to confirm that leachate and landfill gas are not negatively impacting on the surrounding environment. A post closure program for landfill inspection and maintenance will include:

- Maintaining vegetation on the cover system as required,
- Maintaining surface water diversion away from the landfill,
- Inspection for erosion and slope stability,
- Inspection for exfiltrate seeps,
- Inspection for wildlife damage, and
- Continued monitoring of all identified environmental parameters including landfill gas and groundwater (as per above).

It is recommended that this program be conducted in the spring following snow melt, mid summer and in the early fall.

In addition, for the first two years, monthly inspections of the test pad monitoring equipment would be conducted. This is to ensure that all the equipment is functioning properly and that the test data will be valid.

9 Reporting

9.1 Compacted Sludge Final Cover System Performance

Within six months of the completion of the closure of the old ash landfill a report will be prepared for the BC MoWLAP. This report will detail the activities related to the closure, including the re-grading, placement of the sand and compacted sludge layers, fabrication of the growing media and placement and seeding of this soil product on the landfill. This report will include the results of the hydraulic conductivity/penetrometer testing of the compacted sludge barrier layer and soil trace element and nutrient analyses of the final soil cover.

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In addition, annual reports will be prepared. These reports will be submitted by December 31st of each reporting year. The second and final report will synthesize the results of the landfill test pad for cover evaluation. This report will provide details on the quantity and quality of exfiltrate produced and the overall performance of the cover system. This report will coincide with the groundwater monitoring reporting requirement at which time the requirement for ongoing monitoring assessed.

10 Schedule of Activities

A schedule of activities is proposed below. This schedule does not include routine ground water monitoring as required under permit.

Feb. 2003	Work with MoWLAP to obtain acceptance of closure plan for Old Ash Landfill (PR-15166)
Mar. 2003	Additional Ksat testing, Experimental design and review, QA/QC standards for Installation ✓
Apr. 2003	Re-grade landfill to final contours. Install test pad and collection system. Apply first sand layer.
May – June 2003	Apply and compact sludge, mix fabricated soil
June 2003	Apply sand drainage layer and crush for toe slopes
June 2003	Apply fabricated soil and seed
July 2003	Assess landfill cover, author installation report to BC MoWLAP
Sept. 2003	Assess cover performance
Oct. 2003	Author cover performance report.
May 2004	Assess cover performance
July 2004	Assess cover performance
Oct. 2004	Assess cover performance, author cover performance report.
May 2005	Assess cover performance
July 2005	Assess cover performance
Oct. 2005	Assess cover performance, author final performance report.

11 Estimated Costs

The cost estimates for the Sand Cover System, the Sludge Cover System are similar, whereas the Clay Cover System is almost 5 times more expensive. This is mainly due to the cost of importing clay.

The Sand Cover and Sludge Cover Systems are similar in cost, but given the superior performance of the Sludge Cover System and that it beneficially recycles a waste product, it is recommended for final closure.

12 Tables

Table 1: Climate norms for Mackenzie and Prince George, BC.

Months	Mackenzie Temperature (°C)	Prince George Temperature (°C)		Prince George Precipitation (mm)
January	-11.1	-9.9	55.1	54.4
February	-6.6	-5.4	36.1	35.0
March	-3.4	-0.7	42.6	34.3
April	2.9	4.7	22.8	28.3
May	8.3	9.4	43.7	61.7
June	12.5	13.1	61.8	64.5
July	14.9	15.3	63.6	60.0
August	14.0	14.6	61.0	61.2
September	9.0	9.8	49.4	59.3
October	3.6	4.8	62.3	59.4
November	-4.6	-3.1	65.1	52.7
December	-10.1	-8.4	69.7	53.8

Table 2: Typical Ash SWEP test.

Paraméter	Ash	Units
Physical Tests		
Molsture	11.4	%
PH	10.1	-
Initial SWEP pH	10.9	-
Final SWEP pH	5.31	-
Extractable Metals		
Arsenic	<0.2	mg L ⁻¹
Barium	1.68	mg L ⁻¹
Boron	0.3	mg L ⁻¹
Cadmium	<0.01	mg L ⁻¹
Chromium	<0.01	mg L ⁻¹
Copper	<0.01	mg L ⁻¹
Lead	<0.05	mg L ⁻¹
Mercury	<0.00005	mg L ⁻¹
Selenium	<0.2	mg L ⁻¹
Silver	<0.01	mg L ⁻¹
Zinc	0.24	mg L ⁻¹

Abitibi Consolidated collected the sample on September 14th, 2001 and directed ALS labs to conduct the analysis.

Table 3: Ash Nutrient Analysis.

Parameter	Ash	Units
Nitrogen Total	0.03	%
Ammonium - N	0.95	$\mu\text{g g}^{-1}$
Nitrate - N	9	$\mu\text{g g}^{-1}$
Boron	5.23	$\mu\text{g g}^{-1}$
Calcium	17200	$\mu\text{g g}^{-1}$
Copper	1.27	$\mu\text{g g}^{-1}$
Iron	33	$\mu\text{g g}^{-1}$
Magnesium	934	$\mu\text{g g}^{-1}$
Manganese	0.0	$\mu\text{g g}^{-1}$
Phosphorus	59	$\mu\text{g g}^{-1}$
Potassium	>600	$\mu\text{g g}^{-1}$
Sodium	654	$\mu\text{g g}^{-1}$
Sulphate-S	>20	$\mu\text{g g}^{-1}$
Zinc	3.36	$\mu\text{g g}^{-1}$
C:N Ratio	110	-
Carbon Total Organic	2.74	%
Cation Exchange Capacity	7.95	meq 100g ⁻¹
Organic Matter	5.49	%
Bulk Density	1.11	g mL ⁻¹
Organic Matter (heated)	3.9	%
Moisture Wet Weight	20.6	%
Conductivity	54.9	dS m ⁻¹
pH	12.8	-
Calcium Carbonate Equivalent	16.7	%

The sample was a composite of 5 discrete subsamples collected on May 9th, 2001. Analysis completed by Norwest Labs.

Table 4: Ash Trace Element Analysis.

Parameter	Ash	Units
Aluminum	1960	$\mu\text{g g}^{-1}$
Antimony	< 10	$\mu\text{g g}^{-1}$
Arsenic	2.7	$\mu\text{g g}^{-1}$
Barium	3	$\mu\text{g g}^{-1}$
Beryllium	< 1	$\mu\text{g g}^{-1}$
Boron	2	$\mu\text{g g}^{-1}$
Cadmium	4.1	$\mu\text{g g}^{-1}$
Calcium	285	$\mu\text{g g}^{-1}$
Chromium	9	$\mu\text{g g}^{-1}$
Cobalt	< 1	$\mu\text{g g}^{-1}$
Copper	8	$\mu\text{g g}^{-1}$
Iron	115	$\mu\text{g g}^{-1}$
Lead	3	$\mu\text{g g}^{-1}$
Magnesium	169	$\mu\text{g g}^{-1}$
Manganese	2	$\mu\text{g g}^{-1}$
Mercury	0.005	$\mu\text{g g}^{-1}$
Molybdenum	4	$\mu\text{g g}^{-1}$
Nickel	3	$\mu\text{g g}^{-1}$
Phosphorus	1300	$\mu\text{g g}^{-1}$
Selenium	0.4	$\mu\text{g g}^{-1}$
Silver	< 2	$\mu\text{g g}^{-1}$
Sodium	< 5	$\mu\text{g g}^{-1}$
Strontium	2	$\mu\text{g g}^{-1}$
Tin	< 5	$\mu\text{g g}^{-1}$
Titanium	2	$\mu\text{g g}^{-1}$
Vanadium	< 1	$\mu\text{g g}^{-1}$
Zinc	6	$\mu\text{g g}^{-1}$

The sample was a composite of 5 discrete subsamples collected on May 9th, 2001. Analysis completed by CANTEST Ltd.

All concentrations reported on a total dry weight basis.

Table 5: Waste Volume Deposited Into the Old Ash Landfill by Month and Year of Operation.

Date		Waste Volume Deposited (m ³)
1997	September	252
	October	407
	November	721
	December	623
	<i>Subtotal</i>	2,003
1998	January	748
	February	892
	March	1078
	April	1068
	May	715
	June	803
	July	1084
	August	973
	September	949
	October	574
	November	1219
	December	481
	<i>Subtotal</i>	10,584
1999	January	780
	February	539
	March	709
	April	363

Date		Waste Volume Deposited (m ³)
	May	387
	June	715
	July	539
	August	792
	September	627
	October	879
	November	803
2000	December	856
	<i>Subtotal</i>	7,989
	January	645
	February	674
	March	753
	April	621
	May	844
	June	821
	July	838
	August	1,108
	September	1,260
	October	959
	November	774
	<i>Subtotal</i>	9,297
Total		29,873

Table 6: Landfill Gas Generation Assessment Results.

Parameter	Sample Code								
	1	2	3	4	5	6	7	8	9
CH ₄ (% vol.)	0	0	0	0	0	0	0	0	0
CH ₄ LEL	0	0	0	0	0	0	0	0	0
O ₂ (% vol.)	20.9	20.9	20.9	20.9	20.9	19.2	20.9	20.6	20.2
CO (ppm)	0	0	0	0	0	160	0	50	160
H ₂ S (ppm)	0	0	0	0	0	0	0	2	1

CH₄ is methane.

LEL is Lower Explosive Limit (5% for methane).

O₂ is oxygen.

CO is carbon monoxide.

H₂S is hydrogen sulfide.

Sample Codes:

1. surface; at ash interface lower pile; not compacted
2. surface; top of ash landfill; not compacted
3. surface; top of ash landfill; compacted
4. surface; outside perimeter of ash landfill; not compacted
5. surface; lower ash landfill; compacted
6. borehole; top of ash landfill; compacted; replicate 1
7. borehole; top of ash landfill; compacted; replicate 2
8. borehole; top of ash landfill; compacted; replicate 3
9. borehole; top of ash landfill; not compacted

Table 7: HELP Model Results on the Three Cover Systems.

SAND COVER	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Precipitation	57.35	36.85	43.95	20.53	47.50	50.72	60.77	67.05	52.30	51.15	65.99	71.37	625.53
Run off	0.00	0.42	30.18	81.13	5.68	0.00	1.37	0.20	0.00	0.00	4.33	0.03	123.34
Evapotranspiration.	7.26	8.95	9.70	8.28	61.99	57.21	62.72	65.56	57.35	15.65	10.40	6.38	371.45
Lateral Drainage	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Leachate	1.14	0.72	0.62	0.49	78.25	13.17	8.17	7.39	4.83	3.56	4.10	2.16	124.59

SLUDGE COVER	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Precipitation	57.35	36.85	43.95	20.53	47.50	50.72	60.77	67.05	52.30	51.15	65.99	71.37	625.53
Run off	0.00	0.51	34.05	88.50	6.84	0.00	1.48	0.20	0.00	0.00	4.69	0.05	136.32
Evapotranspiration.	7.26	8.95	9.70	7.46	64.26	56.88	53.26	63.27	56.80	17.40	10.84	6.38	362.47
Lateral Drainage	0.00	0.00	0.00	0.00	80.80	1.85	0.82	3.09	2.78	1.45	2.67	0.00	93.45
Leachate	0.00	0.00	0.00	0.00	12.85	3.31	0.66	1.93	1.88	0.97	3.57	0.00	25.16

CLAY COVER	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Precipitation	57.35	36.85	43.95	20.53	47.50	50.72	60.77	67.05	52.30	51.15	65.99	71.37	625.53
Run off	0.00	0.50	34.05	88.50	6.84	0.00	1.48	0.20	0.00	0.00	4.69	0.05	136.30
Evapotranspiration.	7.26	8.95	9.70	7.46	64.25	56.95	53.37	63.16	56.69	17.40	10.84	6.38	362.43
Lateral Drainage	0.00	0.00	0.00	0.00	37.40	0.01	0.59	0.37	0.10	0.05	0.11	0.00	38.63
Leachate	0.00	0.00	0.00	0.00	57.92	3.34	2.13	4.40	3.78	2.69	5.80	0.00	80.05

All units are presented in mm.

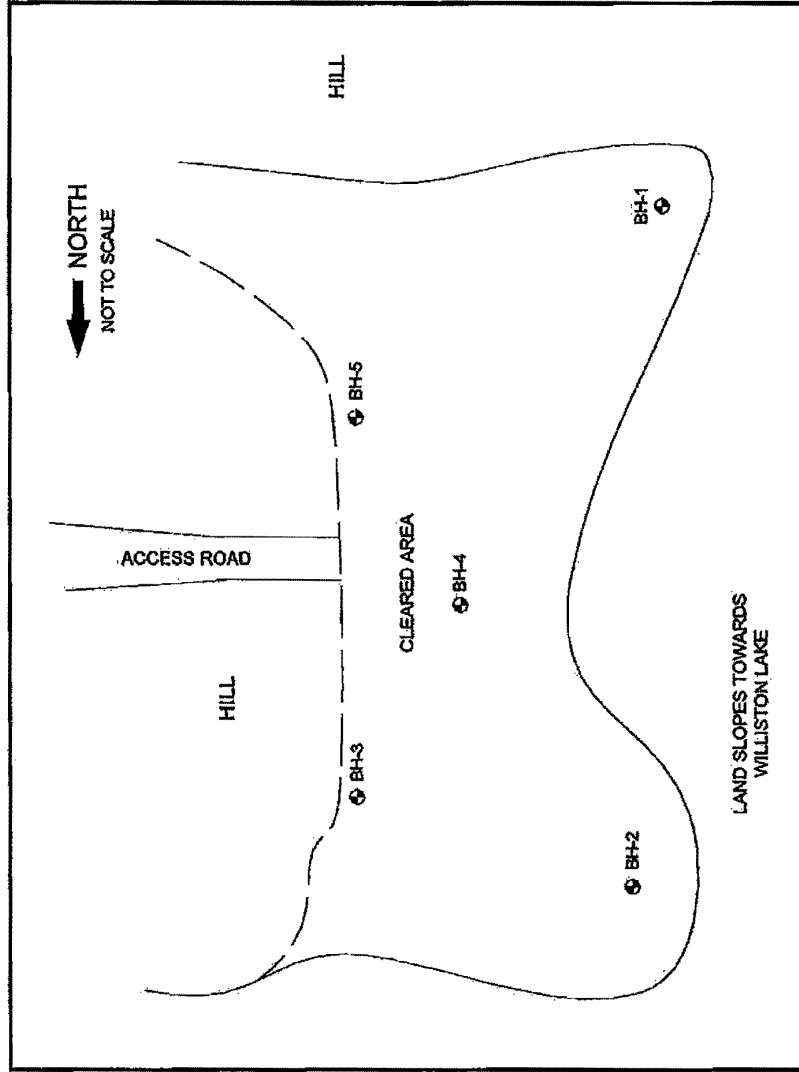
Note: Lateral Drainage = Lateral Drainage Collected From Drainage Layer

13 Figures

Figure 1: Location of Old Ash Landfill in relation to the Abitibi Consolidated Mill and other adjacent infrastructure.

This Figure is an insert found on the following page.

Figure 2: Approximate location of test holes for pre landfill siting evaluation.



As modified from Agra, accompanying soil descriptions are located in Appendix E.

Figure 3: Locations of test pits on the old ash landfill.

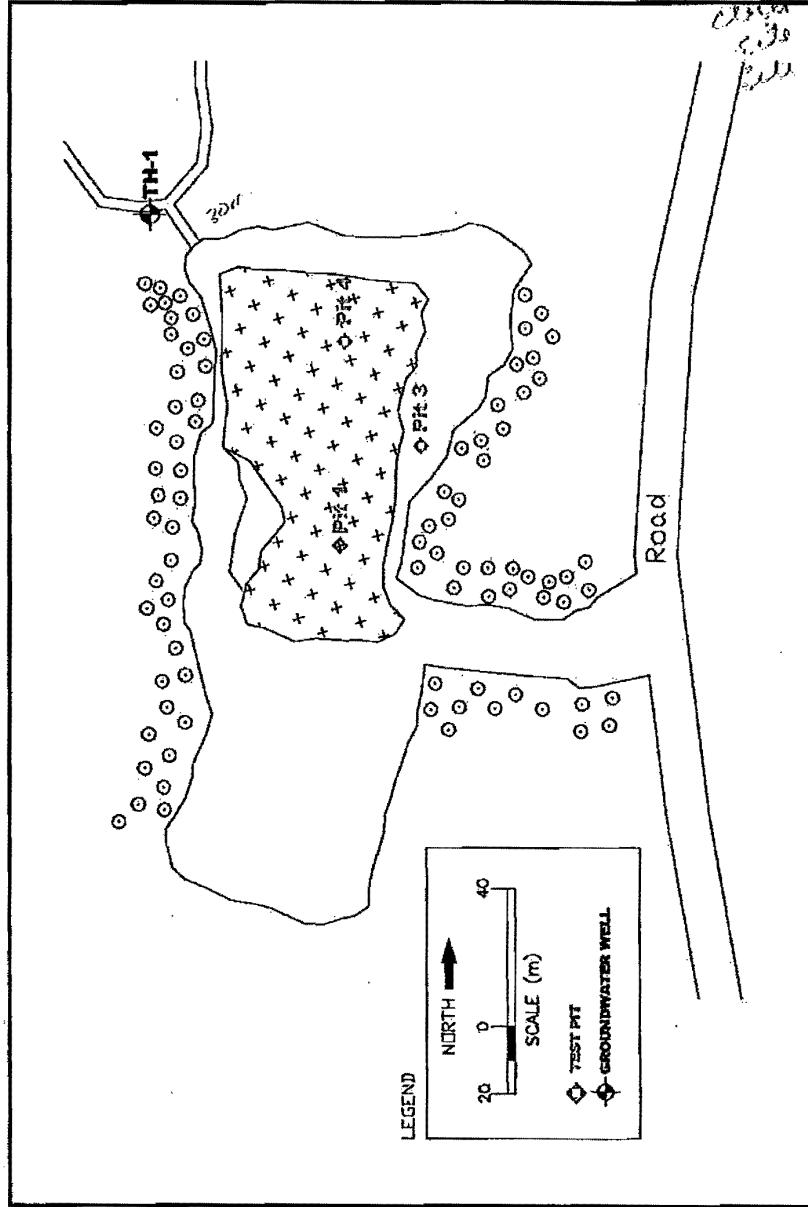
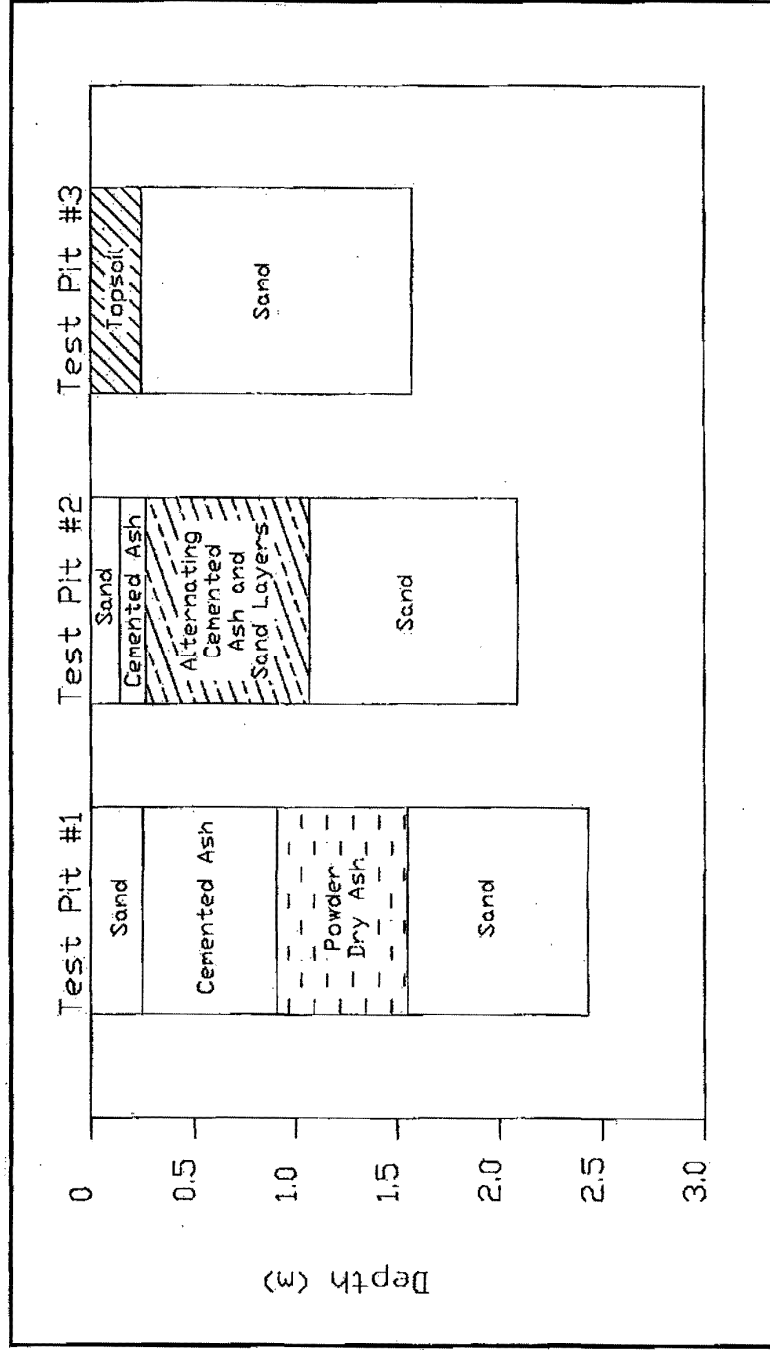


Figure as modified from AGRA reports, Test pit profiles are found in Figure 4.

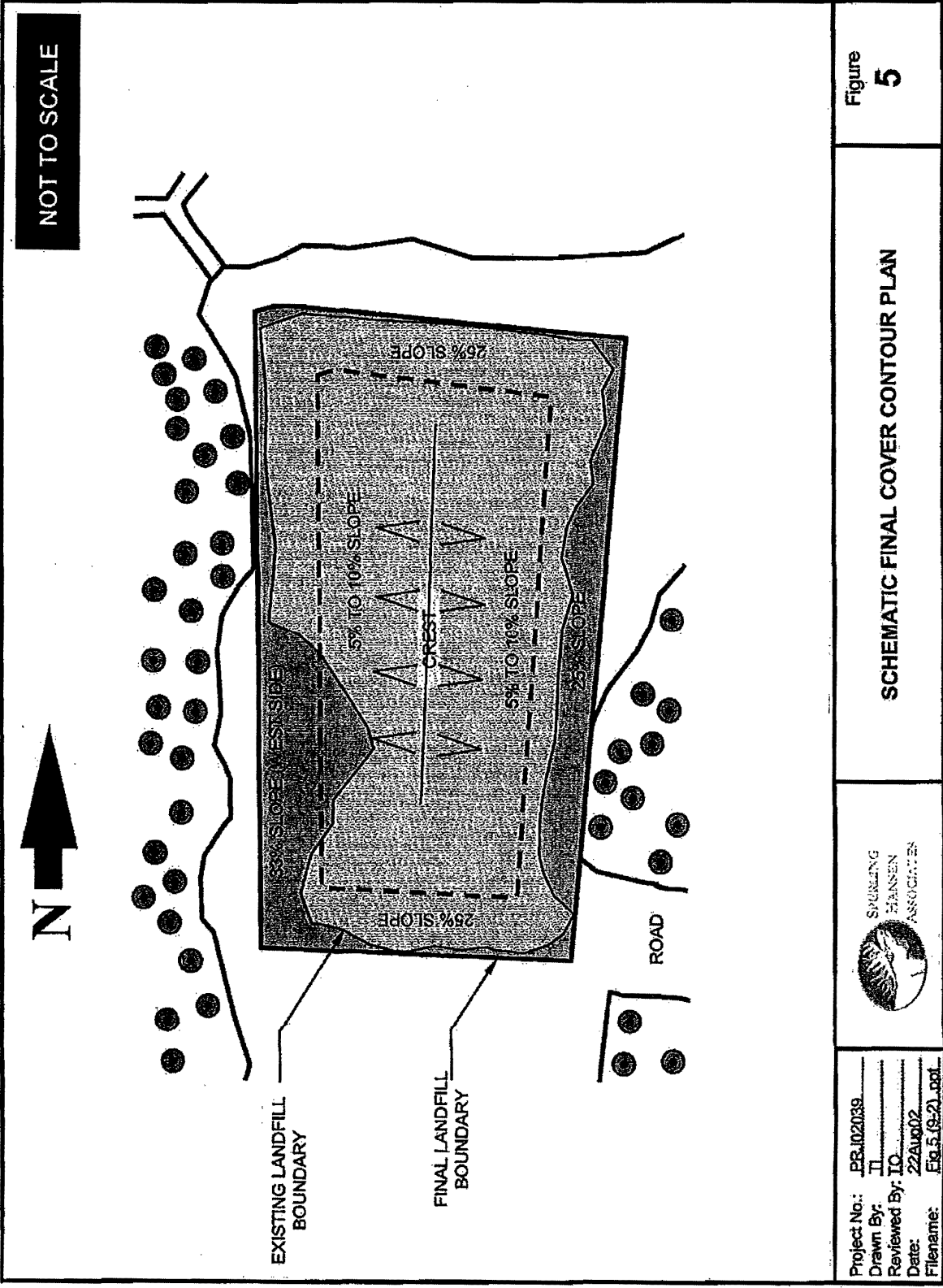
Figure 4: 1997 Test pit soil profiles.



Profiles as reproduced from Agra reports.

Figure 5: Schematic Final Contour Plan of the Old Ash Landfill.

This Figure is an insert found on the following page



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Figure 6: Schematic Cross Section of Grading and Contours on the Old Ash Landfill.

This Figure is an insert found on the following page

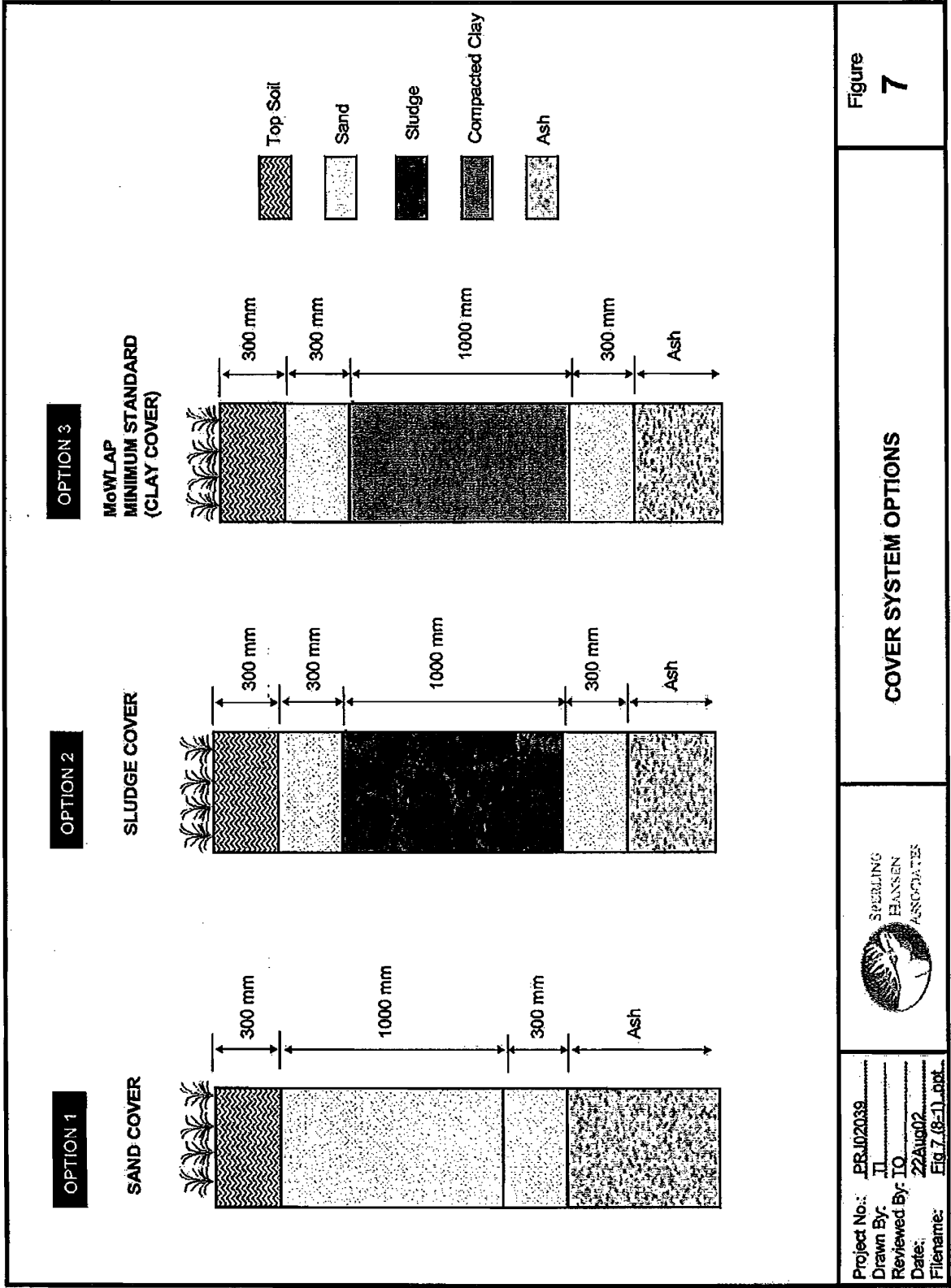
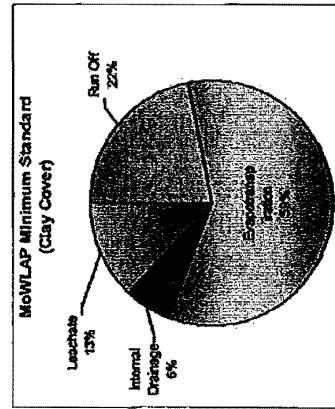
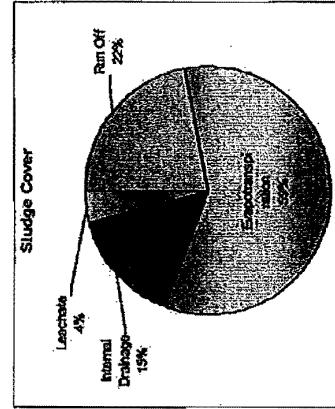
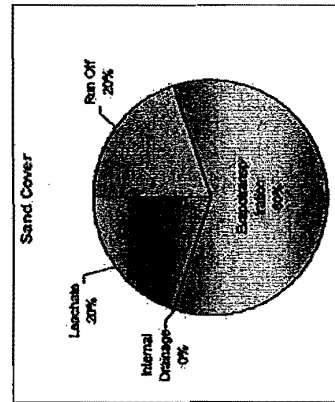
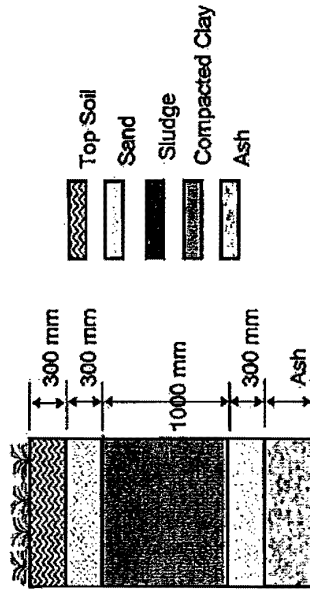
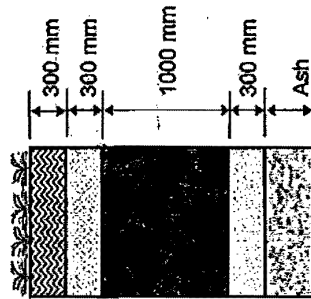
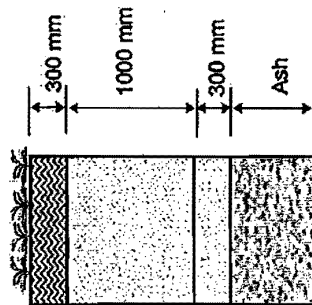


Figure
7

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Figure 8: HELP Model Results for the Different Cover System Options.
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**MoWLaP Minimum Standard
(Clay Cover)**

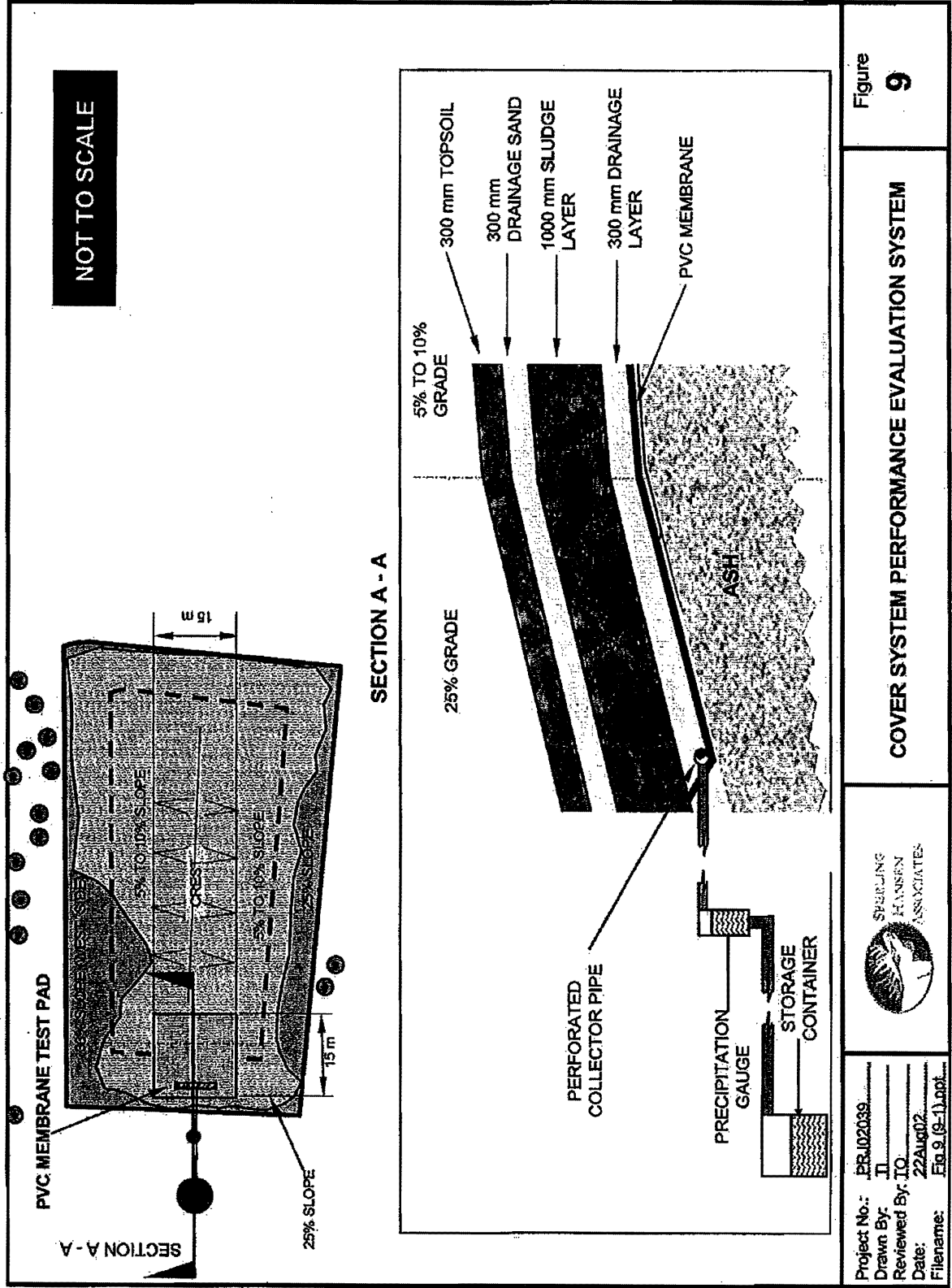


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 Reviewed By: TO
 Date: 22Aug02
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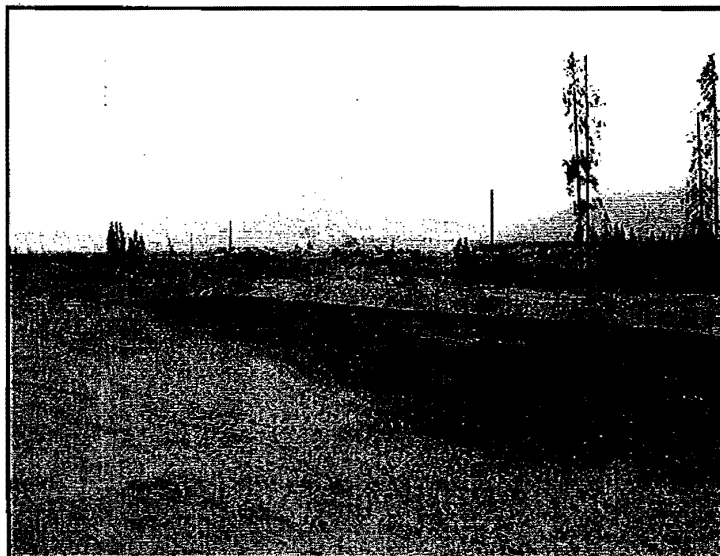
HELP MODEL RESULTS FOR DIFFERENT COVER SYSTEM OPTIONS

Figure 8

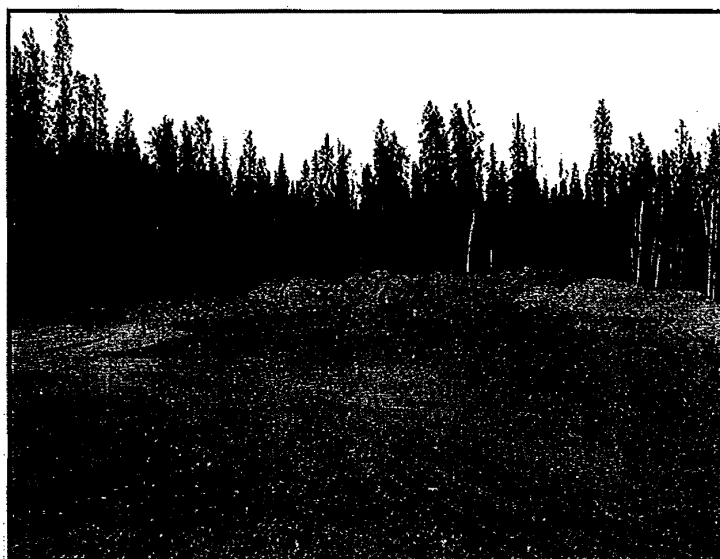


14 Photographs

Photograph 1: View from the top and middle of the old ash landfill looking north towards the mill.



Photograph 2: View from the top and middle of the old ash landfill looking south away from the mill.

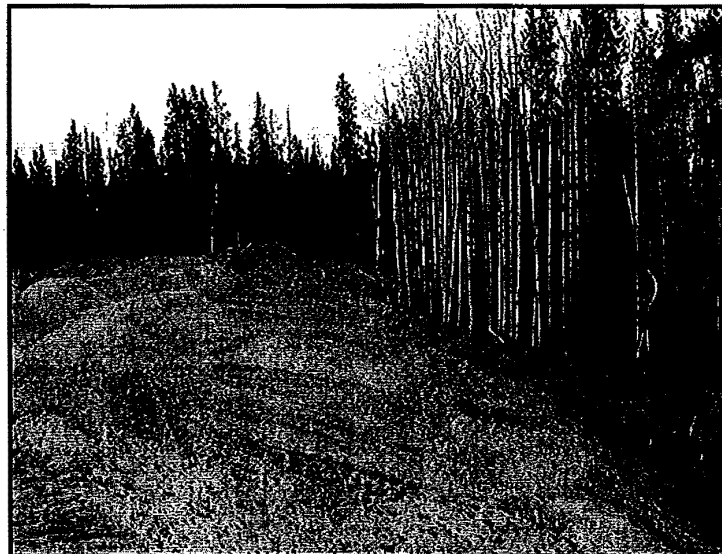


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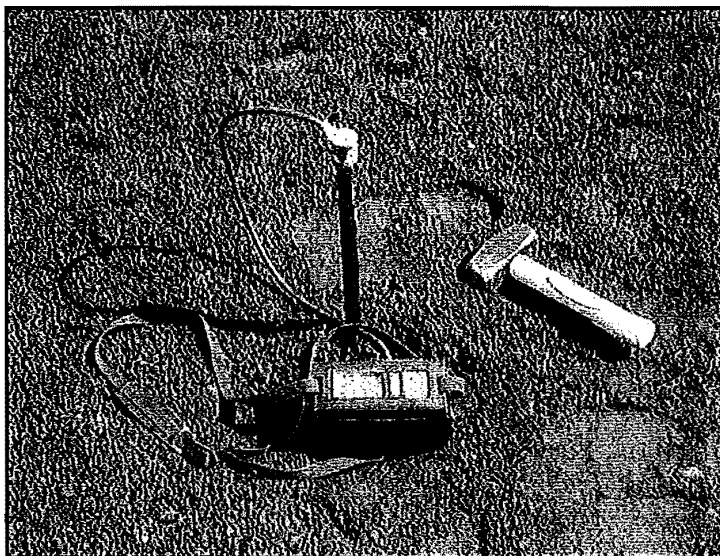
Photograph 3: View of west toe of old ash landfill looking down and north towards ground water monitoring well.



Photograph 4: View of west side of old ash landfill looking south from middle (road entrance) of landfill.



Photograph 5: Equipment used in evaluation of landfill gas generation potential.



15 Report Closure

SYLVIS has prepared this closure plan for the purpose of an ash and spent sand landfill closure. The closure plan is limited to the specific site, development and design objectives for the old ash landfill under British Columbia Ministry of Water Land and Air Protection Permit PR-15166 located at Abitibi Consolidated Inc. Paper Mill in Mackenzie, British Columbia.

This closure plan is intended for use by persons or companies familiar with landfills, their closure and management, real property such as the subject property, and persons or companies that are familiar with land use terminology, methodology, and reporting. Any questions about the closure plan, its use, terms, scope, research or the analytical methodology used should be directed to its author.

This closure plan must not be used partially but only in the context in which it is presented. We cannot monitor changes to our reports once they leave our office, nor can we prevent changes, additions or deletions in copies of our reports. We recommend that people intending to rely on our report do so only after reading an original report in its entirety.

The only party who may rely on the opinions expressed in this closure plan is the client. As this closure plan has been prepared exclusively for Abitibi Consolidated Inc. it is assumed that only the addressee will rely upon it, and only for the intended use stated herein. No one else may rely on this closure plan without the written consent of the author, which we may not provide retroactively. We expressly deny any legal liability for unauthorized reliance and for any other use.

Possession of this closure plan, or a copy of it, does not carry with it the right to reproduction or publication, in full or in part. No one other than the recipient may use this closure plan for any purpose without the written consent of this company. Exceptions exist when required by due process of law, or if subject to confidential review by the BC Ministry of Water, Land and Air Protection.

The analysis contained in this closure plan and the basis of the opinions and estimates relies upon written and verbal information obtained from a variety of sources we considered reliable. This closure plan has not been prepared for court purposes or for arbitration, as such some of the information set out in this plan may not have been fully documented or confirmed by reference to primary sources. Information provided by the client has not been verified with other parties unless so indicated in the plan. The information provided to us by the client is believed to be correct and reliable. General market and environmental information is derived from various public sources, as well as from various individuals believed to be knowledgeable in these matters. Information from others is believed to be correct, but accuracy cannot be guaranteed. The veracity of information provided to us by others has been accepted unless we have specific reason for doubt, in which case further confirmation is usually sought. Soil quality predictions are predicated upon laboratory analysis of the soil and amendments. We cannot assume responsibility for the accuracy of such analyses where the basis was third party sources. We have included plans and sketches for visual reference only. We cannot assume responsibility for the accuracy of such illustrations where the basis was third party sources.

We did not complete technical investigations such as:

- a. Contaminated Site Assessments
- b. Hydrogeological Assessments
- c. Terrain Stability Assessments

We undertook no investigation with the BC Ministry of Water, Land and Air Protection or any other government regulatory agency except as expressly described in this closure plan. The subject property must comply with such government regulations. Any non-compliance may affect the closure plan. Confirming compliance could require further investigations.

Unless otherwise stated in this plan, the existence of any contaminants or hazardous materials, which may or may not be present on the property, was not observed. No one provided hazardous materials or contaminated land studies to us or authorized us to commission such a study. We have no knowledge of the existence of such materials on or in the property. We were not retained to detect such substances, the presence of which may materially affect the value of the property. No responsibility is assumed for any such conditions, or for any specialized expertise or engineering knowledge required to discover them or to remove or eliminate them.

Attendance at any legal proceedings with respect to this plan, and any fees and expenses for preparation and attendance, are to be agreed upon in advance. However, neither this nor any other of these limiting conditions is an attempt to limit the use that might be made of this plan should it properly become evidence in a judicial proceeding. In such a case, it is acknowledged that it is the judicial body that will decide the use of the plan that best serves the administration of justice.



49
File: PR-15166

SENT BY FAX TO: 250-997-6723

June 25, 2004

Ablibi-Consolidated Company of Canada
PO Box 2800
Mackenzie BC V0J 2C0

Attention: Sophie Mullen

Dear Sophie,

Re: Site Closure Plan for Ash Landfill (PR-15166)

As per Section 4.7.3 of permit PR-15166, I hereby approve the closure plan dated February 2003 for the "old ash landfill" and as further described in the attachments provided by email from Mike Van Ham dated June 21, 2004. This approval is conditional on the submission of an experimental design and evaluation document outlining the details of the barrier performance comparison testing.

To accommodate the changes in the original schedule, the following portion of Section 4.2 of permit PR-15166 is hereby amended to read as follows:

- The groundwater monitoring program shall be maintained until **October 31, 2006**, or unless otherwise specified in writing by the Regional Waste Manager. At the end of this period and by **December 31, 2006**, the Permittee shall submit to the regional Environmental Protection office a summary of all ash and groundwater data including QA/QC data. The report shall include a discussion of results, an assessment of the receiving environment and recommendations if further action is necessary to protect the environment.

The use of sludge as a final barrier cover for the old landfill and in this experimental design has been accepted on the understanding that if results of the barrier performance comparison test indicate that the compacted sludge layer is not suitable as barrier system for this purpose, or should other information indicate that the sludge layer is unsuitable, the mill will make the necessary changes to ensure that the groundwater and surface water is adequately protected and an contingency cover system will be installed.

I must commend you on taking a very innovative approach to closure activities at the site, while leaving flexibility to ensure that post-closure strategies will minimize any long term problems. If you have any further questions, please feel free to contact me or Maureen Blawchuk.

Yours truly,

Del Reinheimer, P.Eng.
Assistant Regional Waste Manager
Omineca & Peace Regions

:msb

Ministry of
Water, Land and Air
Protection

Environmental Protection
Omineca & Peace
Regions

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 666-6155
Facsimile: (250) 666-6629

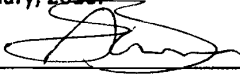
This is Exhibit "28"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 28



MINISTRY OF ENVIRONMENT

PERMIT
PR09044

Under the Provisions of the Waste Management Act

Finlay Forest Industries Inc.

P.O. Box 250

Mackenzie, British Columbia

V0J 2C0

is authorized to discharge refuse to the ground from a logging camp and logging 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.

An annual fee will be determined on the basis of the NC code and the related capacity as defined in the Waste Management Fees Regulation.

1. Specific Authorized Discharges and Related Requirements

1.1. Refuse to a landfill.

1.1.1. The maximum authorized rate of discharge is 300 m³/year.

1.1.2. The authorized components of the discharge are plastic, rubber, metal, and incinerator ash.

1.1.3. The works authorized are a landfill operation.

2. Location of the Facilities

The location of the landfill to which the discharges will occur is approximately 5 km west of the confluence of Carbon Creek and Williston Lake, British Columbia. Longitude: 122° 48' 30", Latitude: 56° 04' 00".

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

Date issued: January 7, 1991
Amendment date:
(most recent)
Page: 1 of 2

JUL 29 1994

Permit No. PR-9044

2

3. Landfill Operation

The Permittee shall compact the refuse and apply cover material at least once every two months except when freezing conditions adversely affect normal operation. The Regional Waste Manager may vary the frequency of covering when sufficient quantities of soil material are incorporated with the waste.

Oil pails and filters must be well drained prior to disposal in the authorized landfill.

4. Segregation of Metallic Wastes

Segregate large metallic wastes for disposal in a separate area of the landfill site.

5. Bypasses

The discharge of refuse which has bypassed the designated treatment works is prohibited unless the consent of the Regional Waste Manager is obtained and confirmed in writing.

6. Process Modifications

The Permittee shall notify the Regional Waste Manager in writing prior to implementing changes that may affect the quality and/or quantity of the discharge.

7. Site Preparation and Restoration

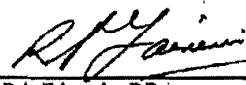
Provision of fencing, site access, vehicle safety barriers, surface water diversionary works, leachate control works, firebreaks and site restoration as required, shall be carried out to the satisfaction of the Regional Waste Manager.

8. Wildlife Nuisance

The subject discharge is one that is of concern because of the possibility of a nuisance or hazard being caused by bears or other animals attracted to the site. Additional works may be required or other operating instructions may be issued by the Regional Waste Manager if such problems arise.

9. Sampling and Monitoring Program

The need for sampling and monitoring will be dependent on the visual monitoring of the operation carried out by Waste Management staff as part of an ambient monitoring program for the operation, plus any other pertinent information.



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

Date issued: January 7, 1991
Amendment date:
(most recent)

Page: 2 of 2

JUL 29 1994

Permit No. PR-9044



Province of
British Columbia

BC
Environment

MINISTRY OF
ENVIRONMENT,
LANDS AND PARKS

Environmental Protection
1011 4th Avenue
Prince George, British Columbia
V2L 3H9
Telephone: (804) 565-6155
Fax: (804) 565-6629

3

REGISTERED MAIL

Date: JUL 29 1994.

File: PR-9044

Finlay Forest Industries Inc.
P.O. Box 250
Mackenzie, British Columbia
VOJ 2C0

Attention: A.J. Boldt

Dear Permittee:

Enclosed is an amended copy of Permit No. PR-9044 issued under the provisions of the Waste Management Act. Your attention is respectfully directed to the terms and conditions outlined in the Permit.

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 shall rest with the Permittee.

The Permittee shall ensure that any discharge under this Permit meets the requirements of other regulatory agencies including, but not restricted to, Environment Canada and the Department of Fisheries and Oceans (Canada).

An annual permit fee will be determined according to the Waste Management Permit Fees Regulation.

The administration of this Permit will be carried out by staff from our Regional Office located in Prince George, (telephone 565-6155). Plans, data and reports pertinent to the Permit are to be submitted to the Environmental Protection office, 3rd Floor, 1011 Fourth Avenue, Prince George, British Columbia, V2L 3H9.

This decision may be appealed in accordance with Section 27 of the Waste Management Act by giving written notice to me within 21 days of this notification.

Yours truly,

R.A. Fairservice P.Eng.
Assistant Regional Waste Manager
Northern Interior Region

enclosure

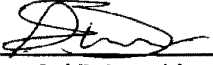
This is Exhibit "29"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 29



MINISTRY OF ENVIRONMENT

PERMIT
PR-8720

Under the Provisions of the Waste Management Act

Finlay Forest Industries Inc.

P.O. Box 250

Mackenzie, British Columbia

V0J 2C0

is authorized to discharge refuse to the ground from a logging camp and logging 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.

An annual fee will be determined on the basis of the NC code and the related production capacity as defined in the Waste Management Fees Regulation.

1. Specific Authorized Discharges and Related Requirements

1.1. Refuse to a landfill.

1.1.1. The maximum authorized rate of discharge is 500 m³/year.

1.1.2. The authorized components of the discharge are plastic, rubber, metal, and incinerator ash.

1.1.3. The works authorized are a landfill operation.

2. Location of the Facilities

The location of the landfill to which the discharges will occur is approximately 12.5 km south by southeast from the confluence of the Nabesche River and Emerslund Creek, British Columbia. Longitude: 123° 07' 20", Latitude: 56° 07' 35".

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

Date issued: March 30, 1990

Amendment date:
(most recent)

Page: 1 of 2

JUL 29 1994

Permit No. PR-8720

2

3. Landfill Operation

The Permittee shall compact and apply cover material once every 40 days of operation or at least once every two months. The Regional Waste Manager may vary the frequency of covering when freezing conditions adversely affect normal operation or when sufficient quantities of soil material are incorporated with the waste.

There shall be no open burning.

Any refuse deemed unacceptable by the Regional Waste Manager shall not be discharged at this site.

4. Segregation of Metallic Wastes

Segregate metallic waste for disposal in a separate area of the site.

5. Bypasses

The discharge of refuse which has bypassed the designated treatment works is prohibited unless the consent of the Regional Waste Manager is obtained and confirmed in writing.

6. Refuse Disposal Modifications

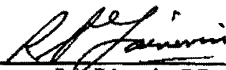
The Permittee shall notify the Regional Waste Manager in writing prior to implementing changes to any refuse disposal practice that may affect the quality and/or quantity of the discharge.

7. Site Preparation and Restoration

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

8. Wildlife Nuisance

The subject discharge is one of concern because of the possibility of a nuisance or hazard caused to wildlife. Additional works may be required or other operating instructions may be issued by the Regional Waste Manager if such problems arise.



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

Date issued: March 30, 1990

Amendment date:
(most recent)

JUL 29 1994

Page: 2 of 2

Permit No. FR-8720



Province of
British Columbia

BC
Environment

MINISTRY OF
ENVIRONMENT,
LANDS AND PARKS

Environmental Protection
1011 4th Avenue
Prince George, British Columbia
V2L 3H9
Telephone: (804) 565-6155
Fax: (804) 565-6829

3

REGISTERED MAIL

Date: **JUL 29 1994**

File: PR-8720

Finlay Forest Industries Inc.
P.O. Box 250
Mackenzie, British Columbia
V0J 2C0

Attention: A.J. Boldt

Dear Permittee:

Enclosed is an amended copy of Permit No. PR-8720 issued under the provisions of the Waste Management Act. Your attention is respectfully directed to the terms and conditions outlined in the Permit.

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 shall rest with the Permittee.

The Permittee shall ensure that any discharge under this Permit meets the requirements of other regulatory agencies including, but not restricted to, Environment Canada and the Department of Fisheries and Oceans (Canada).

An annual permit fee will be determined according to the Waste Management Permit Fees Regulation.

The administration of this Permit will be carried out by staff from our Regional Office located in Prince George, (telephone 565-6155). Plans, data and reports pertinent to the Permit are to be submitted to the Environmental Protection office, 3rd Floor, 1011 Fourth Avenue, Prince George, British Columbia, V2L 3H9.

This decision may be appealed in accordance with Section 27 of the Waste Management Act by giving written notice to me within 21 days of this notification.

Yours truly,

R.A. Fairservice P.Eng.
Assistant Regional Waste Manager
Northern Interior Region

enclosure

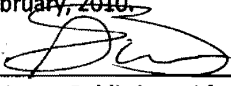
This is Exhibit "30"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 30



MINISTRY OF ENVIRONMENT,
LANDS AND PARKS

PERMIT
PE03015

Under the Provisions of the Waste Management Act

Finlay Forest Industries Inc.
Box 250
Mackenzie, British Columbia
VOJ 2C0

is authorized to discharge effluent to the ground from a logging camp located in the Omineca Arm of Williston Lake, 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.

1. **AUTHORIZED DISCHARGES**

- 1.1 The discharge of effluent to which this Sub-Section is applicable is from a logging camp domestic wastewater treatment system as shown on the attached Site Plan A. The reference number (S.E.A.M. site number) for this discharge is E210363.
- 1.1.1 The maximum rate at which effluent may be discharged is a maximum of 34.1 cubic metres per day.
- 1.1.2 The characteristics of the discharge shall not exceed:
- 5 day Biochemical Oxygen Demand, 130 mg/L
Total Suspended Solids, 130 mg/L
- 1.1.3 The works authorized are a package treatment plant, infiltration lagoon and related appurtenances approximately located as shown on the attached Site Plan A.
- 1.1.4 The location of the facilities from which the discharge originates is described in Special Use Permit 7373, Williston Lake.

Date issued: May 8, 1974

Amendment Date:

(most recent)

Page: 1 of 2

JUL 29 1994

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

PERMIT NO. : PE03015

1.1.5 The location of the point of discharge is described in Special Use Permit 7373, Williston Lake.

2. GENERAL REQUIREMENTS

2.1 Maintenance of Works

The Permittee shall inspect the pollution control works regularly and maintain them in good working order. Notify the Regional Waste Manager of any malfunction of these works.

2.2 Emergency Procedures

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 Bypasses

The discharge of effluent which has bypassed the designated works is prohibited unless the approval of the Director or the Regional Waste Manager is obtained and confirmed in writing.

2.4 Process Modifications

The Permittee shall notify the Regional Waste Manager prior to implementing changes to any process that may affect the quality and/or quantity of the discharge.

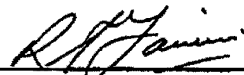
2.5 Infiltration Lagoon and Treatment Plant

2.5.1 There shall be no overflow from the infiltration lagoon to the receiving environment.

2.5.2 Surface drainage shall be diverted away from the infiltration lagoon.

2.5.3 The residue from the infiltration lagoon and/or the treatment plant shall be disposed of in a manner and location approved by the Regional Waste Manager.

Date issued: May 8, 1974
Amendment Date: JUL 29 1994
(most recent)
Page: 2 of 2


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

PERMIT NO. : PE03015



Province of
British Columbia

MINISTRY OF
ENVIRONMENT,
LANDS AND PARKS

BC
Environment

Environmental Protection
1011 4th Avenue
Prince George, British Columbia
V2L 3H9
Telephone: (804) 565-6155
Fax: (804) 565-6629

3

REGISTERED MAIL

Date: JUL 29 1994

File: PE-3015

Finlay Forest Industries Inc.
P.O. Box 250
Mackenzie, British Columbia
V0J 2C0

Attention: A.J. Boldt

Dear Permittee:

Enclosed is an amended copy of Permit No. PE-3015 issued under the provisions of the Waste Management Act. Your attention is respectfully directed to the terms and conditions outlined in the Permit.

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 shall rest with the Permittee.

The Permittee shall ensure that any discharge under this Permit meets the requirements of other regulatory agencies including, but not restricted to, Environment Canada and the Department of Fisheries and Oceans (Canada).

An annual permit fee will be determined according to the Waste Management Permit Fees Regulation.

The administration of this Permit will be carried out by staff from our Regional Office located in Prince George, (telephone 565-6155). Plans, data and reports pertinent to the Permit are to be submitted to the Environmental Protection office, 3rd Floor, 1011 Fourth Avenue, Prince George, British Columbia, V2L 3H9.

This decision may be appealed in accordance with Section 27 of the Waste Management Act by giving written notice to me within 21 days of this notification.

Yours truly,

R.A. Fairservice P.Eng.
Assistant Regional Waste Manager
Northern Interior Region

enclosure



4
File: PE-03015

REGISTERED MAIL

December 6, 1999

Finlay Forest Industries Inc.
PO Box 250
Mackenzie BC V0J 2C0

Attention: Gary Walsh

Dear Permittee

Re: Permit Amendment for PE-03015

As per the request dated October 27, 1999 by Ladner Downs Barristers & Solicitors, and in accordance with Section 13 of the Waste Management Act, Permit PE-03015 (dated May 8, 1974 with an amendment date of July 29, 1994) is hereby amended so that the Permit Holder for this permit is now:

Produtls Forestiers Donohue Inc. - Donohue Forest Products Inc.
PO Box 250
Mackenzie BC V0J 2C0

This decision may be appealed to the Environmental Appeal Board. Notice of the appeal must: (1) be in writing, (2) include the grounds for the appeal, (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal board, 4th Floor 836 Yates Street, Victoria, BC, V8V 1X5, (4) be delivered within 21 days from the date notice of the decision is given, and (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Yours truly,

R.A. Pairservice, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

:msb/ cc. Original to be sent to Robert Owen, Ladner Downs Barristers & Solicitors, 1200 Waterfront Centre, 200 Burrard Street, PO Box 48600, Vancouver, BC, V7X 1T2.
cc. Huges Simon, Comptroller, Donohue Forest Products Inc., PO Box 250, Mackenzie, V0J 2C0.

Ministry of
Environment,
Lands and Parks

Pollution Prevention
Environment and Lands
Omineca-Peace
Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629



File: PE-03015

REGISTERED MAIL

January 7, 2002

Produits Forestiers Donohue Inc. – Donohue Forest Products Inc.
 PO Box 250
 Mackenzie BC V0J 2C0

Attention: Gary Walsh
 Logging Supervisor

Dear Gary,

Re: PERMIT AMENDMENT FOR PE-03015

Further to and as per the request dated December 11, 2001 by McCarthy Tetrault LLP, and in accordance with Section 13 of the *Waste Management Act*, Permit PE-03015 (dated May 8, 1974 and last amended December 6, 1999), is hereby amended so the Permit Holder for this permit is now:

**Compagnie Abitibi-Consolidated du Canada – Abitibi-Consolidated
 Company of Canada**
 PO Box 250
 Mackenzie BC V0J 2C0

This decision may be appealed to the Environmental Appeal Board. Notice of the appeal must:

- (1) be in writing,
- (2) include the grounds for appeal,
- (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria B.C., V8V 1X5
- (4) be delivered within 21 days from the date notice of the decision is given, and
- (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Please attach this letter to the original permit. If you have any questions, please feel free to contact Ben Van Nostrand at 250-565-6528.

Yours truly,

Del Reinheimer, P.Eng.
 Assistant Regional Waste Manager
 Omineca-Peace Region

msb / cc. Jim Tilerle, McCarthy Tetrault LLP, PO Box 10424, Pacific Centre, Suite 1300, 777
 Dunsmuir Street, Vancouver, BC, V7Y 1K2.

**Ministry of Water,
 Land and Air
 Protection**

Pollution Prevention
 Environment and Lands
 Omineca-Peace Region

Mailing Address:
 325 - 1011 Fourth Avenue
 PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6155
 Facsimile: (250) 565-6629

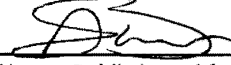
This is Exhibit "31"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 31



MINISTRY OF ENVIRONMENT,
LANDS AND PARKS

PERMIT
PR04401

Under the Provisions of the Waste Management Act

Finlay Forest Industries Ltd.

Box 250

Mackenzie, British Columbia

VOJ 2C0

is authorized to discharge refuse and contaminants to the ground and air from a logging camp located on the Ominica Arm of Williston Lake, 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.

1. **AUTHORIZED DISCHARGES**

1.1 The discharge of refuse to which this Sub-Section is applicable is from a logging camp as shown on the attached Site Plan A. The reference number (S.E.A.M. site number) for this discharge is E210361.

1.1.1 The maximum rate at which refuse may be discharged is 0.8 m³ per day.

1.1.2 The characteristics of the discharge shall not exceed:

0.8 m³ per day.

1.1.3 The works authorized are a landfill operation approximately located as shown on the attached Site Plan A.

Date issued: February 1, 1977

Amendment Date:
(most recent)

Page: 1 of 4

JUL 29 1994

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

PERMIT NO.: PR04401

2

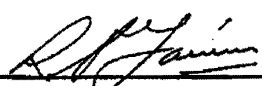
- 1.1.4 The location of the facilities from which the discharge originates is described by the following traverse: commencing at 2877 meters west and 1006 meters south of $55^{\circ} 07'30''$ north latitude and $124^{\circ} 22'30''$ west longitude thence 60 m N80W, thence 80 m N10E thence 60 m S80E, thence 60 m S10W to the point of commencement, all of the Cariboo Land District.
- 1.1.5 The location of the point of discharge is described by the following traverse: commencing at 2877 meters west and 1006 meters south of $55^{\circ} 07'30''$ north latitude and $124^{\circ} 22'30''$ west longitude thence 60 m N80W, thence 80 m N10E thence 60 m S80E, thence 60 m S10W to the point of commencement, all of the Cariboo Land District.
- 1.2 The discharge of contaminants to which this Sub-Section is applicable is from a stack associated with a refuse incinerator as shown on the attached Site Plan A. The B.C. Environment reference number (S.E.A.M. site number) for this discharge is E210361.
- 1.2.1 The maximum rate at which contaminants may be discharged is :
- Maximum: 11.3 mols/s Duration: continuous,
Frequency: continuous
- Average daily: (based on the operating period) 11.3 mos/s, continuously.
- 1.2.2 The characteristics of the discharge shall not exceed:
- 20 percent for periods longer than 3 minutes at intervals of not less than 1/2 hour. Discharge smoke opacity shall not exceed 40 percent at any time.
- 1.2.3 The works authorized are a refractory lined auxiliary fuel fired incinerator equipped with a combustion system (including forced air supply) and related appurtenances approximately located as shown on the attached Site Plan A.
- 1.2.4 The location of the facilities from which the discharge originates is described by the following traverse: commencing at 11, 617 m north and 5963 m east of $56^{\circ} 00'$ north latitude and $124^{\circ} 30'$ west longitude thence 282 m east, thence 141 m north, thence 60 m west, thence 503 m north thence 221 m west, thence 644 m south to the point of commencement, all of the Cariboo Land District.

Date issued: February 1, 1977

Amendment Date:
(most recent)

Page: 2 of 4

JUL 29 1994


R. Ar. Fairservice, P.Eng.
Assistant Regional Waste Manager

PERMIT NO.: PR04401

3

1.2.5 The location of the point of discharge is described by the following traverse: commencing at 11, 617 m north and 5963 m east of 56° 00' north latitude and 124° 30' west longitude thence 282 m east, thence 141 m north, thence 60 m west, thence 503 m north thence 221 m west, thence 644 m south to the point of commencement, all of the Cariboo Land District.

2. GENERAL REQUIREMENTS

2.1 Landfill Operation

The Permittee shall maintain the landfill authorized in Sub Section 1.1 as a Level "E" operation in accordance with the Pollution Control Objectives for Municipal Type Waste Discharges in British Columbia, dated September 1975, which, in normal conditions, requires that cover material be applied once per 40 days of operation and at least once every two months. The Regional Waste Manager may vary the frequency of covering when freezing conditions adversely affect normal operation.

2.2 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.

2.3 Wildlife Nuisance

The subject discharge is one that is of concern because of the possibility of a nuisance or hazard being caused by bears or other animals attracted to the site. Additional works may be required or other operating instructions may be issued by the Regional Waste Manager if such problems arise.

2.4 Segregation of Metallic Wastes

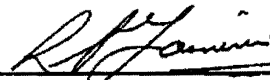
Segregate large metallic waste such as appliances and auto bodies, etc., for disposal in a separate area of the site.

Date issued: February 1, 1977

Amendment Date:
(most recent)

Page: 3 of 4

JUL 29 1994


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

PERMIT NO. 1 PR04401

2.5 Maintenance of Works

The Permittee shall inspect the incinerator regularly and maintain it in good working order. Notify the Regional Waste Manager of any malfunction of these works. The incinerator is to be maintained in a nuisance free condition.

2.6 Incinerator Operation

2.6.1 The incinerator shall consist of a refractory lined incinerator and shall incorporate an auxiliary fuel and shall be equipped with a combustion control system.

2.6.2 All putrescible and combustible wastes originating from the logging camp shall be treated by incineration prior to incorporation into the landfill disposal operation.

2.6.3 Incinerator operation shall be restricted to specific limited personnel selected by the permittee to perform the incineration duties.

2.6.4 There shall be no open stock piling of putrescible and combustible wastes.

2.6.5 All putrescible and combustible wastes from the logging camp shall be incinerated on a daily basis.

2.6.6 There shall be no open burning.

3. MONITORING AND REPORTING REQUIREMENTS

3.1 Monitoring Procedures

Visual monitoring of the incinerator emissions authorized by Sub Section 1.2 will be carried out by the Waste Management Staff.

In the event of any undesirable emission from this operation which in the Regional Waste Manager's judgement is considered to be unacceptable, additional works may be required or other operating instructions may be issued by the Regional Waste Manager.

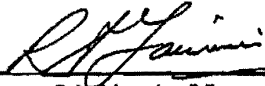
Date issued: February 1, 1977

Amendment Date:

(most recent)

Page: 4 of 4

JUL 29 1994


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

PERMIT NO.: PR04401



Province of
British Columbia

MINISTRY OF
ENVIRONMENT,
LANDS AND PARKS

BC
Environment

Environmental Protection
1011 4th Avenue
Prince George, British Columbia
V2L 3H9
Telephone: (804) 565-6155
Fax: (804) 565-6629

5

REGISTERED MAIL

Date: JUL 29 1994

File: PR-4401

Finlay Forest Industries Inc.
P.O. Box 250
Mackenzie, British Columbia
V0J 2C0

Attention: A.J. Boldt

Dear Permittee:

Enclosed is an amended copy of Permit No. PR-4401 issued under the provisions of the Waste Management Act. Your attention is respectfully directed to the terms and conditions outlined in the Permit.

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 shall rest with the Permittee.

The Permittee shall ensure that any discharge under this Permit meets the requirements of other regulatory agencies including, but not restricted to, Environment Canada and the Department of Fisheries and Oceans (Canada).

An annual permit fee will be determined according to the Waste Management Permit Fees Regulation.

The administration of this Permit will be carried out by staff from our Regional Office located in Prince George, (telephone 565-6155). Plans, data and reports pertinent to the Permit are to be submitted to the Environmental Protection office, 3rd Floor, 1011 Fourth Avenue, Prince George, British Columbia, V2L 3H9.

This decision may be appealed in accordance with Section 27 of the Waste Management Act by giving written notice to me within 21 days of this notification.

Yours truly,

R.A. Fairservice P.Eng.
Assistant Regional Waste Manager
Northern Interior Region

enclosure



6
File: PR-04401

REGISTERED MAIL

December 6, 1999

Finlay Forest Industries Inc.
PO Box 250
Mackenzie BC V0J 2C0

Attention: Gary Walsh

Dear Permittee

Re: Permit Amendment for PR-04401

As per the request dated October 27, 1999 by Ladner Downs Barristers & Solicitors, and in accordance with Section 13 of the Waste Management Act, Permit PR-04401 (dated February 1, 1977 with an amendment date of July 29, 1994) is hereby amended so that the Permit Holder for this permit is now:

Produits Forestiers Donohue Inc. - Donohue Forest Products Inc.
PO Box 250
Mackenzie BC V0J 2C0

This decision may be appealed to the Environmental Appeal Board. Notice of the appeal must: (1) be in writing, (2) include the grounds for the appeal, (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal board, 4th Floor 836 Yates Street, Victoria, BC, V8V 1X5, (4) be delivered within 21 days from the date notice of the decision is given, and (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Yours truly,

R.A. Fokservice, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

rmsb/ cc. Original to be sent to Robert Owen, Ladner Downs Barristers & Solicitors, 1200 Waterfront Centre, 200 Burrard Street, PO Box 48600, Vancouver, BC, V7X 1T2.
cc. Huges Simon, Comptroller, Donohue Forest Products Inc., PO Box 250, Mackenzie, V0J 2C0.

Ministry of
Environment,
Lands and Parks

Pollution Prevention
Environment and Lands
Omineca-Peace
Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629



7
File: PR-04401

REGISTERED MAIL

January 7, 2002

Produits Forestiers Donohue Inc. – Donohue Forest Products Inc.
PO Box 250
Mackenzie BC V0J 2C0

Attention: Gary Walsh
Logging Supervisor

Dear Gary,

Re: PERMIT AMENDMENT FOR PR-04401

Further to and as per the request dated December 11, 2001 by McCarthy Tetrault LLP, and in accordance with Section 13 of the *Waste Management Act*, Permit PR-04401 (dated February 1, 1977 and last amended December 6, 1999), is hereby amended so the Permit Holder for this permit is now:

**Compagnie Abitibi-Consolidated du Canada – Abitibi-Consolidated
Company of Canada**
PO Box 250
Mackenzie BC V0J 2C0

This decision may be appealed to the Environmental Appeal Board. Notice of the appeal must:

- (1) be in writing,
- (2) include the grounds for appeal,
- (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 838 Yates Street, Victoria B.C., V8V 1X5
- (4) be delivered within 21 days from the date notice of the decision is given, and
- (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Please attach this letter to the original permit. If you have any questions, please feel free to contact Ben Van Nostrand at 250-565-6528.

Yours truly,

Del Reinheimer, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

msb / cc. Jim Titerle, McCarthy Tetrault LLP, PO Box 10424, Pacific Centre, Suite 1300, 777
Dunsmuir Street, Vancouver, BC, V7Y 1K2.

**Ministry of Water,
Land and Air
Protection**

Pollution Prevention
Environment and Lands
Omineca-Peace Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629

This is Exhibit "32"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 32



Pollution Prevention
1011 Fourth Avenue
Prince George
British Columbia V2L 3H9
Telephone: (250) 565-6155
Fax: (250) 565-6629

MINISTRY OF WATER, LAND AND AIR PROTECTION

**PERMIT
PR-08721**

Under the Provisions of the Waste Management Act

Compagnie Abitibi-Consolidated du Canada -

Abitibi-Consolidated Company of Canada

P.O. Box 250

Mackenzie, British Columbia, V0J 2C0

is authorised to discharge refuse to the ground from a logging camp commonly known as the Osilinka Camp located near the confluence of the Osilinka River and Tenakihl Creek, north-west of Mackenzie, 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 revokes and replaces all previously issued permits under the number PR-08721 issued under Part 2, Section 8 of the Waste Management Act.

1. AUTHORIZED DISCHARGES

1.1 This subsection applies to the discharge of refuse to a **modified sanitary landfill operation**. The site reference number for this discharge is E210365.

1.1.1 The maximum authorised rate of refuse which may be discharged to the landfill is 24.6 tonnes per year.

1.1.2 The characteristics of the refuse which may be discharged are those of construction waste, plastic, metal, rubber and incinerator ash. No other wastes shall be discharged without the written approval of the Regional Waste Manager.

1.1.3 The authorised works are a modified trench-type landfill operation and related appurtenances.

1.1.4 The location of the facilities from which the discharge originates is approximately 1.5 km east of the confluence of the Osilinka River and

Date issued: March 30, 1990
Date Amended: **NOV 22 2001**
(most recent)
Page: 1 of 5



R.W. Girard, R.P. Bio.
Regional Waste Manager

PERMIT: PR-08721

Tenakihi Creek latitude 56°08'66" longitude 125°07'25", British Columbia.

- 1.1.5 The location of the point of discharge is shown on the attached Site Plan.
- 1.2 This subsection applies to the discharge of contaminants to the air from a **controlled open burning operation**. The site reference number for this discharge is E240023.
- 1.2.1 The maximum volume of woodwaste which may be burned and the frequency of individual burns shall not exceed 16 m³ per burn, 2 times per year.
- 1.2.2 The characteristics of the waste that may be burned are those of clean woodwaste.
- 1.2.3 The authorised works are a controlled open burning operation.
- 1.2.4 The location of the point of discharge is the same location as identified in subsection 1.1.4.

2. GENERAL REQUIREMENTS

2.1 Waste Compaction and Covering

The Permittee shall maintain the landfill, compact refuse and apply intermediate soil cover twice a year. Intermediate soil cover shall consist of a minimum of 0.30 meters of compacted soil placed over all exposed refuse. Final soil cover shall be applied in accordance with an approved Closure Plan as set out in Section 3.

The Regional Waste Manager may vary the maintenance frequency in consideration of modified operating hours or when freezing conditions adversely affect normal operations. Any revision to the maintenance frequency must have the prior written authorization of the Regional Waste Manager.

2.2 Site Preparation and Restoration

3

2.2 Site Preparation and Restoration

Provision of fencing, site access, vehicle safety barriers, surface water diversionary works, leachate control works, firebreaks and site restoration as required, shall be carried out to the satisfaction of the Regional Waste Manager. Proper signage shall be provided to ensure adequate instruction to the general public using the facility.

2.3 Designated Areas

Reusable materials such as large metallic objects, white goods, tires and batteries, shall be segregated into separate areas of the landfill site. The preferred method of final disposal of these wastes is through recycling.

2.4 Restricted Materials

Generally, no wastes shall be disposed of at this site, which are unacceptable to the Regional Waste Manager. Unacceptable materials include, but are not limited to, items containing ozone depleting substances as defined in the *Ozone Depleting Substances Regulation*, and special wastes as defined by the *Special Waste Regulation*.

2.5 Wildlife Nuisance

The subject discharge is one that is of concern because of the possibility of a nuisance or hazard being caused by bears or other animals attracted to the site. Additional works may be required or the Regional Waste Manager may issue other operating instructions if such problems arise.

2.6 Litter Control

The best practical means shall be used to prevent the scatter of litter. Any litter scattered into the neighbouring property, along access roads, in drainage ditches, along litter control fences, into surrounding trees or elsewhere on the landfill site shall be cleaned up by the Permittee. The Regional Waste Manager shall determine the frequency of clean up and other additional requirements for refuse scatter control.

2.7 Property Boundary

The buffer zone between the discharge of Municipal Solid Waste and the property boundary should be at least 15 metres and must be reserved for natural or landscaped screening (berms or vegetative screens).

Date issued: March 30, 1990
Date Amended: NOV 22 2001
(most recent)
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R.W. Girard, R.P. Bio.
Regional Waste Manager

PERMIT: PR-08721

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2.8 Notification of Unauthorised Burning

In the event of any unauthorised burning occurring at the site, the Permittee shall immediately notify the Regional Waste Manager and take appropriate remedial action.

2.9 Operational Requirements for Regulated Open Burning

The provision for open burning of selected materials is subject to the conditions outlined below. Based on site inspections by Environmental Protection staff, or any other information obtained, the Regional Waste Manager may in writing rescind this provision and prohibit burning at this site.

2.9.1 Area

The operation shall be restricted to an area on the site that is satisfactory to the Regional Waste Manager.

2.9.2 Nature of Wastes

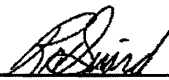
Generally, only wood waste that is acceptable to the Regional Waste Manager shall be burned. Acceptable materials may include selected demolition refuse, stumps, trees and similar items, but excluding nuisance causing combustibles such as rubber, plastics, tars, gyproc, pressure treated wood, insulation, etc.

2.9.3 Timing

Burning shall take place only when conditions promote rapid combustion and dispersion of combustible products. During burning, materials shall be charged to the facility in a manner to best promote combustion throughout the duration of the burn and restrict the uplift of lighter constituents. No burning shall take place during periods of high fire hazard nor when burning is prohibited by other government agencies.

2.9.4 Duration of Smoke Release

Each burn shall comprise one continuous period necessary to reduce the stockpile of waste to ashes. The smoke release period shall not exceed 24 consecutive hours.



R.W. Girard, R.P. Eto.
Regional Waste Manager

5

2.9.5 Fire Control

- 2.9.5.1 Burning shall take place only when approved by the Ministry of Forests and/or the local fire department who will determine whether it is safe to burn and may specify the conditions under which the burning can take place.
- 2.9.5.2 No burning shall occur when there is a wind strong enough to cause sparks or other burning material to land in any other combustible area.
- 2.9.5.3 A suitable distance shall be maintained between the open burning operation and any flammable material, such as slash, brush, dry grass, wood buildings and trees.
- 2.9.5.4 During burning, an attendant shall be on duty and adequate fire control equipment shall be available on site. Full time supervision shall be provided until the burning activity is complete and no danger of fire exists.

3. CLOSURE AND POST-CLOSURE

A Closure Plan shall be submitted for the written approval of the Regional Waste Manager prior to decommissioning of the site or as otherwise specified. The Closure Plan shall specify the closure date, design details, site monitoring and post-closure maintenance. Section 8 of the *Landfill Criteria for Municipal Solid Waste, June 1993*, shall be used as the terms of reference for developing the Closure Plan.

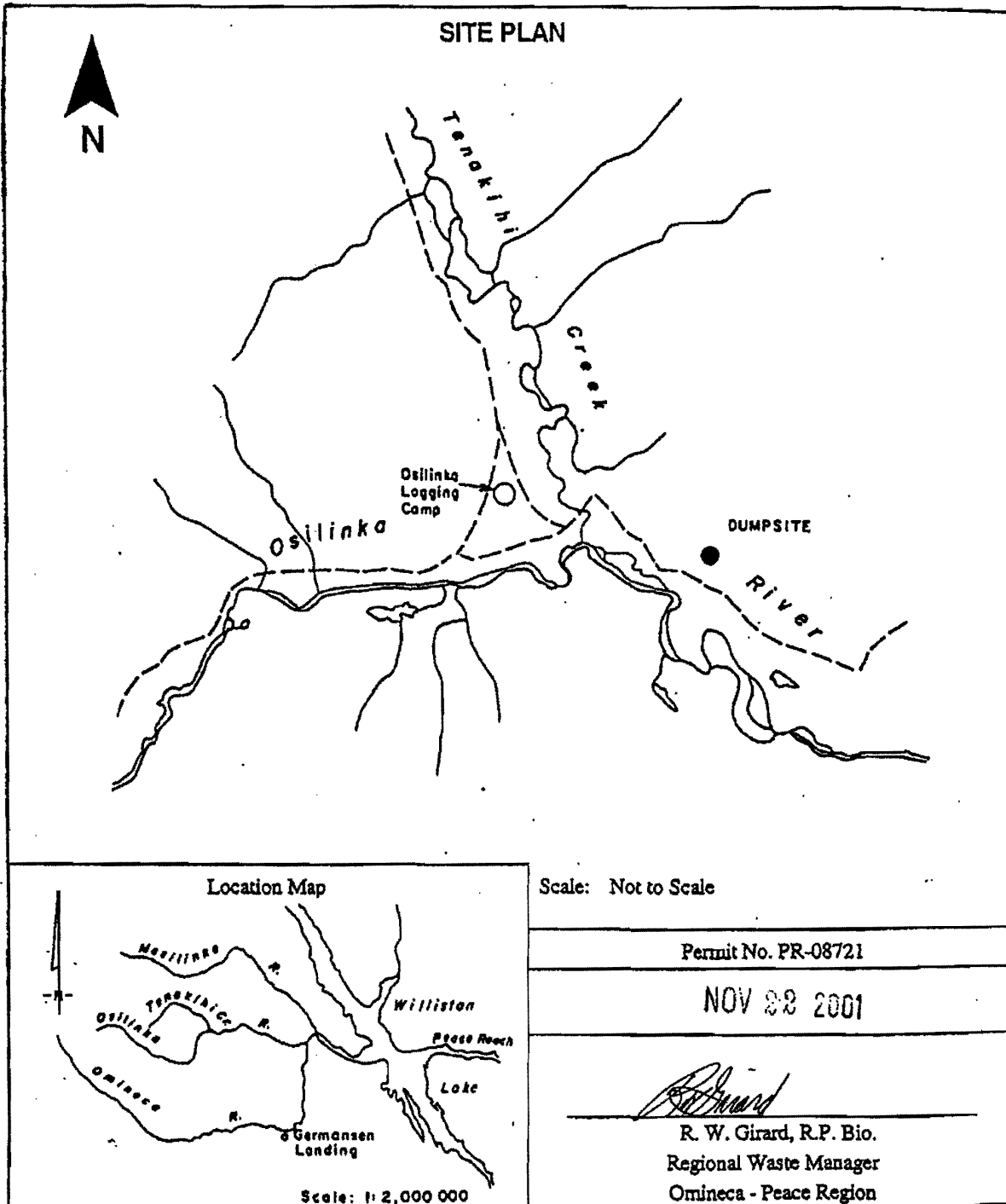
Site closure shall be carried out in accordance with the approved Closure Plan.

Date Issued: March 30, 1990
Date Amended: NOV 22 2001
(most recent)
Page: 5 of 5



R.W. Girard, R.P. Bio.
Regional Waste Manager

PERMIT: PR-08721





7
File: PR-08721

Date: NOV 23 2001

REGISTERED MAIL

Abitibi - Consolidated Inc.
PO Box 250
MACKENZIE BC V0J 2C0

Attention: Joan Thomas, R.P.F.

Dear Permittee:

Enclosed is Permit PR-08721 issued under the provisions of the *Waste Management Act*. Your attention is respectfully directed to the terms and conditions outlined in the permit. An annual permit fee will be determined according to the Waste Management Permit Fees Regulation.

This permit does not authorise entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorised by the owner of such lands or works. The responsibility for obtaining such authority shall rest with the permittee. This permit is issued pursuant to the provisions of the *Waste Management Act* to ensure compliance with Section 54(3) of that statute, which makes it an offence to discharge waste without proper authorisation. It is also the responsibility of the permittee to ensure that all activities conducted under this authorisation 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. Notice of the appeal must (1) be in writing, (2) include the grounds for appeal, (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria B.C., V8V 1X5 (4) be delivered within 30 days from the date notice of the decision is given, and (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Administration of this permit will be carried out by staff from our Regional Office located at 3rd Floor, 1011 Fourth Avenue, Prince George, British Columbia, V2L 3H9. Plans, data and reports pertinent to the permit are to be submitted to the Regional Waste Manager at this address.

Yours truly,

R.W. Girard
Regional Waste Manager
Omineca-Peace Region

enclosure

Ministry of Water,
Land and Air
Protection

Pollution Prevention
Omineca-Peace Region

Mailing Address:
1011 - 4th Avenue
Prince George, BC V2L 3H9

Telephone: (250) 565-6135
Facsimile: (250) 565-6629



File: PR-08721

Date: JAN 7 2002

REGISTERED MAIL

Compagnie Abitibi-Consolidated du Canada –
Abitibi-Consolidated Company of Canada
PO Box 250
MACKENZIE BC V0J 2C0

Attention: Joan Thomas, R.P.F.

Dear Joan:

Re: Notice of Correction to Permit No. PR-08721, presently in the name of Abitibi – Consolidated Inc., and last amended November 22, 2001.

This is to advise you that the following correction has been made to the subject permit. The permittee name should read:

**Compagnie Abitibi-Consolidated du Canada – Abitibi-Consolidated
Company of Canada**

Please remove and destroy the original page(s) in your permit package and replace with the revised version enclosed.

Yours truly,

A handwritten signature in cursive script, appearing to read "R.W. Girard".

R.W. Girard
Regional Waste Manager
Omineca-Peace Region

:BVN

Ministry of
Water, Land and Air
Protection

Pollution Prevention
Regional Operations
Omineca-Peace Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: 250-565-6155
Facsimile: 250-565-6629

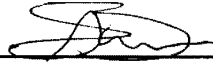
This is Exhibit 1133
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 33



MINISTRY OF ENVIRONMENT,
LANDS AND PARKS

PERMIT
PR-08722

Under the Provisions of the Waste Management Act

Finlay Forest Industries Inc.

P.O. Box 250

Mackenzie, British Columbia

VOJ 2C0

is authorized to discharge refuse to the ground from a logging camp and logging operations located near the confluence of Estella Creek and the Finlay River, 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 revokes and replaces all previously issued permits under the number PR-8722 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 the logging camp and logging operations. The site reference number for this discharge is E210364.

1.1.1 The maximum authorized rate of discharge is 600 m³/year.

1.1.2 The authorized components of the discharge are plastics, rubber, metal, and incineration ash.

1.1.3 The authorized works are a landfill operation, approximately located as shown on attached Site Plan A.

1.1.4 The location of the facilities from which the discharge originates is Latitude 56°56'20" Longitude 124°59'30".

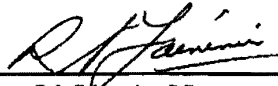
1.1.5 The location of the point of discharge is Latitude 56°58'50" Longitude 125°08'40".

Date Issued: March 30, 1990

Date Amended: **OCT 19 1994**

(most recent)

Page: 1 of 2


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

PERMIT : PR-08722

2

2. GENERAL REQUIREMENTS

2.1 Landfill Operation

The Permittee shall compact and apply cover material once every 40 days of operation or at least once every two months. The Regional Waste Manager may vary the frequency of covering when freezing conditions adversely affect normal operation or when sufficient quantities of soil material are incorporated with the waste.

There shall be no open burning.

Any refuse deemed unacceptable by the Regional Waste Manager shall not be discharged at this site.

2.2 Segregation of Metallic Wastes

Segregate metallic waste for disposal in a separate area of the site.

2.3 Bypasses

The discharge of refuse which has bypassed the designated treatment works is prohibited unless the consent of the Regional Waste Manager is obtained and confirmed in writing.

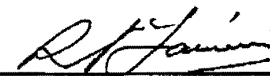
2.4 Refuse Disposal Modifications

The Permittee shall notify the Regional Waste Manager in writing prior to implementing changes to any refuse disposal practice that may affect the quality and/or quantity of the discharge.

2.5 Site Preparation and Restoration

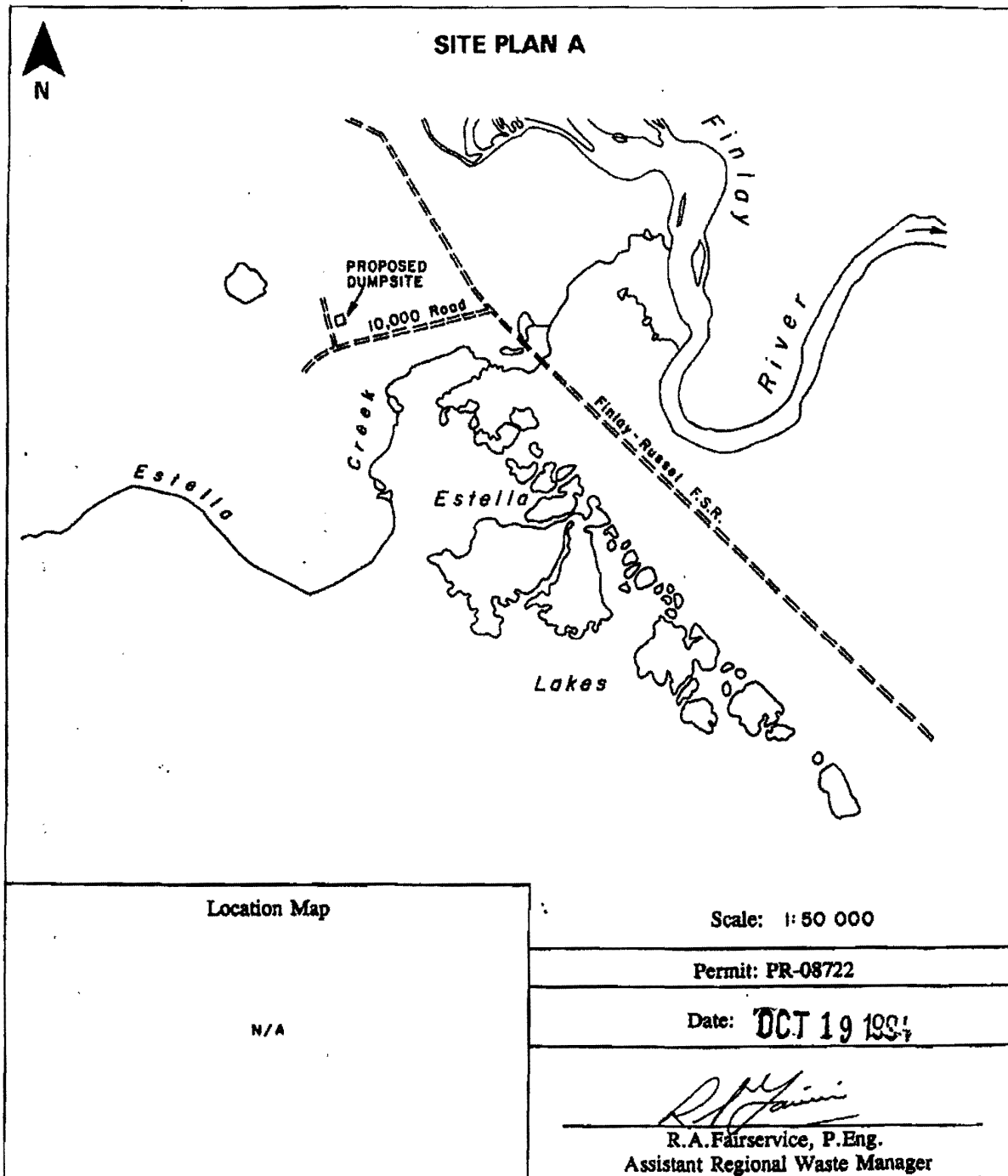
Provision of fencing, site access, vehicle safety barriers, surface water diversionary works, leachate control works, firebreaks and site restoration as required, shall be carried out to the satisfaction of the Regional Waste Manager.

Date Issued: March 30, 1990
Date Amended: OCT 19 1994
(most recent)
Page: 2 of 2



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

PERMIT : PR-08722





Province of
British Columbia

MINISTRY OF
ENVIRONMENT,
LANDS AND PARKS

BC
Environment

Environmental Protection
1011 4th Avenue
Prince George, British Columbia
V2L 3H9
Telephone: (604) 565-8155
Fax: (604) 565-6629

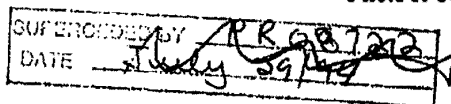
4

REGISTERED MAIL

Date: OCT 19 1994

File: PR-08722

Finlay Forest Industries Inc.
P.O. Box 250
Mackenzie, British Columbia
V0J 2C0



Attention: Brian Hamm

Nov. 2/94 Brian Hamm no longer with Company

Dear Permittee:

Enclosed is an amended copy of Permit No. PR-08722 issued under the provisions of the Waste Management Act. Your attention is respectfully directed to the terms and conditions outlined in the Permit.

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 shall rest with the Permittee.

The Permittee shall ensure that any discharge under this Permit meets the requirements of other regulatory agencies including, but not restricted to, Environment Canada and the Department of Fisheries and Oceans (Canada).

An annual permit fee will be determined according to the Waste Management Permit Fees Regulation.

The administration of this Permit will be carried out by staff from our Regional Office located in Prince George, (telephone 565-6447). Plans, data and reports pertinent to the Permit are to be submitted to the Environmental Protection office, 3rd Floor, 1011 Fourth Avenue, Prince George, British Columbia, V2L 3H9.

This decision may be appealed in accordance with Section 27 of the Waste Management Act by giving written notice to me within 21 days of this notification.

Yours truly,

R.A. Fairservice, P.Eng.
Assistant Regional Waste Manager
Northern Interior Region

enclosure



File: PR-08722

REGISTERED MAIL

December 6, 1999

Finlay Forest Industries Inc.
PO Box 250
Mackenzie BC V0J 2C0

Attention: Gary Walsh

Dear Permittee

Re: Permit Amendment for PR-08722

As per the request dated October 27, 1999 by Ladner Downs Barristers & Solicitors, and in accordance with Section 13 of the Waste Management Act, Permit PR-08722 (dated March 30, 1990 with an amendment date of October 19, 1994) is hereby amended so that the Permit Holder for this permit is now:

Products Forestiers Donohue Inc. - Donohue Forest Products Inc.
PO Box 250
Mackenzie BC V0J 2C0

This decision may be appealed to the Environmental Appeal Board. Notice of the appeal must: (1) be in writing, (2) include the grounds for the appeal, (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria, BC, V8V 1X5, (4) be delivered within 21 days from the date notice of the decision is given, and (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Yours truly,

R.A. Fairservice, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

:msb/ cc. Original to be sent to Robert Owen, Ladner Downs Barristers & Solicitors, 1200 Waterfront Centre, 200 Burrard Street, PO Box 48600, Vancouver, BC, V7X 1T2.
cc. Huges Simon, Comptroller, Donohue Forest Products Inc., PO Box 250, Mackenzie, V0J 2C0.

Ministry of
Environment,
Lands and Parks

Pollution Prevention
Environment and Lands
Omineca-Peace
Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629



6
File: PR-08722

REGISTERED MAIL

January 7, 2002

Produits Forestiers Donohue Inc. – Donohue Forest Products Inc.
PO Box 250
Mackenzie BC V0J 2C0

Attention: Gary Walsh
Logging Supervisor

Dear Gary,

Re: PERMIT AMENDMENT FOR PR-08722

Further to and as per the request dated December 11, 2001 by McCarthy Tetrault LLP, and in accordance with Section 13 of the *Waste Management Act*, Permit PR-08722 (dated March 30, 1990 and last amended December 6, 1999), is hereby amended so the Permit Holder for this permit is now:

**Compagnie Abitibi-Consolidated du Canada – Abitibi-Consolidated
Company of Canada**
PO Box 250
Mackenzie BC V0J 2C0

This decision may be appealed to the Environmental Appeal Board. Notice of the appeal must:

- (1) be in writing,
- (2) include the grounds for appeal,
- (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria B.C., V8V 1X5
- (4) be delivered within 21 days from the date notice of the decision is given, and
- (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Please attach this letter to the original permit. If you have any questions, please feel free to contact Ben Van Nostrand at 250-565-6528.

Yours truly,

Del Reinheimer, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

msb / cc. Jim Titerle, McCarthy Tetrault LLP, PO Box 10424, Pacific Centre, Suite 1300, 777
Dunsmuir Street, Vancouver, BC, V7Y 1K2.

**Ministry of Water,
Land and Air
Protection**

Pollution Prevention
Environment and Lands
Omineca-Peace Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629

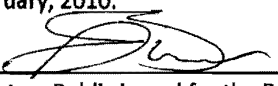
This is Exhibit "34"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 34



Pollution Prevention
1011 Fourth Avenue
Prince George
British Columbia V2L 3H9
Telephone: (250) 565-6155
Fax: (250) 565-6629

MINISTRY OF WATER, LAND AND AIR PROTECTION

PERMIT
PR-11116

Under the Provisions of the Waste Management Act

Compagnie Abitibi-Consolidated du Canada –
Abitibi-Consolidated Company of Canada
P.O. Box 250
Mackenzie, British Columbia, V0J 2C0

is authorised to discharge refuse to the ground from a logging camp commonly known as the Swannell Camp located near the confluence of the Swannell River and the Ingenika River, north-west of Mackenzie, 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 revokes and replaces all previously issued permits under the number PR-11116 issued under Part 2, Section 8 of the Waste Management Act.

1. AUTHORIZED DISCHARGES

- 1.1 This subsection applies to the discharge of refuse to a modified sanitary landfill operation. The site reference number for this discharge is E216729.
 - 1.1.1 The maximum authorised rate of refuse that may be discharged to the landfill is 6.6 tonnes per year.
 - 1.1.2 The characteristics of the refuse which may be discharged are those of construction waste, plastic, metal, rubber and incinerator ash. No other wastes shall be discharged without the written approval of the Regional Waste Manager.
 - 1.1.3 The authorised works are a modified trench-type landfill operation and related appurtenances.

Date Issued: February 5, 1992

Date Amended: **NOV 22 2001**
(most recent)

Page: 1 of 3

R.W. Girard, R.P. Bio.
Regional Waste Manager

PERMIT: PR-11116

- 1.1.4 The location of the facilities from which the discharge originates is approximately 2.5 km south west of the confluence of the Swannell River and the Ingenika River, 56°43'30" longitude 125°07'30", British Columbia.
- 1.1.5 The location of the point of discharge is shown on the attached Site Plan.
- 1.2 This subsection applies to the discharge of contaminants to the air from a **controlled open burning operation**. The site reference number for this discharge is E240041.
- 1.2.1 The maximum volume of woodwaste which may be burned and the frequency of individual burns shall not exceed 16 m³ per burn, 2 times per year.
- 1.2.2 The characteristics of the waste that may be burned are those of clean woodwaste.
- 1.2.3 The authorised works are a controlled open burning operation.
- 1.2.4 The location of the point of discharge is the same location as identified in subsection 1.1.4.

2. GENERAL REQUIREMENTS

2.1 Waste Compaction and Covering

The Permittee shall maintain the landfill, compact refuse and apply intermediate soil cover twice a year. Intermediate soil cover shall consist of a minimum of 0.30 meters of compacted soil placed over all exposed refuse. Final soil cover shall be applied in accordance with an approved Closure Plan as set out in Section 3.

The Regional Waste Manager may vary the maintenance frequency in consideration of modified operating hours or when freezing conditions adversely affect normal operations. Any revision to the maintenance frequency must have the prior written authorization of the Regional Waste Manager.

2.2 Site Preparation and Restoration



R.W. Girard, R.P. Bio.
Regional Waste Manager

2.2 Site Preparation and Restoration

Provision of fencing, site access, vehicle safety barriers, surface water diversionary works, leachate control works, firebreaks and site restoration as required, shall be carried out to the satisfaction of the Regional Waste Manager. Proper signage shall be provided to ensure adequate instruction to the general public using the facility.

2.3 Designated Areas

Reusable materials such as large metallic objects, white goods, tires and batteries, shall be segregated into separate areas of the landfill site. The preferred method of final disposal of these wastes is through recycling.

2.4 Restricted Materials

Generally, no wastes shall be disposed of at this site, which are unacceptable to the Regional Waste Manager. Unacceptable materials include, but are not limited to, items containing ozone depleting substances as defined in the *Ozone Depleting Substances Regulation*, and special wastes as defined by the *Special Waste Regulation*.

2.5 Wildlife Nuisance

The subject discharge is one that is of concern because of the possibility of a nuisance or hazard being caused by bears or other animals attracted to the site. Additional works may be required or the Regional Waste Manager may issue other operating instructions if such problems arise.

2.6 Litter Control

The best practical means shall be used to prevent the scatter of litter. Any litter scattered into the neighbouring property, along access roads, in drainage ditches, along litter control fences, into surrounding trees or elsewhere on the landfill site shall be cleaned up by the Permittee. The Regional Waste Manager shall determine the frequency of clean up and other additional requirements for refuse scatter control.

2.7 Property Boundary

The buffer zone between the discharge of Municipal Solid Waste and the property boundary should be at least 15 metres and must be reserved for natural or landscaped screening (berms or vegetative screens).

Date issued: February 5, 1992
Date Amended: **NOV 22 2001**
(most recent)
Page: 3 of 5


R.W. Girard, R.P. Bio.
Regional Waste Manager

PERMIT: PR-11116

4

2.8 Notification of Unauthorised Burning

In the event of any unauthorised burning occurring at the site, the Permittee shall immediately notify the Regional Waste Manager and take appropriate remedial action.

2.9 Operational Requirements for Regulated Open Burning

The provision for open burning of selected materials is subject to the conditions outlined below. Based on site inspections by Environmental Protection staff, or any other information obtained, the Regional Waste Manager may in writing rescind this provision and prohibit burning at this site.

2.9.1 Area

The operation shall be restricted to an area on the site that is satisfactory to the Regional Waste Manager.

2.9.2 Nature of Wastes

Generally, only wood waste that is acceptable to the Regional Waste Manager shall be burned. Acceptable materials may include selected demolition refuse, stumps, trees and similar items, but excluding nuisance causing combustibles such as rubber, plastics, tars, gyproc, pressure treated wood, insulation, etc.

2.9.3 Timing

Burning shall take place only when conditions promote rapid combustion and dispersion of combustible products. During burning, materials shall be charged to the facility in a manner to best promote combustion throughout the duration of the burn and restrict the uplift of lighter constituents. No burning shall take place during periods of high fire hazard nor when burning is prohibited by other government agencies.

2.9.4 Duration of Smoke Release

Each burn shall comprise one continuous period necessary to reduce the stockpile of waste to ashes. The smoke release period shall not exceed 24 consecutive hours.

Date Issued: February 5, 1992
Date Amended: **NOV 22 2001**
(most recent)
Page: 4 of 5



R.W. Girard, R.P. Bio.
Regional Waste Manager

PERMIT: PR-11116

5

2.9.5 Fire Control

- 2.9.5.1 Burning shall take place only when approved by the Ministry of Forests and/or the local fire department who will determine whether it is safe to burn and may specify the conditions under which the burning can take place.
- 2.9.5.2 No burning shall occur when there is a wind strong enough to cause sparks or other burning material to land in any other combustible area.
- 2.9.5.3 A suitable distance shall be maintained between the open burning operation and any flammable material, such as slash, brush, dry grass, wood buildings and trees.
- 2.9.5.4 During burning, an attendant shall be on duty and adequate fire control equipment shall be available on site. Full time supervision shall be provided until the burning activity is complete and no danger of fire exists.

3. CLOSURE AND POST-CLOSURE

A Closure Plan shall be submitted for the written approval of the Regional Waste Manager prior to decommissioning of the site or as otherwise specified. The Closure Plan shall specify the closure date, design details, site monitoring and post-closure maintenance. Section 8 of the *Landfill Criteria for Municipal Solid Waste, June 1993*, shall be used as the terms of reference for developing the Closure Plan.

Site closure shall be carried out in accordance with the approved Closure Plan.

Date Issued: February 5, 1992

Date Amended: **NOV 22 2001**
(most recent)

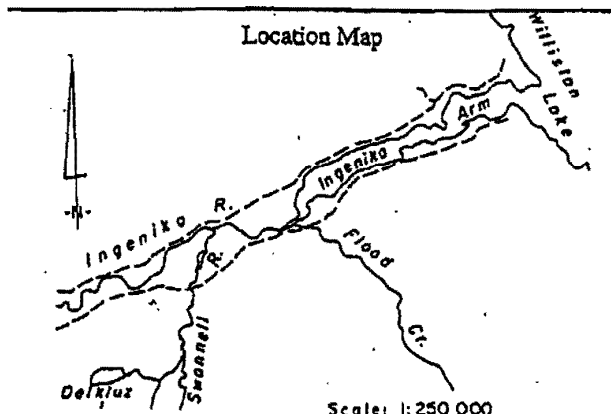
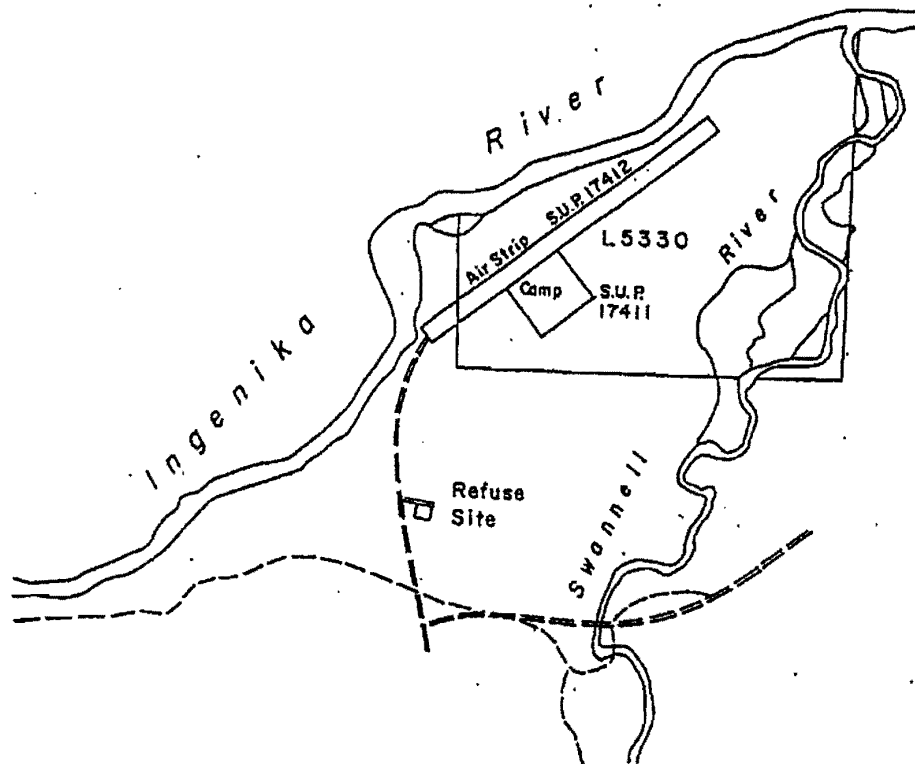
Page: 5 of 5



R.W. Girard, R.P. Bio,
Regional Waste Manager

PERMIT: PR-11116

SITE PLAN



Scale: Not to Scale

Permit No. PR-11116

NOV 22 2001

R. W. Girard, R.P. Bio.
Regional Waste Manager
Omineca - Peace Region



7
File: PR-11116

Date: NOV 22 2001

REGISTERED MAIL

Abitibi - Consolidated Inc.
PO Box 250
MACKENZIE BC V0J 2C0

Attention: Joan Thomas, R.P.F.

Dear Permittee:

Enclosed is Permit PR-11116 issued under the provisions of the *Waste Management Act*. Your attention is respectfully directed to the terms and conditions outlined in the permit. An annual permit fee will be determined according to the Waste Management Permit Fees Regulation.

This permit does not authorise entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorised by the owner of such lands or works. The responsibility for obtaining such authority shall rest with the permittee. This permit is issued pursuant to the provisions of the *Waste Management Act* to ensure compliance with Section 54(3) of that statute, which makes it an offence to discharge waste without proper authorisation. It is also the responsibility of the permittee to ensure that all activities conducted under this authorisation 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. Notice of the appeal must (1) be in writing, (2) include the grounds for appeal, (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria B.C., V8V 1X5 (4) be delivered within 30 days from the date notice of the decision is given, and (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Administration of this permit will be carried out by staff from our Regional Office located at 3rd Floor, 1011 Fourth Avenue, Prince George, British Columbia, V2L 3H9. Plans, data and reports pertinent to the permit are to be submitted to the Regional Waste Manager at this address.

Yours truly,

A handwritten signature in dark ink, appearing to read "R. Girard".

R.W. Girard
Regional Waste Manager
Omineca-Peace Region

enclosure

**Ministry of Water,
Land and Air
Protection**

Pollution Prevention
Omineca-Peace Region

Mailing Address:
1011 - 4th Avenue
Prince George, BC V2L 3H9

Telephone: (250) 565-6135
Facsimile: (250) 565-6629



File: PR-11116

Date: JAN 7 2002

REGISTERED MAIL

Compagnie Abitibi-Consolidated du Canada –
Abitibi-Consolidated Company of Canada
PO Box 250
MACKENZIE BC V0J 2C0

Attention: Joan Thomas, R.P.F.

Dear Joan:

Re: Notice of Correction to Permit No. PR-11116, presently in the name of Abitibi – Consolidated Inc., and last amended November 22, 2001.

This is to advise you that the following correction has been made to the subject permit. The permittee name should read:

**Compagnie Abitibi-Consolidated du Canada – Abitibi-Consolidated
Company of Canada**

Please remove and destroy the original page(s) in your permit package and replace with the revised version enclosed.

Yours truly,

A handwritten signature in dark ink, appearing to read "R. Girard".

R.W. Girard
Regional Waste Manager
Omineca-Peace Region

:BVN

Ministry of
Water, Land and Air
Protection

Pollution Prevention
Regional Operations
Omineca-Peace Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: 250-565-6155
Facsimile: 250-565-6629

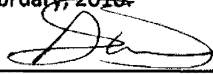
This is Exhibit "35"
referred to in the Affidavit
of Maureen Blawchuk
sworn before me this 4 day of
~~February, 2010.~~

A Notary Public in and for the Province of
British Columbia

Exhibit 35



Pollution Prevention
1011 Fourth Avenue
Prince George
British Columbia V2L 3H9
Telephone: (250) 565-6155
Fax: (250) 565-6829

MINISTRY OF WATER, LAND AND AIR PROTECTION

**PERMIT
PR-11638**

Under the Provisions of the Waste Management Act

**Compagnie Abitibi-Consolidated du Canada -
Abitibi-Consolidated Company of Canada
P.O. Box 250**

Mackenzie, British Columbia, V0J 2C0

is authorised to discharge refuse to the ground from a logging camp commonly known as the Omineca Camp located near the confluence of the Osoinka River and Williston Lake, north-west of Mackenzie, 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 revokes and replaces all previously issued permits under the number PR-11638 issued under Part 2, Section 8 of the Waste Management Act.

1. AUTHORIZED DISCHARGES

- 1.1 This subsection applies to the discharge of refuse to a modified sanitary landfill operation. The site reference number for this discharge is E219382.
 - 1.1.1 The maximum authorised rate of refuse that may be discharged to the landfill is 10 tonnes per year.
 - 1.1.2 The characteristics of the refuse which may be discharged are those of construction waste, plastic, metal, rubber and incinerator ash. No other wastes shall be discharged without the written approval of the Regional Waste Manager.
 - 1.1.3 The authorised works are a modified trench-type landfill operation and related appurtenances.

Date issued: July 19, 1993
Date Amended:
(most recent)
Page: 1 of 5

NOV 22 2001



R.W. Girard, R.P. Bio.
Regional Waste Manager

PERMIT: PR-11638

- 1.1.4 The location of the facilities from which the discharge originates is approximately 700 meters south east of the confluence of the Osilinka River and Williston Lake, 56°00'00" longitude 124°00'00", British Columbia.
- 1.1.5 The location of the point of discharge is shown on the attached Site Plan.
- 1.2 This subsection applies to the discharge of contaminants to the air from a controlled open burning operation. The site reference number for this discharge is E240042.
 - 1.2.1 The maximum volume of woodwaste which may be burned and the frequency of individual burns shall not exceed 16 m³ per burn, 2 times per year.
 - 1.2.2 The characteristics of the waste that may be burned are those of clean woodwaste.
 - 1.2.3 The authorised works are a controlled open burning operation.
 - 1.2.4 The location of the point of discharge is the same location as identified in subsection 1.1.4.

2. GENERAL REQUIREMENTS

2.1 Waste Compaction and Covering

The Permittee shall maintain the landfill, compact refuse and apply intermediate soil cover twice a year. Intermediate soil cover shall consist of a minimum of 0.30 meters of compacted soil placed over all exposed refuse. Final soil cover shall be applied in accordance with an approved Closure Plan as set out in Section 3.

The Regional Waste Manager may vary the maintenance frequency in consideration of modified operating hours or when freezing conditions adversely affect normal operations. Any revision to the maintenance frequency must have the prior written authorization of the Regional Waste Manager.

2.2 Site Preparation and Restoration

Provision of fencing, site access, vehicle safety barriers, surface water diversionary works, leachate control works, firebreaks and site restoration as required, shall be carried out to the satisfaction of the Regional Waste Manager. Proper signage shall be provided to ensure adequate instruction to the general public using the facility.

2.3 Designated Areas

Reusable materials such as large metallic objects, white goods, tires and batteries, shall be segregated into separate areas of the landfill site. The preferred method of final disposal of these wastes is through recycling.

2.4 Restricted Materials

Generally, no wastes shall be disposed of at this site, which are unacceptable to the Regional Waste Manager. Unacceptable materials include, but are not limited to, items containing ozone depleting substances as defined in the *Ozone Depleting Substances Regulation*, and special wastes as defined by the *Special Waste Regulation*.

2.5 Wildlife Nuisance

The subject discharge is one that is of concern because of the possibility of a nuisance or hazard being caused by bears or other animals attracted to the site. Additional works may be required or the Regional Waste Manager may issue other operating instructions if such problems arise.

2.6 Litter Control

The best practical means shall be used to prevent the scatter of litter. Any litter scattered into the neighbouring property, along access roads, in drainage ditches, along litter control fences, into surrounding trees or elsewhere on the landfill site shall be cleaned up by the Permittee. The Regional Waste Manager shall determine the frequency of clean up and other additional requirements for refuse scatter control.

2.7 Property Boundary

The buffer zone between the discharge of Municipal Solid Waste and the property boundary should be at least 15 metres and must be reserved for natural or landscaped screening (berms or vegetative screens).

Date issued: July 19, 1993
Date Amended:
(most recent) **NOV 22 2001**
Page: 3 of 5


R.W. Girard, R.P. Bio.
Regional Waste Manager

PERMIT: PR-11638

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2.8 Notification of Unauthorised Burning

In the event of any unauthorised burning occurring at the site, the Permittee shall immediately notify the Regional Waste Manager and take appropriate remedial action.

2.9 Operational Requirements for Regulated Open Burning

The provision for open burning of selected materials is subject to the conditions outlined below. Based on site inspections by Environmental Protection staff, or any other information obtained, the Regional Waste Manager may in writing rescind this provision and prohibit burning at this site.

2.9.1 Area

The operation shall be restricted to an area on the site that is satisfactory to the Regional Waste Manager.

2.9.2 Nature of Wastes

Generally, only wood waste that is acceptable to the Regional Waste Manager shall be burned. Acceptable materials may include selected demolition refuse, stumps, trees and similar items, but excluding nuisance causing combustibles such as rubber, plastics, tars, gyproc, pressure treated wood, insulation, etc.

2.9.3 Timing

Burning shall take place only when conditions promote rapid combustion and dispersion of combustible products. During burning, materials shall be charged to the facility in a manner to best promote combustion throughout the duration of the burn and restrict the uplift of lighter constituents. No burning shall take place during periods of high fire hazard nor when burning is prohibited by other government agencies.

2.9.4 Duration of Smoke Release

Each burn shall comprise one continuous period necessary to reduce the stockpile of waste to ashes. The smoke release period shall not exceed 24 consecutive hours.

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2.9.5 Fire Control

- 2.9.5.1 Burning shall take place only when approved by the Ministry of Forests and/or the local fire department who will determine whether it is safe to burn and may specify the conditions under which the burning can take place.
- 2.9.5.2 No burning shall occur when there is a wind strong enough to cause sparks or other burning material to land in any other combustible area.
- 2.9.5.3 A suitable distance shall be maintained between the open burning operation and any flammable material, such as slash, brush, dry grass, wood buildings and trees.
- 2.9.5.4 During burning, an attendant shall be on duty and adequate fire control equipment shall be available on site. Full time supervision shall be provided until the burning activity is complete and no danger of fire exists.

3. CLOSURE AND POST-CLOSURE

A Closure Plan shall be submitted for the written approval of the Regional Waste Manager prior to decommissioning of the site or as otherwise specified. The Closure Plan shall specify the closure date, design details, site monitoring and post-closure maintenance. Section 8 of the *Landfill Criteria for Municipal Solid Waste, June 1993*, shall be used as the terms of reference for developing the Closure Plan.

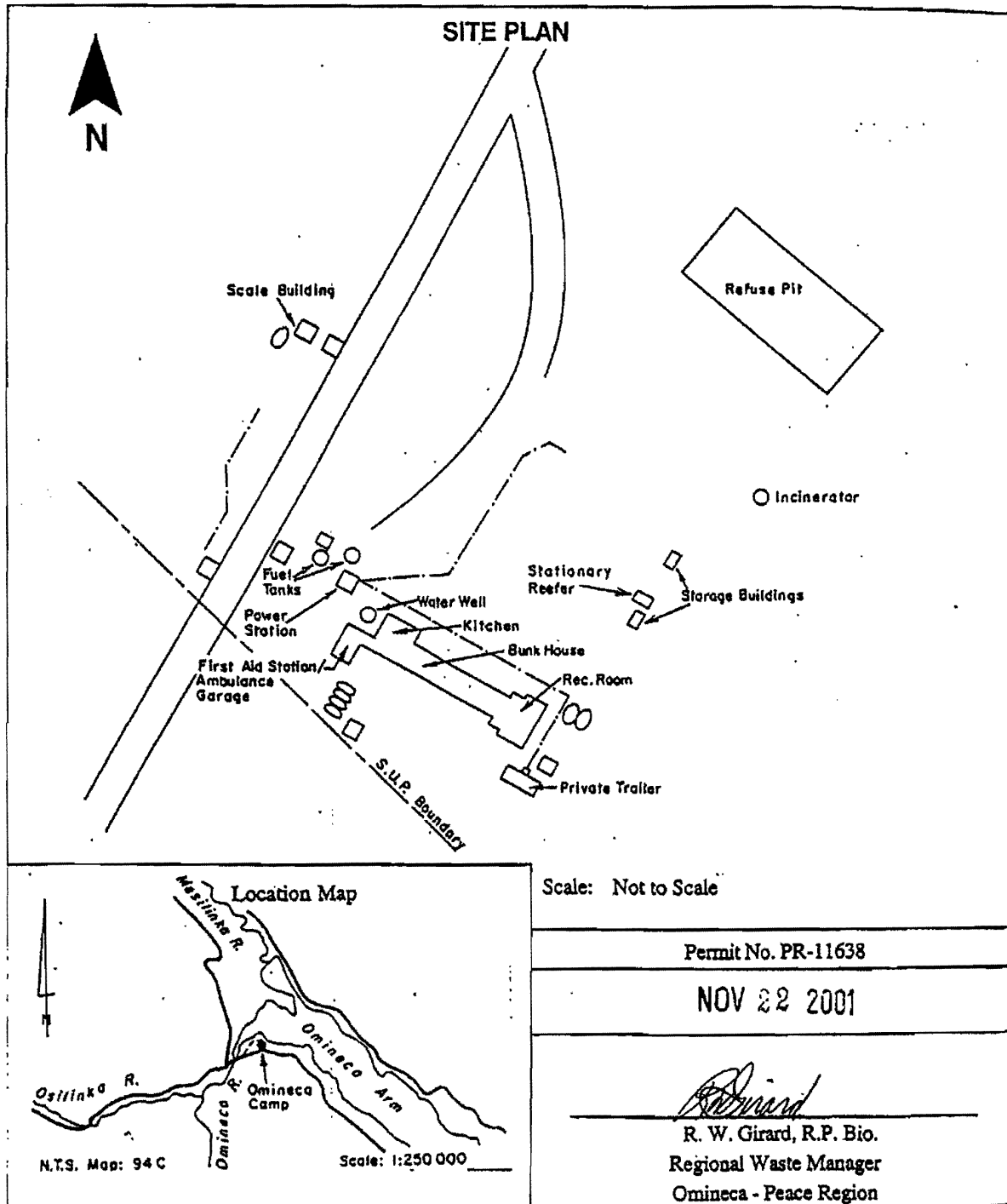
Site closure shall be carried out in accordance with the approved Closure Plan.

Date issued: July 19, 1993
Date Amended: **NOV 22 2001**
(most recent)
Page: 5 of 5


R.W. Girard, R.P. Bio.
Regional Waste Manager

PERMIT: PR-11638

6





File: PR-11638

Date: NOV 22 2001

REGISTERED MAIL

Abitibi - Consolidated Inc.
PO Box 250
MACKENZIE BC V0J 2C0

Attention: Joan Thomas, R.P.F.

Dear Permittee:

Enclosed is Permit PR-11638 issued under the provisions of the *Waste Management Act*. Your attention is respectfully directed to the terms and conditions outlined in the permit. An annual permit fee will be determined according to the Waste Management Permit Fees Regulation.

This permit does not authorise entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorised by the owner of such lands or works. The responsibility for obtaining such authority shall rest with the permittee. This permit is issued pursuant to the provisions of the *Waste Management Act* to ensure compliance with Section 54(3) of that statute, which makes it an offence to discharge waste without proper authorisation. It is also the responsibility of the permittee to ensure that all activities conducted under this authorisation 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. Notice of the appeal must (1) be in writing, (2) include the grounds for appeal, (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria B.C., V8V 1X5 (4) be delivered within 30 days from the date notice of the decision is given, and (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Administration of this permit will be carried out by staff from our Regional Office located at 3rd Floor, 1011 Fourth Avenue, Prince George, British Columbia, V2L 3H9. Plans, data and reports pertinent to the permit are to be submitted to the Regional Waste Manager at this address.

Yours truly,


R.W. Girard
Regional Waste Manager
Omineca-Peace Region

enclosure

Ministry of Water,
Land and Air
Protection

Pollution Prevention
Omineca-Peace Region

Mailing Address:
1011 - 4th Avenue
Prince George, BC V2L 3H9

Telephone: (250) 565-6135
Facsimile: (250) 565-6629



8

File: PR-11638

Date: JAN 7 2002

REGISTERED MAIL

Compagnie Abitibi-Consolidated du Canada –
Abitibi-Consolidated Company of Canada
PO Box 250
MACKENZIE BC V0J 2C0

Attention: Joan Thomas, R.P.F.

Dear Joan:

Re: Notice of Correction to Permit No. PR-11638, presently in the name of Abitibi – Consolidated Inc., and last amended November 22, 2001.

This is to advise you that the following correction has been made to the subject permit. The permittee name should read:

**Compagnie Abitibi-Consolidated du Canada – Abitibi-Consolidated
Company of Canada**

Please remove and destroy the original page(s) in your permit package and replace with the revised version enclosed.

Yours truly,


R.W. Girard
Regional Waste Manager
Omineca-Peace Region

:BVN

Ministry of
Water, Land and Air
Protection

Pollution Prevention
Regional Operations
Omineca-Peace Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: 250-565-6155
Facsimile: 250-565-6629

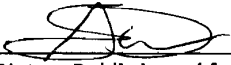
This is Exhibit "36"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 36



Pollution Prevention
1011 Fourth Avenue
Prince George
British Columbia V2L 3H9
Telephone: (250) 565-6155
Fax: (250) 565-6629

MINISTRY OF ENVIRONMENT,
LANDS AND PARKS

PERMIT
PE-14802

Under the Provisions of the Waste Management Act

Finlay Forest Industries Inc.

P.O. Box 250

Mackenzie, British Columbia

V0J 2C0

is authorized to discharge effluent to the ground from a 150-person logging camp commonly known as the Ostlinka Camp, located approximately 230 km north west of Mackenzie, 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.

1. AUTHORISED DISCHARGES

1.1 This subsection applies to the discharge of septic tank effluent to a sub-surface disposal system. The site reference number for this discharge is E234353

1.1.1 The maximum authorised rate of discharge is 34 m³/day.

1.1.2 The characteristics of the effluent shall be equivalent to or better than typical septic tank effluent. For the purpose of permit fee calculations, the following effluent quality criteria shall be used:

- | | |
|------------------------------------|----------|
| a) 5-Day Biochemical Oxygen Demand | 130 mg/L |
| b) Total Suspended Solids | 130 mg/L |

1.1.3 The authorised works are a 36 m³ septic tank and a 9 m³ septic tank connected in series, a 9 m³ dosing chamber, two drainfields (each containing 396 metres of drainage pipe), a standby area and related appurtenances approximately located as shown on the attached Site Plan A.

Date Issued: FEB 02 1999
Date Amended:
(most recent)
Page: 1 of 3

B.W. Medlar
Assistant Regional Waste Manager

PERMIT: PE-14802

2

- 1.1.4 The location of the point of discharge and the facilities from which the discharge originates is approximately 1.5 km east of the confluence of the Osilinka River and Tenakihi Creek, S.U.P. #13094 and Forest Licence A 15385, British Columbia (Longitude: 125° 07' 25", Latitude: 56° 08' 66").

2. **GENERAL REQUIREMENTS**

2.1. **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 continuing operation of the authorized works, the Permittee shall immediately notify the Regional Waste Manager and take appropriate remedial action.

2.2. **Bypasses**

The discharge of effluent which has bypassed the authorized works is prohibited unless the consent of the Regional Waste Manager is obtained and confirmed in writing.

2.3. **Modifications to Processes and/or Authorized Works**

The Permittee shall notify the Regional Waste Manager in writing prior to implementing changes to any process and/or authorized works that may negatively affect the quality of the discharge and/or increase the quantity of the discharge.

2.4. **Future Upgrading of Works**

The Regional Waste Manager may require future upgrading of the authorized works to protect the environment.

2.5. **Plans - New Works**

Plans and specifications of any new works shall be submitted to the Regional Waste Manager and his consent obtained in writing before construction commences. The works shall be constructed in accordance with the approved plans.

2.6. **Septic Tank Sludge and Scum Removal**

The septic tanks and dosing chamber shall be accessible for pumpout, inspected annually and pumped out a minimum of once every three (3) years or at a frequency sufficient to ensure that sludge accumulation does not exceed 20% of the tank depth. Sludge and scum wasted from the treatment works shall be disposed of to a site and in a manner authorized by the Regional Waste Manager. Records of the frequency and volumes of sludge and scum removal shall be maintained for inspection.

Date Issued: FEB 02 1999
Date Amended:
(most recent)
Page: 2 of 3


B.W. Medlar
Assistant Regional Waste Manager

PERMIT: PE-14802

2.7. Dosing Chamber Operation

A dosing chamber shall be utilized to provide uniform distribution of effluent throughout the drainfield area. The lift pump shall be maintained on a regular basis and a standby pump shall be available on site for use as a replacement in the case of pump failure.

2.8. Operation of Drainfields

With respect to operation of the drainage fields, the following points shall be adhered to:

- a) The surface of the drainfields shall be kept free of buildings, vehicular traffic or hard surfacing of any kind.
- b) The permittee shall alternate use of the drainfields to provide intermittent periods of dosing and rest. The alternating period requires the approval of the Regional Waste Manager.
- c) Observation ports, which provide visual access to the disposal pipe and trench bottom, shall be installed and maintained in the drainfields. The number and location of these facilities is subject to the approval of the Regional Waste Manager. During operation of the drainfields, the Permittee shall monitor the performance of the field by conducting regular inspections at the observation ports.
- d) A standby area, equivalent to 200% of the developed field area, shall be set aside and maintained free of any permanent structures. The standby area is to be held in reserve for future use as a ground disposal field.

3. MONITORING AND REPORTING REQUIREMENTS

3.1. Discharge Monitoring

3.1.1. Camp Occupancy

In order to estimate use of the sewage facility, the permittee shall record, once each month, the maximum number of people in occupancy at the camp during that month.

3.2. Reporting

Monthly occupancy records shall be maintained for inspection and submitted to the Regional Pollution Prevention office annually, on or before January 31st of each year for the previous twelve month period.

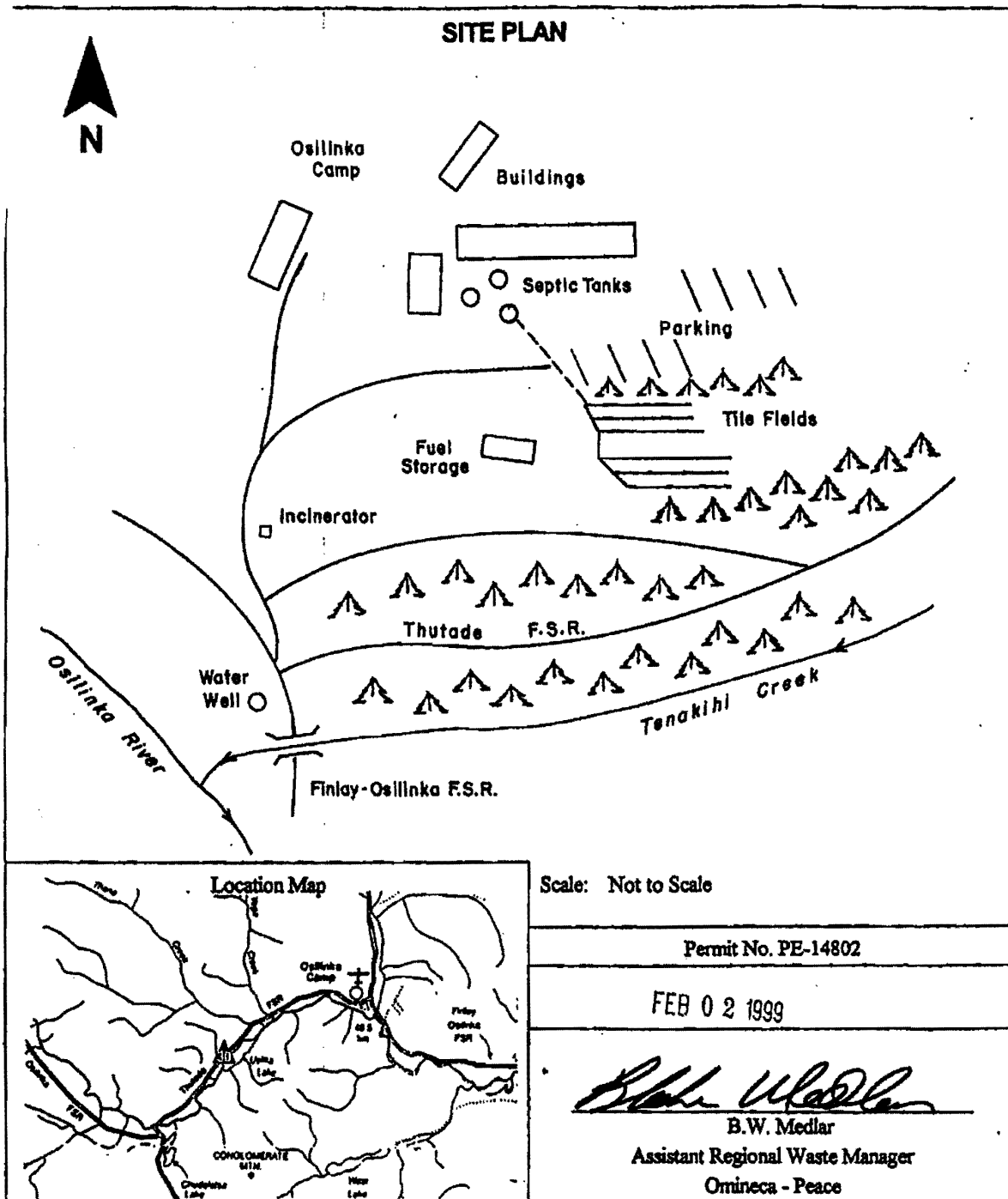
The need for subsequent increased or decreased monitoring will be assessed on the basis of the monitoring data submitted and any other data gathered by Pollution Prevention in connection with this discharge.

Date Issued: FEB 02 1999
Date Amended:
(most recent)
Page: 3 of 3


B.W. Medlar
Assistant Regional Waste Manager

PERMIT: PE-14802

4





Date: FEB 02 1999

File: PE-14802

REGISTERED MAIL

Finlay Forest Industries Inc.
P.O. Box 250
Mackenzie BC V0J 2C0

Attention: Gary Walsh

Dear Permittee:

Enclosed is Permit PE-14802 issued under the provisions of the *Waste Management Act*. Your attention is respectfully directed to the terms and conditions outlined in the permit. An annual permit fee will be determined according to the Waste Management Permit Fees Regulation.

This permit does not authorise entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorised by the owner of such lands or works. The responsibility for obtaining such authority shall rest with the permittee. This permit is issued pursuant to the provisions of the *Waste Management Act* to ensure compliance with Section 54(3) of that statute, which makes it an offence to discharge waste without proper authorisation. It is also the responsibility of the permittee to ensure that all activities conducted under this authorisation 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. Notice of the appeal must (1) be in writing, (2) include the grounds for appeal, (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria B.C., V8V 1X5 (4) be delivered within 30 days from the date notice of the decision is given, and (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Administration of this permit will be carried out by staff from our Regional Office located at 3rd Floor, 1011 Fourth Avenue, Prince George, British Columbia, V2L 3H9. Plans, data and reports pertinent to the permit are to be submitted to the Regional Waste Manager at this address, and a copy of all plans, data and reports is to be submitted to the sub-regional office at Room #400, 10003 - 110th Avenue, Fort St. John, British Columbia, V1J 6M7 (telephone (250) 787-3559).

Yours truly,

B.W. Medlar
Assistant Regional Waste Manager
Omineca-Peace Region

BNV
enclosure

Ministry of
Environment,
Lands and Parks

Pollution Prevention
Environment and Lands
Omineca-Peace Region

Mailing Address:
1011 - 4th Avenue
Prince George, BC V2L 3H9

Telephone: (250) 363-6155
Facsimile: (250) 363-6629



6
File: PE-14802

REGISTERED MAIL

December 6, 1999

Finlay Forest Industries Inc.
PO Box 250
Mackenzie BC V0J 2C0

Attention: Gary Walsh

Dear Permittee

Re: Permit Amendment for PE-14802

As per the request dated October 27, 1999 by Ladner Downs Barristers & Solicitors, and in accordance with Section 13 of the Waste Management Act, Permit PE-14802 (dated February 2, 1999) is hereby amended so that the Permit Holder for this permit is now:

Products Foresters Donohue Inc. - Donohue Forest Products Inc.
PO Box 250
Mackenzie BC V0J 2C0

This decision may be appealed to the Environmental Appeal Board. Notice of the appeal must: (1) be in writing, (2) include the grounds for the appeal, (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal board, 4th Floor 836 Yates Street, Victoria, BC, V8V 1X5, (4) be delivered within 21 days from the date notice of the decision is given, and (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Yours truly,


R.A. Fairbridge, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

rmsb/ cc. Original to be sent to Robert Owen, Ladner Downs Barristers & Solicitors, 1200 Waterfront Centre, 200 Burrard Street, PO Box 48600, Vancouver, BC, V7X 1T2.
cc. Huges Simon, Comptroller, Donohue Forest Products Inc., PO Box 250, Mackenzie, V0J 2C0.

Ministry of
Environment,
Lands and Parks

Pollution Prevention
Environment and Lands
Omineca-Peace
Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629



7

File: PE-14802

REGISTERED MAIL

January 7, 2002

Products Foresters Donohue Inc. - Donohue Forest Products Inc.
PO Box 250
Mackenzie BC V0J 2C0

Attention: Gary Walsh
Logging Supervisor

Dear Gary,

Re: PERMIT AMENDMENT FOR PE-14802

Further to and as per the request dated December 11, 2001 by McCarthy Tetraault LLP, and in accordance with Section 13 of the *Waste Management Act*, Permit PE-14802 (dated February 2, 1990 and last amended December 6, 1999), is hereby amended so the Permit Holder for this permit is now:

**Compagnie Abitibi-Consolidated du Canada - Abitibi-Consolidated
Company of Canada
PO Box 250
Mackenzie BC V0J 2C0**

This decision may be appealed to the Environmental Appeal Board. Notice of the appeal must:

- (1) be in writing,
- (2) include the grounds for appeal,
- (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria B.C., V8V 1X5
- (4) be delivered within 21 days from the date notice of the decision is given, and
- (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Please attach this letter to the original permit. If you have any questions, please feel free to contact Ben Van Nostrand at 250-565-6528.

Yours truly, ..

Del Reinheimer, P.Eng.
Assistant Regional Waste Manager
Omineca-Peace Region

:msb / cc. Jim Titerie, McCarthy Tetraault LLP, PO Box 10424, Pacific Centre, Suite 1300, 777
Dunsmuir Street, Vancouver, BC, V7Y 1K2.

**Ministry of Water,
Land and Air
Protection**

Pollution Prevention
Environment and Lands
Omineca-Peace Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-8155
Facsimile: (250) 565-6629

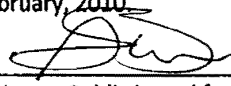
This is Exhibit "37"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010

A Notary Public in and for the Province of
British Columbia

Exhibit 37



Pollution Prevention
1011 Fourth Avenue
Prince George
British Columbia V2L 3H9
Telephone: (250) 565-6155
Fax: (250) 565-6829

MINISTRY OF WATER, LAND AND AIR PROTECTION

PERMIT
PR-15742

Under the Provisions of the Waste Management Act

Compagnie Abitibi-Consolidated du Canada -

Abitibi-Consolidated Company of Canada

P.O. Box 250

Mackenzie, British Columbia, V0J 2C0

is authorized to discharge refuse to the ground from a logging camp commonly known as the Ottertail Camp located in the vicinity of the confluence of the Nabesche River with the Peace Reach of Williston Lake Reservoir, 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 revokes and replaces all previously issued permits under the number PR-8720 issued under Part 2, Section 8 of the Waste Management Act.

1. AUTHORIZED DISCHARGES

1.1 This subsection applies to the discharge of refuse to a landfill operation. The site reference number for this discharge is E210378.

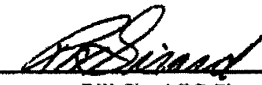
1.1.1 The maximum authorized rate of refuse, which may be discharged to the landfill, is 50 tonnes per year. The maximum authorized frequency of discharge is 365 days per year.

1.1.2 The characteristics of the refuse which may be discharged are those of construction waste, plastic, metal, rubber and incinerator ash. No other wastes shall be discharged without the written approval of the Regional Waste Manager.

1.1.3 The authorized works are a modified trench-type landfill operation and related appurtenances.

Date issued: October 20, 1998

Date Amended: **NOV 22 2001**
(most recent)


R.W. Girard, R.P. Bio.
Regional Waste Manager

2

1.1.4 The location of the facilities from which the discharge originates is approximately 1.5 km on the Nabesche FSR; accessed by the Industrial Waste Access Road to an existing landing in CP 10 CB 1. Latitude - 56°05'30" N, Longitude - 123°06'30" W, which is approximately 5.1 km Southeast of the confluence of the Nabesche River with the Peace Reach of Williston Lake Reservoir, British Columbia.

1.1.5 The location of the point of discharge is shown on the attached Site Plan.

2. GENERAL REQUIREMENTS

2.1 Waste Compaction and Covering

The Permittee shall maintain the landfill, compact refuse and apply intermediate soil cover twice a year. Intermediate soil cover shall consist of a minimum of 0.30 meters of compacted soil placed over all exposed refuse. Final soil cover shall be applied in accordance with an approved Closure Plan as set out in Section 3.

The Regional Waste Manager may vary the maintenance frequency in consideration of modified operating hours or when freezing conditions adversely affect normal operations. Any revision to the maintenance frequency must have the prior written authorization of the Regional Waste Manager.

2.2 Site Preparation and Restoration

Provision of fencing, site access, vehicle safety barriers, surface water diversionary works, leachate control works, firebreaks and site restoration as required, shall be carried out to the satisfaction of the Regional Waste Manager. Proper signage shall be provided to ensure adequate instruction to the general public using the facility.

2.3 Designated Areas

Reusable materials such as large metallic objects, white goods, tires and batteries, shall be segregated into separate areas of the landfill site. The preferred method of final disposal of these metal wastes is through recycling.

2.4 Restricted Materials

Generally, no wastes shall be disposed of at this site which are unacceptable to the Regional Waste Manager. Unacceptable materials include, but are not limited to, items containing ozone depleting substances as defined in the *Ozone Depleting*

3

Substances Regulation, and special wastes as defined by the *Special Waste Regulation*.

2.5 Wildlife Nuisance

The subject discharge is one that is of concern because of the possibility of a nuisance or hazard being caused by bears or other animals attracted to the site. Additional works may be required or other operating instructions may be issued by the Regional Waste Manager if such problems arise.

2.6 Litter Control

The best practical means shall be used to prevent the scatter of litter. Any litter scattered into the neighbouring property, along access roads, in drainage ditches, along litter control fences, into surrounding trees or elsewhere on the landfill site shall be cleaned up by the Permittee. The frequency of clean up and other additional requirements for refuse scatter control shall be determined by the Regional Waste Manager.

2.7 Notification of Unauthorized Burning

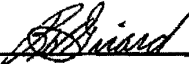
In the event of any unauthorized burning occurring at the site, the Permittee shall immediately notify the Regional Waste Manager and take appropriate remedial action.

3. Closure and Post - Closure

A Closure Plan shall be submitted for the written approval of the Regional Waste Manager prior to decommissioning of the site or as otherwise specified. The Closure Plan shall specify the closure date, design details, site monitoring and post-closure maintenance. Section 8 of the *Landfill Criteria for Municipal Solid Waste, June 1993*, shall be used as the terms of reference for developing the Closure Plan.

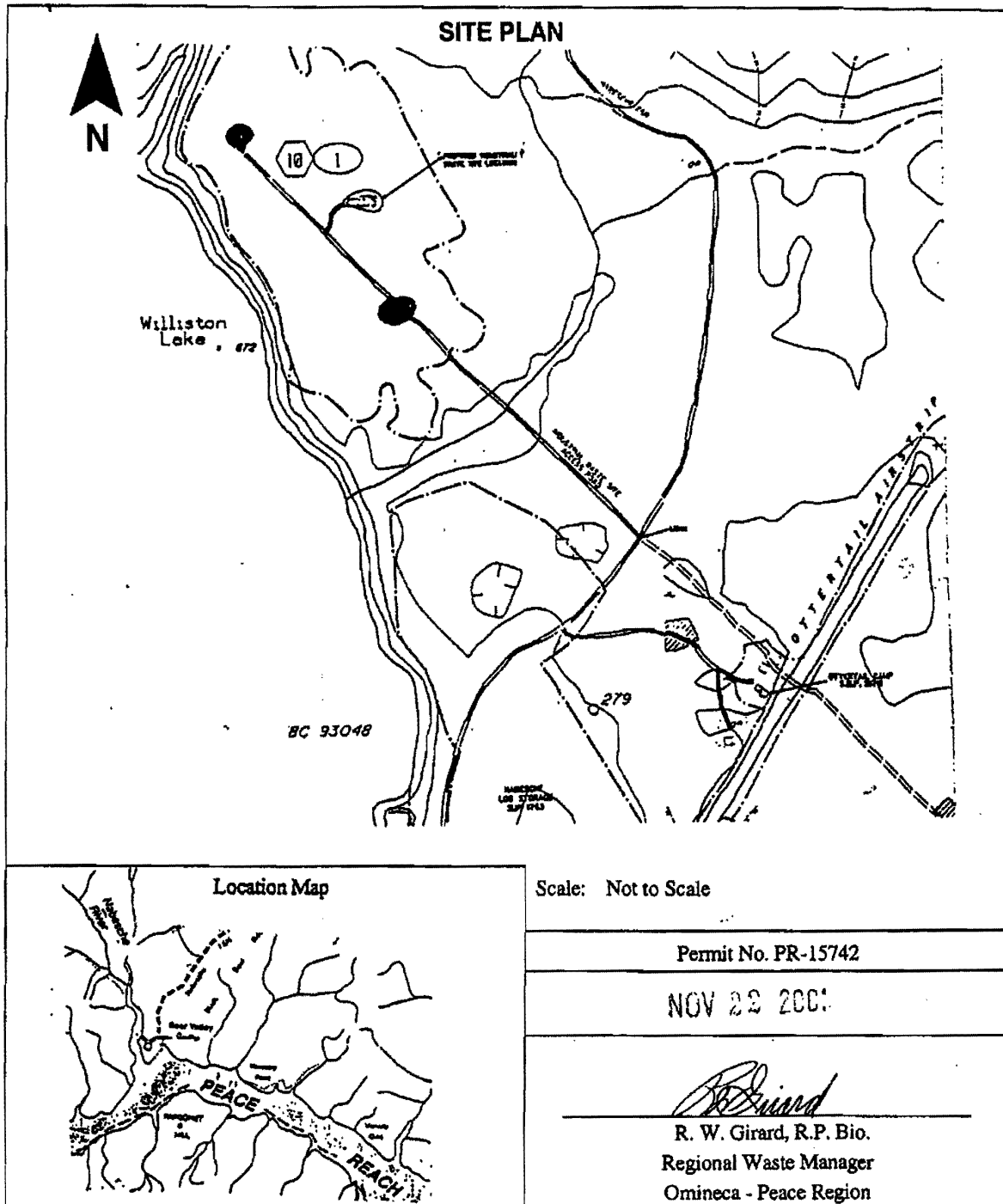
Site closure shall be carried out in accordance with the approved Closure Plan.

Date Issued: October 20, 1998
Date Amended: **NOV 22 2001**
(most recent)
Page: 3 of 3



R.W. Girard, R.P. Bio.
Regional Waste Manager

PERMIT: PR-16742





File: PR-15742

Date: NOV 28 2001

REGISTERED MAIL

Abitibi - Consolidated Inc.
PO Box 250
MACKENZIE BC V0J 2C0

Attention: Joan Thomas, R.P.F.

Dear Permittee:

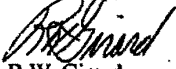
Enclosed is Permit PR-15742 issued under the provisions of the *Waste Management Act*. Your attention is respectfully directed to the terms and conditions outlined in the permit. An annual permit fee will be determined according to the Waste Management Permit Fees Regulation.

This permit does not authorise entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorised by the owner of such lands or works. The responsibility for obtaining such authority shall rest with the permittee. This permit is issued pursuant to the provisions of the *Waste Management Act* to ensure compliance with Section 54(3) of that statute, which makes it an offence to discharge waste without proper authorisation. It is also the responsibility of the permittee to ensure that all activities conducted under this authorisation 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. Notice of the appeal must (1) be in writing, (2) include the grounds for appeal, (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria B.C., V8V 1X5 (4) be delivered within 30 days from the date notice of the decision is given, and (5) be accompanied by a fee of \$25, payable to the Minister of Finance and Corporate Relations.

Administration of this permit will be carried out by staff from our Regional Office located at 3rd Floor, 1011 Fourth Avenue, Prince George, British Columbia, V2L 3H9. Plans, data and reports pertinent to the permit are to be submitted to the Regional Waste Manager at this address.

Yours truly,


R.W. Girard
Regional Waste Manager
Omineca-Peace Region

enclosure

Ministry of Water,
Land and Air
Protection

Pollution Prevention
Omineca-Peace Region

Mailing Address:
1011 - 4th Avenue
Prince George, BC V2L 3H9

Telephone: (250) 565-6135
Facsimile: (250) 565-6629



6

File: PR-15742

Date: JAN 7 2002

REGISTERED MAIL

Compagnie Abitibi-Consolidated du Canada --
Abitibi-Consolidated Company of Canada
PO Box 250
MACKENZIE BC V0J 2C0

Attention: Joan Thomas, R.P.F.

Dear Joan:

Re: Notice of Correction to Permit No. PR-15742, presently in the name of Abitibi - Consolidated Inc., and last amended November 22, 2001.

This is to advise you that the following correction has been made to the subject permit. The permittee name should read:

**Compagnie Abitibi-Consolidated du Canada - Abitibi-Consolidated
Company of Canada**

Please remove and destroy the original page(s) in your permit package and replace with the revised version enclosed.

Yours truly,

A handwritten signature in dark ink, appearing to read "R. Girard".

R.W. Girard
Regional Waste Manager
Omineca-Peace Region

:BVN

Ministry of
Water, Land and Air
Protection

Pollution Prevention
Regional Operations
Omineca-Peace Region

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: 250-566-6155
Facsimile: 250-566-6629

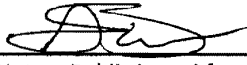
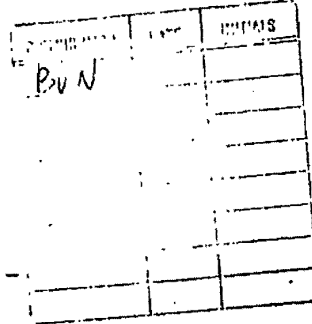
This is Exhibit 113811
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 38



February 5, 2002

Dear Jim Atkinson:

Thank you for your letter dated January 8, 2002, requesting cancellation of Waste Management Permit PR-08722 for a refuse site located approximately 2 kilometers down the 10,000 road off of the Finlay – Russel F.S.R. The photographs of the site submitted with your letter confirms that the site has been covered, graded to direct drainage away from the site, and seeded.

Despite *abandonment*, should it be necessary for protection of the environment, additional requirements may be imposed in the future respecting restoration of the environment or control or monitoring of the waste discharged.

Yours truly,

:BVN

cc: Environment Canada



File: PR-11116
PR-04401
PE-03015

August 22, 2005

Abitibi-Consolidated Company of Canada
Mackenzie Region
PO Box 250
MACKENZIE BC V0J 2C0

Attention: Doug Stokes, Roads Supervisor

Re: Abandonment of Permits PR-11116, PR-04401 and PE-03015

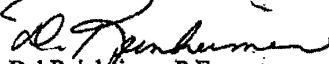
I acknowledge receipt of your notice dated August 16, 2005, stating Abitibi Consolidated has chosen to abandon the aforementioned closed landfill and sewage treatment system pursuant to Section 20(3) of the *Environmental Management Act*.

The notice to abandon the permits is a result of Abitibi's closure of the Swannell and Mesilinka camps. Pursuant to section 20(5)(b) of the *Environmental Management Act*, Abitibi must carry out the following additional requirements:

- inspect closed sites once per year;
- ensure no additional waste is deposited;
- remove any unauthorized waste; and,
- post signage indicating the site is closed.

Please be advised that additional requirements respecting restoration of the environment may be specified by the Director. If you have any questions, please contact Ben Van Nostrand at 250-565-6528.

Yours truly,


Del Reinheimer, P.Eng.

for Director, *Environmental Management Act*
Omineca and Peace Regions

:bvn

Ministry of
Environment

Environmental Protection Division
Regional Operations Branch
Omineca and Peace Regions

Mailing Address:
325 - 1011 Fourth Avenue
PRINCE GEORGE BC V2L 3H9

Telephone: (250) 565-6155
Facsimile: (250) 565-6629

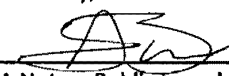
This is Exhibit "39"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 39



Fax to: 250-997-2707
514-394-3624

File: RE-14026 PR-8721
RE-14027 PR-11638
RE-14028 PR-15742
RE-14029 PR-16423

Date: January 4, 2008

Abitibi Bowater Inc.
Woodlands Operations
PO Box 250
Mackenzie, British Columbia V0J 2C0

Attention: Wayne Lewis, Woodlands Manager

Re: Shutdown of Operations-Mackenzie Woodlands Operations

Dear Wayne:

The BC Ministry of Environment staff have recently been contacted by both the Abitibi Bowater Paper Mill and Sawmill operations regarding the Company's responsibilities, concerning the environment, during the indefinite shutdown of all Abitibi Bowater facilities in Mackenzie. In the event of a possible long-term shutdown of a facility, I would like to see Abitibi-Bowater's plans regarding the waste handling, clean-up, and management of the site.

Waste Handling, Clean-up, and Management of Sites

It is expected that Abitibi Bowater will take all reasonable precautions to prevent any possible detrimental impact upon the environment as a result of the shutdown, closure, or restarting of the Mackenzie Woodland Operations. This includes the completion of outstanding obligations and the undertaking of additional protective measures to safe guard the environment. Included in these are measures to ensure that:

- Aspects of the works and facilities that may have a deleterious impact on the environment are identified, assessed, and mitigated;
- Any hazardous materials are not left on site (i.e. solvents, waste oil, anti-freeze, etc.);
- Large amounts of raw materials, process waste, and finished product are appropriately stored or disposed of prior to the cessation of operations;

Ministry of
Environment

Regional Operations
Omineca and Peace Regions

Mailing/Location Address
325 - 1011 Fourth Ave.
Prince George, V2L 3H9

Telephone: (250) 565-8135
Facsimile: (250) 565-8629
<http://www.gov.bc.ca/>
<http://www.gov.bc.ca/env>

2

- Chemical and fuel bulk storage facilities are secured and monitored;
- Provisions are made and documented to fulfill all aspects of any valid requirements made under the Environmental Management Act and its ancillary regulations;
- Appropriate security measures are provided for each site at all times to protect the integrity of the sites and prevent vandalism; and
- Operational provisions are in place for the orderly shutting down, restarting, or decommissioning of the facilities.

It has been the Ministry of Environment's experience that waste materials left on site are prone to spills, leaks, or vandalism and should a company become insolvent, difficult to dispose of. In closures of other facilities wood and bark debris deteriorated and contributed to leachate and insect infestation problems. Fire also becomes a serious concern whether through natural or human agents. Refuse storage sites not properly treated and covered can cause long term problems with groundwater; be aesthetically unpleasant; and be detrimental to wildlife.

By January 25, 2008, please provide to me in writing the following information:

1. A timetable for the shutting down all of the Woodland operations;
2. Contact name for someone who will be responsible for all the sites and is able to provide access for ministry personnel to the site on less than 24 hours notice; and
3. A list of activities that the Woodlands operations will be undertaking to prepare for the indefinite shutdown to ensure the sites will not negatively affect the environment and the expected timeline thereof. This may include proposed changes to operations, works, monitoring, reporting, emergency response, and risk to the environment for each registration and permit where changes are anticipated.

The inspection requirements of a registration under the *Petroleum Storage and Distribution Facilities Storm Water Regulation* may vary as identified per section 6(13) of that regulation. Closure plans for the refuse sites are to be submitted for the written approval of the Regional Manager prior to decommissioning of the site as per the *Closure and Post-closure* sections of the permits. Site closure shall then be carried out in accordance with an approved closure plan.

If you should have any questions with regards to the above options, please do not hesitate to call myself at (250) 565-6459, Peter Lawrie (250) 565-4394, or Lisa Barkowsky at (250) 565-4168.

Yours truly,

Maureen Bilawchuk

Maureen Bilawchuk, P.Ag.
for Director, *Environmental Management Act*
Omineca and Peace Regions

Enclosure

3

Environment Canada

Mike Macfarlane-Manager, Land Remediation

Ben Van Nostrand- Environmental Protection Officer Omineca and Peace Regions

Jaqueline Hipwell- Senior Investigator, Ministry of Forests, Prince George

Nicole Roy, Abitibi Bowater Inc., 1155 Metcalfe St, Suite 800, Montreal, Que., H3B 5H2

Duncan Moss, C&E Forester,

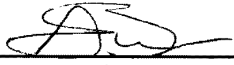
This is Exhibit "40"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public In and for the Province of
British Columbia

Exhibit 40

Date Printed: 2010-01-29

Site Details Report

SELECTION CRITERIA

Destination Type:	Cache
Destination Name:	
Site Id:	1465
Regional File No.:	%
Victoria File No.:	%
Include Subdivisions (Y/N)?	Y
Include Site Profiles (Y/N)?	N

report version v.5.2.0

SITE DETAILS REPORT

Site Id : 1465 Region: PRINCE GEORGE, OMINECA-PEACE
Common Name : OSILINKA CAMP, FINLAY FOREST INDUSTRIES

LOCATION

Site Address : FINLAY OSILINKA FOREST SERVICE ROAD
Victoria File :
Regional File : 26250-20/PG9561
Longitude : 125 : 09 : 46.3
Latitude : 056 : 08 : 31.4
Location Description : APPROX 170 KM NW OF MACKENZIE. LAT/LONG DERIVED FROM BC ENVIRONMENT REFERENCING THE TRANSPORTATION CENTERLINE NETWORK(TCN), NAD 83
City : MACKENZIE
Province : BC
Postal Code :

STATUS

Status : INACTIVE - NO FURTHER ACTION Initial Approval Date : 1998-05-30
Category : NOT APPLICABLE Last Approval Date : 2002-07-30
Pending Date : 2002-07-29

NOTATIONS

Initiated	Notation	Notes	Required Actions	Participants	Role
1998-03-19	HISTORICAL SITE NOTIFICATION ISSUED (MMA 26-3(3))	Auto-created by the Mailout Process		RAPER, WALLY	Ministry Contact
1997-01-17	REMEDIATION COMPLETION REPORT SUBMITTED	REPORT CONTAINS ADDITIONAL ASSESSMENT DATA, REMEDIAL ACTIONS AND REMEDIATION COMPLETION DATA.		MITCHELL, IAN J.D (MELP)	Ministry Contact
				PETCO INSTALLATIONS LTD. (PRINCE GEORGE)	SUBMITTED BY
1998-12-10	SPILL REPORTED	SPILL OF APPROX 5,000 L OF DIESEL. SPILL FILE 3200-25.745120		FINLAY FOREST INDUSTRIES (MACKENZIE)	SUBMITTED BY
				HANRATTY, JEFF	Ministry Contact

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SITE DETAILS REPORT

NOTATIONS					
Initiated	Notation	Notes	Required Actions	Participants	Role

1995-08-16	REMEDATION PLAN REPORT SUBMITTED		1995-09-16 - MINISTRY LETTER SENT BY WALLY RAPER REQUESTING DETAILS OF THE WORK TO BE CONDUCTED IN THE FALL OF 96 BE PROVIDED AND SUGGESTING THAT APPROVAL OR PERMIT MAY BE REQUIRED FOR WORK PLANNED IN 1997.	MITCHELL, IAN J D (MELP) PACIFIC RIM FILTRATION & SERVICES LTD (CAMPBELL RIVER) RAPER, WALLY	Ministry Contact SUBMITTED BY ISSUED BY Ministry Contact
1995-07-11	INSPECTION / VISIT	MEETING WITH FINLAY FOREST INDUSTRIES REGARDING FUEL STORAGE.		RAPER, WALLY	Ministry Contact
1995-04-12	TICKET ISSUED - WASTE MANAGEMENT ACT	TICKET A236050334 ISSUED BY STEVE DOWLING TO FINLAY FOREST UNDER WASTE MANAGEMENT ACT SECTION 3(1.1). INTRODUCING BUSINESS WASTE INTO THE ENVIRONMENT.		RAPER, WALLY	Ministry Contact

SITE PARTICIPANTS

Participant	Start Date	End Date	Note	Role
FINLAY FOREST INDUSTRIES (MACKENZIE)	1995-07-11			LEASE/RENT/TERMINANT NOTICE RECIPIENT(WMAA20.21(3))-DOONT FLAG
HANRAITY, JEFF	1995-07-16			ALTERNATE MINISTRY CONTACT
MITCHELL, IAN J D (MELP)	1995-08-16	1995-07-17		ENVIRONMENTAL CONSULTANT/CONTRACTOR
PACIFIC RIM FILTRATION & SERVICES LTD (CAMPBELL RIVER)	1995-08-16	1995-09-03		ENVIRONMENTAL CONSULTANT/CONTRACTOR
PETCO INSTALLATIONS LTD. (PRINCE GEORGE)	1995-12-04			MAIN MINISTRY CONTACT
RAPER, WALLY	1995-04-12	2004-03-31		

DOCUMENTS

Title	Document Date	Received Date	Participant	Role	Notes
ENVIRONMENTAL ASSESSMENT OF SPILL IMPACT, CLEAN UP/REMEDIATION SYSTEM AND METHODS THROUGH TO PREPARATION FOR SUBMISSION TO BC MINISTRY OF THE ENVIRONMENT	1995-12-12	1997-01-17	FINLAY FOREST INDUSTRIES (MACKENZIE) PETCO INSTALLATIONS LTD. (PRINCE GEORGE)	COMMISSIONER AUTHOR	
OSLUNKA CAMP - ASSESSMENT AND INSPECTION TO DETERMINE CURRENT STATUS OF THE POLLUTION REMAINING	1995-12-04	1995-12-11	MITCHELL, IAN J D (MELP) PETCO INSTALLATIONS LTD. (PRINCE GEORGE)	RECIPIENT AUTHOR	
FINLAY FOREST INDUSTRIES, OSLUNKA CAMP	1995-09-16	1995-09-16	PACIFIC RIM FILTRATION & SERVICES LTD (CAMPBELL RIVER) RAPER, WALLY	AUTHOR RECIPIENT	

SITE ASSOCIATIONS

3

SITE DETAILS REPORT

Page 3 of 3

SUSPECT LAND USE

Description	Notes
PETRO. PROD., PRODUCE WATER STRG ABVEGRND/UNDERGRND TANK	

PARCEL DESCRIPTIONS

Land Title # (PID)	Crown Land # (PIN)	Land File #	Date Noted	Legal/Land Descriptions
		SUP1308	2000-07-16	SUP 1308A: PRINCE GEORGE FOREST REGION, CASSIAR LAND DISTRICT UTM COORDINATES: ZONE 10, EAST 352400, NORTH 6225800, REG. 74, COMPT 41

H

This is Exhibit "41"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 41

Date Printed: 2010-01-29

Site Details Report

SELECTION CRITERIA

Destination Type:	Cache
Destination Name:	
Site Id:	6254
Regional File No.:	%
Victoria File No.:	%
Include Subdivisions (Y/N)?	Y
Include Site Profiles (Y/N)?	N

report version v.5.2.0

SITE DETAILS REPORT

Site Id : 6254 Region: NANAIMO, VANCOUVER ISLAND
Common Name : FORMER GOLD RIVER PULP MILL

LOCATION

Site Address : PO BOX 1000
City : GOLD RIVER
Province : BC
Postal Code : V0P 1G0
Victoria File : 26250-20/6254
Regional File : 26250-20/6254
Longitude : 126 : 07 : 28.7
Latitude : 049 : 40 : 56.3
Location Description : DUPLICATE SITE 7396 HAS BEEN AMALGAMATED WITH THIS SITE AND DELETED.

STATUS

Status : ACTIVE - REMEDIATION COMPLETE
Category : LARGE SITE, COMPLEX CONTAMINATION
Initial Approval Date : 1999-10-22
Last Approval Date : 2005-01-21
Pending Date : 2005-01-18

NOTATIONS

Initiated	Notation	Notes	Required Actions	Participants	Role
2001-11-01	CERTIFICATE OF COMPLIANCE ISSUED (MMA 27.9(2))	INCLUDES PIDS 009-526-S10 & 009-526-757, BLOCK D, & PID 009-526-620 EXCEPT FOR AREA 1 & AREA 2, MANAGED UNDER CONDITIONAL CERTIFICATE OF COMPLIANCE.		BOLLANS, RON A BOWATER PULP & PAPER CANADA INC (ONTARIO) VILLAGE OF GOLD RIVER (GOLD RIVER)	Ministry Contact RECEIVED BY RECEIVED BY REQUESTED BY
2001-11-01	CONDITIONAL CERTIFICATE OF COMPLIANCE ISSUED (MMA 27.9(3))	COVERS AREA 1 AND AREA 2 WHICH ARE NOT COVERED BY THE CERTIFICATE OF COMPLIANCE.		BOWATER PULP & PAPER CANADA INC (ONTARIO) HARRIS, GLENN E VILLAGE OF GOLD RIVER (GOLD RIVER) WALTON, DOUG G SLOAN, MICHAEL URS CORPORATION (VANCOUVER)	Ministry Contact RECEIVED BY ISSUED BY Ministry Contact SUBMITTED BY
2001-07-31	DETAILED SITE INVESTIGATION REPORT: INTERNAL REVIEW REQUESTED				

2

SITE DETAILS REPORT

NOTATIONS

Initiated	Notation	Notes	Required Actions	Participants	Role
2001-07-31	REMEDIAL PLAN SUBMITTED WITH RISK ASSESSMENT: INTERNAL REVIEW REQUESTED			SLOAN, MICHAEL URS CORPORATION (VANCOUVER)	Ministry Contact SUBMITTED BY
2001-07-31	CERTIFICATE OF COMPLIANCE REQUESTED WITHOUT INSPECTION	REQUESTED FOR A PORTION OF THE SITE		SLOAN, MICHAEL URS CORPORATION (VANCOUVER)	Ministry Contact SUBMITTED BY
2001-12-08	CERTIFICATE OF COMPLIANCE REQUESTED WITHOUT INSPECTION	COMPLETION REPORT FOR THE SOIL REMEDIATION PROGRAM		BOWATER PULP & PAPER CANADA INC (ONTARIO)	SUBMITTED BY
2001-03-22	APPROVAL IN PRINCIPLE ISSUED	APPLICABLE ONLY TO PID 009-528-510 AND PORTIONS OF 009-528-757 & 009-528-820		SLOAN, MICHAEL BOLLANS, RON A BOWATER PULP & PAPER CANADA INC. (MONTREAL, QUEBEC)	Ministry Contact Ministry Contact RECEIVED BY
1998-11-29	APPROVAL IN PRINCIPLE REQUESTED			BOLLANS, RON A GARTNER LEE LIMITED (BURNABY, B.C.)	Ministry Contact SUBMITTED BY
1998-11-29	REMEDIAL PLAN SUBMITTED WITHOUT RISK ASSESSMENT: INTERNAL REVIEW REQUESTED	GOLD RIVER PULP MILL REMEDIATION PLAN		BOLLANS, RON A GARTNER LEE LIMITED (BURNABY, B.C.)	Ministry Contact SUBMITTED BY
1998-10-05	DETAILED SITE INVESTIGATION REPORT: INTERNAL REVIEW REQUESTED	STAGE 1 PRELIMINARY SITE INVESTIGATION, STAGE 2 PRELIMINARY SITE INVESTIGATION, APPENDICES, ADDENDUM TO STAGE 2		BOWATER PULP & PAPER CANADA INC. (MONTREAL, QUEBEC)	SUBMITTED BY
				SLOAN, MICHAEL	Ministry Contact

SITE PARTICIPANTS

Participant	Start Date	End Date	Note	Role
BOLLANS, RON A	1998-11-29	2002-05-29		ALTERNATE MINISTRY CONTACT
BOWATER PULP & PAPER CANADA INC (ONTARIO)	1998-11-16			PROPERTY OWNER
BOWATER PULP & PAPER CANADA INC. (MONTREAL, QUEBEC)	1998-05-01			PROPERTY OWNER
GARTNER LEE LIMITED (BURNABY, B.C.)	1998-05-01			ENVIRONMENTAL CONSULTANT/CONTRACTOR
HARRIS, GLENN E	2001-11-01			MAIN MINISTRY CONTACT
SLOAN, MICHAEL	1998-05-01	2002-08-29		ENVIRONMENTAL CONSULTANT/CONTRACTOR
URS CANADA INC	2001-10-16			ENVIRONMENTAL CONSULTANT/CONTRACTOR
URS CORPORATION (VANCOUVER)	2001-07-31			MUNICIPAL/REGIONAL CONTACT
VILLAGE OF GOLD RIVER (GOLD RIVER)	2001-11-01			ALTERNATE MINISTRY CONTACT
WALTON, DOUG G	2001-10-01			

SITE DETAILS REPORT

DOCUMENTS

Title	Document Date	Received Date	Participant	Role	Notes
ADDENDUM TO FINAL REPORT FOR STAGE 1 PRELIMINARY SITE INVESTIGATION, GOLD RIVER PULP MILL	2001-10-31	2001-10-31	BOWATER PULP & PAPER CANADA INC (ONTARIO) GARTNER LEE LIMITED (BURNABY, B.C.) SLOAN, MICHAEL	COMMISSIONER AUTHOR REVIEWER	
GROUNDWATER MONITORING PROGRAM, GOLD RIVER PULP MILL, GOLD RIVER, BC	2001-10-30	2001-10-30	URS CANADA INC	AUTHOR	
BOWATER - GOLD RIVER PULP MILL SITE - GROUNDWATER MONITORING REPORTS, SUMMARY OF MONITORING DATA	2001-10-16	2001-10-16	URS CANADA INC	AUTHOR	
HUMAN HEALTH RISK ASSESSMENT, GOLD RIVER PULP AND PAPER MILL, GOLD RIVER, BC	2001-07-31	2001-06-01	BOWATER PULP & PAPER CANADA INC. (MONTREAL, QUEBEC)	COMMISSIONER	
TIER 1 ECOLOGICAL RISK ASSESSMENT, GOLD RIVER PULP MILL, GOLD RIVER, BC	2001-07-31	2001-06-01	URS CORPORATION (VANCOUVER)	AUTHOR	
GOLD RIVER PULP MILL - ENVIRONMENTAL INVESTIGATION OF THE HISTORIC PACKAGE BOILER	2001-04-16	2001-06-01	BOWATER PULP & PAPER CANADA INC. (MONTREAL, QUEBEC)	COMMISSIONER	
APPENDICES: COMPLETION REPORT FOR THE SOIL REMEDIATION PROGRAM, GOLD RIVER PULP MILL	2000-12-01	2000-12-14	URS CORPORATION (VANCOUVER)	AUTHOR	
COMPLETION REPORT FOR THE SOIL REMEDIATION PROGRAM, GOLD RIVER PULP MILL	2000-12-01	2000-12-14	BOWATER PULP & PAPER CANADA INC (ONTARIO) GARTNER LEE LIMITED (BURNABY, B.C.) SLOAN, MICHAEL	COMMISSIONER AUTHOR REVIEWER	
SECOND QUARTER GROUNDWATER MONITORING RESULTS - BOWATER GOLD RIVER PULP MILL SITE	2000-06-29	2000-10-06	BOWATER PULP & PAPER CANADA INC. (MONTREAL, QUEBEC)	COMMISSIONER	
GOLD RIVER PULP MILL REMEDIATION PLAN	1999-11-16	1999-11-29	GARTNER LEE LIMITED (BURNABY, B.C.) SLOAN, MICHAEL	AUTHOR RECIPIENT	
ADDENDUM TO STAGE 2 PRELIMINARY SITE INVESTIGATION	1999-10-01	1999-10-16	BOWATER PULP & PAPER CANADA INC (ONTARIO) GARTNER LEE LIMITED (BURNABY, B.C.) SLOAN, MICHAEL	COMMISSIONER AUTHOR REVIEWER	
APPENDICES - STAGE 2 PRELIMINARY SITE INVESTIGATION	1999-06-01	1999-10-05	BOWATER PULP & PAPER CANADA INC. (MONTREAL, QUEBEC)	COMMISSIONER	

BMS SITE ID E242844, E242845, E242847, E242848, E242849, E242850, E242851, E242852, E242853, E242854, 242856, E242857, E242858, E242859

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SITE DETAILS REPORT

DOCUMENTS

Title	Document Date	Received Date	Participant	Role	Notes
APPENDICES - STAGE 2 PRELIMINARY SITE INVESTIGATION	1999-06-01	1999-10-05	GARTNER LEE LIMITED (BURNABY, B.C.) SLOAN, MICHAEL	AUTHOR REVIEWER	
STAGE 2 PRELIMINARY SITE INVESTIGATION, GOLD RIVER PULP MILL	1999-06-01	1999-10-05	BOWATER PULP & PAPER CANADA INC. (MONTREAL, QUEBEC) GARTNER LEE LIMITED (BURNABY, B.C.) SLOAN, MICHAEL	COMMISSIONER AUTHOR REVIEWER	
STAGE 1 PRELIMINARY SITE INVESTIGATION, GOLD RIVER PULP MILL (DRAFT VERSION)	1999-05-01	1999-10-05	BOWATER PULP & PAPER CANADA INC. (MONTREAL, QUEBEC) GARTNER LEE LIMITED (BURNABY, B.C.) SLOAN, MICHAEL	COMMISSIONER AUTHOR REVIEWER	

SUSPECT LAND USE

Description	Note
PULP MILL OPERATIONS	

PARCEL DESCRIPTIONS

Land Title # (PID)	Crown Land # (PIN)	Land File #	Date Noted	Legal/Land Descriptions
006536510			2000-03-22	BLOCK A OF DISTRICT LOT 647, NOOTKA DISTRICT EXCEPT THAT PART IN PLAN V1P63654
006526757			2000-03-22	DISTRICT LOT 54, NOOTKA DISTRICT, EXCEPT THAT PART LYING SOUTH OF THE NORTH BOUNDARY OF DISTRICT LOT 74, NOOTKA DISTRICT, AND THE INDIAN RESERVE, PRODUCED EAST TO THE EASTERLY BOUNDARY OF SAID DISTRICT LOT 54, BEING THE WESTERLY BANK
006526820			2000-03-22	DISTRICT LOT 74, NOOTKA DISTRICT
010519114			2000-01-19	DISTRICT LOT 651, NOOTKA DISTRICT
025497009			2000-04-06	LOT 1 OF DISTRICT LOT 647 NOOTKA DISTRICT PLAN V1P63654
		0267830 NA6254	2000-01-19 2001-11-05	BLK D, DL 647, NOOTKA LAND DISTRICT

2

This is Exhibit "42"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 42

Date Printed: 2010-01-29

Site Details Report

SELECTION CRITERIA

Destination Type: Cache

Destination Name:

Site Id:

1947

Regional File No.:

%

Victoria File No.:

%

Include Subdivisions (Y/N)?

Y

Include Site Profiles (Y/N)?

N

report version v.5.2.0

SITE DETAILS REPORT

Site Id : 1947 Region: NANAIMO, VANCOUVER ISLAND
Common Name : VICTORIA PLYWOOD, 1201 HALLOWELL RD

LOCATION

Site Address : 1201 HALLOWELL ROAD
Victoria File : 26250-20/1947
Regional File :
Longitude : 123 : 25 : 48.1
Latitude : 048 : 26 : 34.7
Location Description : PLUMPER BAY. APPROX LAT/LONG DERIVED BY BC ENVIRONMENT REFERENCING THE TRANSPORTATION CENTRELINE NETWORK (TCN), NAD 83. SHOULD BE UPDATED

City : VIEW ROYAL
Province : BC
Postal Code : V9A 7B6

STATUS

Status : ACTIVE - UNDER REMEDIATION Initial Approval Date : 1997-10-29
Category : LARGE SITE, COMPLEX CONTAMINATION Last Approval Date : 2009-01-22
Pending Date : 2006-12-21

NOTATIONS

Initiated	Notation	Notes	Required Actions	Participants	Role
2006-02-06	NOTICE OF INDEPENDENT REMEDIATION INITIATION SUBMITTED			THURBER ENVIRONMENTAL CONSULTANTS LTD (VICTORIA) WALTON, DOUG G	SUBMITTED BY Ministry Contact
2005-08-18	APPROVAL IN PRINCIPLE ISSUED	ISSUED ON THE RECOMMENDATION OF AN APPROVED PROFESSIONAL (ROB DICKIN) UNDER PROTOCOL 6 OF THE CONTAMINATED SITE REGULATIONS		DICKIN, ROBERT THETIS COVE ESTATES LTD WALTON, DOUG G	APPROVED PROFESSIONAL RECEIVED BY ISSUED BY Ministry Contact

SITE DETAILS REPORT

NOTATIONS

Initiated	Notation	Notes	Required Actions	Participants	Role
2005-06-12	CERTIFICATE OF COMPLIANCE ISSUED USING NUMERICAL STANDARDS	ISSUED ON THE RECOMMENDATION OF AN APPROVED PROFESSIONAL (ROB DICKIN) UNDER PROTOCOL 8 OF THE CONTAMINATED SITES REGULATION.		DICKIN, ROBERT THETIS COVE ESTATES LTD WALTON, DOUG G	APPROVED PROFESSIONAL RECEIVED BY ISSUED BY Ministry Contact
2006-07-07	CERTIFICATE OF COMPLIANCE REQUESTED	COC REQUESTED FOR PHASE 1 & 2 AREA.		DICKIN, ROBERT KNOX, GRAHAM G THETIS COVE ESTATES LTD	APPROVED PROFESSIONAL Ministry Contact REQUESTED BY
2006-07-07	CERTIFICATE OF COMPLIANCE REQUESTED	COC REQUESTED FOR PHASE 2 AREA OF SITE. APPLICATION WITHDRAWN - AUGUST 12, 2005.		DICKIN, ROBERT KNOX, GRAHAM G THETIS COVE ESTATES LTD	APPROVED PROFESSIONAL Ministry Contact REQUESTED BY
2006-07-07	APPROVAL IN PRINCIPLE REQUESTED	AIP REQUESTED FOR PHASE 2 PORTION OF THE SITE		DICKIN, ROBERT KNOX, GRAHAM G THETIS COVE ESTATES LTD	APPROVED PROFESSIONAL Ministry Contact REQUESTED BY
2006-06-30	CONTAMINATED SOIL RELOCATION AGREEMENT APPROVED	ISSUED ON THE RECOMMENDATION OF AN APPROVED PROFESSIONAL (ROB DICKIN) UNDER PROTOCOL 8 OF THE CONTAMINATED SITES REGULATION.		DICKIN, ROBERT THETIS COVE ESTATES LTD WALTON, DOUG G	APPROVED PROFESSIONAL RECEIVED BY ISSUED BY Ministry Contact
2006-06-09	CONTAMINATED SOIL RELOCATION AGREEMENT REQUESTED			DICKIN, ROBERT KNOX, GRAHAM G THETIS COVE ESTATES LTD	APPROVED PROFESSIONAL Ministry Contact REQUESTED BY
2006-05-18	NOTICE OF INDEPENDENT REMEDIATION INITIATION SUBMITTED (NMA 2802)	SUBMITTED BY THURBER ENVIRONMENTAL		BOWATER CANADIAN FOREST PRODUCTS INC (MONTREAL) THETIS COVE ESTATES LTD THURBER ENVIRONMENTAL CONSULTANTS LTD (VICTORIA) TOWN OF VIEW ROYAL (VIEW ROYAL) WALTON, DOUG G GARTNER LEE LIMITED (BURNABY, B.C.) GUTHRIE, MIKE J	REFERRED BY REFERRED BY SUBMITTED BY RECEIVED BY Ministry Contact SUBMITTED BY Ministry Contact
1998-06-17	DETAILED SITE INVESTIGATION REPORT: INTERNAL REVIEW REQUESTED				

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SITE DETAILS REPORT

NOTATIONS

Initiated	Notation	Notes	Required Actions	Participants	Role
1988-06-05	NOTICE OF INDEPENDENT REMEDIATION INITIATION SUBMITTED (MMA 28(2))			BOLLANS, RON A GARTNER LEE LIMITED (BURNABY, B.C.)	Ministry Contact SUBMITTED BY
1987-08-25	HISTORICAL SITE NOTIFICATION ISSUED (MMA 28.3(3))	Auto-created by the Mailout Process		MORRISON, ALLAN	Ministry Contact

SITE PARTICIPANTS

Participant	Start Date	End Date	Note	Role
AVENOR INC.	1985-03-07			PROPERTY OWNER NOTICE RECIPIENT(MMAA20.21(3))-DONIT FLAG ALTERNATE MINISTRY CONTACT PROPERTY OWNER PROPERTY OWNER FORMER PROPERTY OWNER NOTICE RECIPIENT(MMAA20.21(3))-DONIT FLAG NOTICE RECIPIENT(MMAA20.21(3))-DONIT FLAG APPROVED PROFESSIONAL ENVIRONMENTAL CONSULTANT/CONTRACTOR ENVIRONMENTAL CONSULTANT/CONTRACTOR MAIN MINISTRY CONTACT ALTERNATE MINISTRY CONTACT ALTERNATE MINISTRY CONTACT ALTERNATE MINISTRY CONTACT ALTERNATE MINISTRY CONTACT DEVELOPER/ASSOCIATED COMPANY DOCUMENT PARTICIPANT ENVIRONMENTAL CONSULTANT/CONTRACTOR NOTICE RECIPIENT(MMAA20.21(3))-DONIT FLAG MUNICIPAL/REGIONAL CONTACT FORMER OPERATOR NOTICE RECIPIENT(MMAA20.21(3))-DONIT FLAG ALTERNATE MINISTRY CONTACT
BOLLANS, RON A	1985-03-15	2002-03-29		
BOWATER CANADIAN FOREST PRODUCTS INC. (MONTREAL)	2003-06-18			
BOWATER PULP & PAPER CANADA INC. (MONTREAL, QUEBEC)	1988-07-24			
CANADIAN PACIFIC FOREST PRODUCTS (NOW AVENOR INC)	1991-11-20			
CP RAIL LTD. (HEAD OFFICE FOR WESTERN CANADA)	1977-12-16			
DICKIN, ROBERT	2005-06-09			
ENVIROCHEM SERVICES (BURNABY)	1985-03-07		CONTACT: TOM FINNEBOSON	
GARTNER LEE LIMITED (BURNABY, B.C.)	1988-06-05	1988-06-04		
GUTHER, MIKE J	1988-01-01	2002-03-29		
KNOX, GRAHAM G	2005-06-09	2006-01-28		
LOCKHART, DAVE	2006-02-06			
MORRISON, ALLAN	1985-03-07	1988-01-01		
PATTEN, BARRY	1985-05-08	2002-06-20		
THE TIS COVE ESTATES LTD	2003-09-18			
THURBER ENGINEERING LTD.	2005-06-24			
THURBER ENVIRONMENTAL CONSULTANTS LTD (VICTORIA)	2003-09-18			
TOWN OF VIEW ROYAL (VIEW ROYAL)	1985-05-01			
VICTORIA PLYWOOD COOPERATIVE	1985-03-07			
WALTON, DOUG G	2003-08-18			

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SITE DETAILS REPORT

DOCUMENTS

Title	Document Date	Received Date	Participant	Role	Notes
LETTER REPORT: NOTIFICATION OF REMEDIATION CONFIRMATION PHASE 2A, 140 HOLLOWELL ROAD, VICTORIA BC, SITE ID 1847	2005-02-06	2006-02-06	THURBER ENGINEERING LTD.	AUTHOR	
140 HOLLOWELL ROAD VIEW ROYAL ENVIRONMENTAL ASSESSMENT AND REMEDIATION CONFIRMATION - VOLUME 1 OF 3 - PRELIMINARY SITE INVESTIGATION	2005-06-03	2005-06-06	THURBER ENVIRONMENTAL CONSULTANTS LTD (VICTORIA)	AUTHOR	
140 HOLLOWELL ROAD VIEW ROYAL ENVIRONMENTAL ASSESSMENT AND REMEDIATION CONFIRMATION - VOLUME 2 OF 3 - SITE INVESTIGATIONS	2005-06-03	2005-06-09	THURBER ENVIRONMENTAL CONSULTANTS LTD (VICTORIA)	AUTHOR	
140 HOLLOWELL ROAD VIEW ROYAL ENVIRONMENTAL ASSESSMENT AND REMEDIATION CONFIRMATION - VOLUME 2 OF 3 - SUB VOLUME B	2005-06-03	2005-06-09	THURBER ENVIRONMENTAL CONSULTANTS LTD (VICTORIA)	AUTHOR	
140 HOLLOWELL ROAD VIEW ROYAL ENVIRONMENTAL ASSESSMENT AND REMEDIATION CONFIRMATION - VOLUME 3 OF 3 - SUB VOLUME A	2005-06-03	2005-06-09	THURBER ENVIRONMENTAL CONSULTANTS LTD (VICTORIA)	AUTHOR	
140 HOLLOWELL ROAD VIEW ROYAL ENVIRONMENTAL ASSESSMENT AND REMEDIATION CONFIRMATION - VOLUME 3 OF 3 - SUB VOLUME C	2005-06-03	2005-06-09	THURBER ENVIRONMENTAL CONSULTANTS LTD (VICTORIA)	AUTHOR	
GORGE VALE GOLD COURSE DETERMINATION OF SOIL THAT A SOIL RELOCATION RECEIVING SITE	2005-05-24	2005-06-09	THURBER ENVIRONMENTAL CONSULTANTS LTD (VICTORIA)	AUTHOR	
FORMER VICTORIA PLYWOOD MILL SITE SUMMARY REPORT FOR ENVIRONMENTAL INVESTIGATIONS AND REMEDIATION, PREPARED FOR BOWATER PULP AND PAPER CANADA INC.	1998-06-15	1998-08-17	GARTNER LEE LIMITED (BURNABY, B.C.)	AUTHOR	

SITE ASSOCIATIONS

Site Id	Common Name	Date	Notes
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SUSPECT LAND USE

Description	Note
PARTICLE BOARD MANUFACTURING	PLYWOOD

PARCEL DESCRIPTIONS

Land Title # (PID)	Crown Land # (PIN)	Land File #	Date Noted	Legal/Land Descriptions
001182888			1998-02-21	LOT A, SECTION 2, ESQUIMALT DISTRICT, PLAN 31051

2

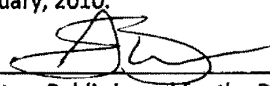
This is Exhibit 1143^b
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 43

Date Printed: 2010-01-29

Site Details Report

SELECTION CRITERIA

Destination Type:	Cache
Destination Name:	
Site Id:	1465
Regional File No.:	%
Victoria File No.:	%
Include Subdivisions (Y/N)?	Y
Include Site Profiles (Y/N)?	N

report version v.5.2.0

SITE DETAILS REPORT

Page 1 of 3

Site Id : 1465 Region: PRINCE GEORGE, OMINECA-PEACE
Common Name : OSILINKA CAMP, FINLAY FOREST INDUSTRIES

LOCATION

Site Address : FINLAY OSILINKA FOREST SERVICE ROAD
Victoria File :
Regional File : 26250-20/PG8561
Longitude : 125 : 08 : 46.3
Latitude : 056 : 08 : 31.4
Location Description : APPROX 170 KM NW OF MACKENZIE. LAT/LONG DERIVED FROM BC ENVIRONMENT REFERENCING THE TRANSPORTATION CENTERLINE NETWORK(TCN), NAD 83
City : MACKENZIE
Province : BC
Postal Code :

STATUS

Status : INACTIVE - NO FURTHER ACTION Initial Approval Date : 1988-05-30
Category : NOT APPLICABLE Last Approval Date : 2002-07-30
Pending Date : 2002-07-29

NOTATIONS

Initiated	Notation	Notes	Required Actions	Participants	Role
1998-03-19	HISTORICAL SITE NOTIFICATION ISSUED (WMA 26.3(2))	Auto-created by the Mailout Process		RAPER, WALLY	Ministry Contact
1997-01-17	REMEDATION COMPLETION REPORT SUBMITTED	REPORT CONTAINS ADDITIONAL ASSESSMENT DATA, REMEDIAL ACTIONS AND REMEDIATION COMPLETION DATA.		MITCHELL, IAN J D (HELP)	Ministry Contact
				PETCOO INSTALLATIONS LTD. (PRINCE GEORGE)	SUBMITTED BY
1996-12-10	SPILL REPORTED	SPILL OF APPROX 5,000 L OF DIESEL. SPILL FILE #2320-25,745/20		FINLAY FOREST INDUSTRIES (MACKENZIE)	SUBMITTED BY
				HANRATTY, JEFF	Ministry Contact

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SITE DETAILS REPORT

NOTATIONS

Initiated	Notation	Notes	Required Actions	Participants	Role
1996-08-16	REMEDATION PLAN REPORT SUBMITTED		1996-08-16 - MINISTRY LETTER SENT BY WALLY RAPER REQUESTING DETAILS OF THE WORK TO BE CONDUCTED IN THE FALL OF 98 BE PROVIDED AND SUGGESTING THAT APPROVAL OR PERMIT MAY BE REQUIRED FOR WORK PLANNED IN 1997.	MITCHELL, IAN J D (NELP) PACIFIC RIM FILTRATION & SERVICES LTD (CAMPBELL RIVER)	Ministry Contact SUBMITTED BY
1995-07-11	INSPECTION / VISIT	MEETING WITH FINLAY FOREST INDUSTRIES REGARDING FUEL STORAGE.		RAPER, WALLY	ISSUED BY
1995-04-12	TICKET ISSUED - WASTE MANAGEMENT ACT	TICKET AC3060334 ISSUED BY STEVE DOWLING TO FINLAY FOREST UNDER WASTE MANAGEMENT ACT SECTION 31(1), INTRODUCING BUSINESS WASTE INTO THE ENVIRONMENT.		RAPER, WALLY	Ministry Contact
				RAPER, WALLY	Ministry Contact

SITE PARTICIPANTS

Participant	Start Date	End Date	Note	Role
FINLAY FOREST INDUSTRIES (MACKENZIE)	1996-07-11			LEASEE/ENTERTEENANT
HAMRATTY, JEFF	1996-07-16			NOTICE RECIPIENT(WMA021(3))-DON'T FLAG
MITCHELL, IAN J D (NELP)	1996-08-16	1998-07-17		ALTERNATE MINISTRY CONTACT
PACIFIC RIM FILTRATION & SERVICES LTD (CAMPBELL RIVER)	1996-08-16	1998-09-03		ALTERNATE MINISTRY CONTACT
PETCOO INSTALLATIONS LTD. (PRINCE GEORGE)	1996-12-04			ENVIRONMENTAL CONSULTANT/CONTRACTOR
RAPER, WALLY	1996-04-12	2004-03-31		ENVIRONMENTAL CONSULTANT/CONTRACTOR
				MAIN MINISTRY CONTACT

DOCUMENTS

Title	Document Date	Received Date	Participant	Role	Notes
ENVIRONMENT ASSESSMENT OF SPILL IMPACT, CLEAN UP/REMEDIATION SYSTEM AND METHODS THROUGH TO PREPARATION FOR SUBMISSION TO BC MINISTRY OF THE ENVIRONMENT	1996-12-12	1997-01-17	FINLAY FOREST INDUSTRIES (MACKENZIE)	COMMISSIONER	
OSLUNKA CAMP - ASSESSMENT AND INSPECTION TO DETERMINE CURRENT STATUS OF THE POLLUTION REMAINING	1996-12-04	1998-12-11	PETCOO INSTALLATIONS LTD. (PRINCE GEORGE)	AUTHOR	
FINLAY FOREST INDUSTRIES, OSLUNKA CAMP	1996-08-16	1996-08-16	MITCHELL, IAN J D (NELP) PETCOO INSTALLATIONS LTD. (PRINCE GEORGE)	RECIPIENT AUTHOR	
			PACIFIC RIM FILTRATION & SERVICES LTD (CAMPBELL RIVER)	AUTHOR	
			RAPER, WALLY	RECIPIENT	

SITE ASSOCIATIONS

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SITE DETAILS REPORT

SUSPECT LAND USE	
Description	Note
PETRO. PROD., PRODUCE WATER STRG AB/ES/ND/UNDERGRND TANK	

PARCEL DESCRIPTIONS			
Land Title # (PID)	Crown Land # (PIN)	Land File #	Date Noted
		SUP-1309	2000-07-18
		SUP-1309-1 PRINCE GEORGE FOREST REGION, CASSIAR LAND DISTRICT UTM COORDINATES: ZONE 10, EAST 352400, NORTH 6225600, REG. 7A, COMPT 41	

H

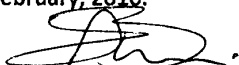
This is Exhibit "44"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 44

Date Printed: 2010-01-29

Site Details Report

SELECTION CRITERIA

Destination Type:	Cache
Destination Name:	
Site Id:	1466
Regional File No.:	%
Victoria File No.:	%
Include Subdivisions (Y/N)?	Y
Include Site Profiles (Y/N)?	N

report version v.5.2.0

SITE DETAILS REPORT

Page 1 of 2

Site Id : 1466 Region: PRINCE GEORGE, Omineca-Peace
Common Name : Omineca Camp, Finlay Forest IND

LOCATION

Site Address : FINLAY FOREST SERVICE ROAD
Victoria File :
Regional File : 26250-20/PG9562
Longitude : 124 : 30 : 3.0
Latitude : 056 : 06 : 45.0
Location Description : APPROX 140KM N OF MACKENZIE Omineca Arm Williston Lake. Latlong derived from BC Environment Referencing the NAD 83 Transportation Centerline Network(TCN)

City : MACKENZIE
Province : BC
Postal Code :

STATUS

Status : UNKNOWN STATUS Initial Approval Date : 1998-05-30
Category : NOT APPLICABLE Last Approval Date : 2001-01-26
Pending Date : 2000-12-29

NOTATIONS

Initiated	Notation	Notes	Required Actions	Participants	Role
1998-05-19	HISTORICAL SITE NOTIFICATION ISSUED (WMA 26.3(3))	Auto-created by the Mailout Process		RAPER, WALLY	Ministry Contact
1998-07-11	CASE MANAGEMENT ITEM	MEETING WITH FINLAY FOREST INDUSTRIES REGARDING FUEL STORAGE, DISCHARGING CONTAMINATED WASTE WATER INTO THE ENVIRONMENT.		RAPER, WALLY	Ministry Contact

SITE PARTICIPANTS

Participant	Start Date	End Date	Note	Role
FINLAY FOREST INDUSTRIES (MACKENZIE)	1995-07-11			LEASEE/RENTER/TENANT NOTICE RECIPIENT(WMA 20.21(3))-DONT FLAG

2

SITE DETAILS REPORT

Page 2 of 2

SITE PARTICIPANTS					
Participant	Start Date	End Date	Note	Role	
RAPER, WALLY	1995-07-11	2004-03-31		MAIN MINISTRY CONTACT	
DOCUMENTS					
Title	Document Date	Received Date	Participant	Role	Notes
SITE ASSOCIATIONS					
Site Id	Common Name	Date	Notes		
SUSPECT LAND USE					
Description	Note				
PETRO. PROD., /PRODUCE WATER STRG ABOVEGROUND TANK					
PARCEL DESCRIPTIONS					
Land Title # (PID)	Crown Land # (PIN)	Land File #	Date Noted	Legal/Land Descriptions	
		114900	2000-07-18	SUP 114900: PRINCE GEORGE FOREST REGION, CASSIAR LAND DISTRICT, MACKENZIE FOREST DISTRICT, UTM GRID: ZONE 10, EAST 407500, NORTH 8218000, REG. 74, COMPT 004	

3

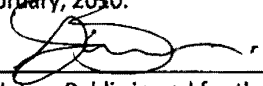
This is Exhibit "45"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 45

Date Printed: 2010-01-29

Site Details Report

SELECTION CRITERIA

Destination Type:	Cache
Destination Name:	
Site Id:	1468
Regional File No.:	%
Victoria File No.:	%
Include Subdivisions (Y/N)?	Y
Include Site Profiles (Y/N)?	N

report version v.5.2.0

SITE DETAILS REPORT

Page 1 of 2

Site Id : 1468
 Common Name : MESILINKA CAMP, FINLAY FOREST IND
 Region: PRINCE GEORGE, OMINECA-PEACE

LOCATION

Site Address : OMINECA ARM WILLISTON LAKE
 Victoria File :
 Regional File : 26250-20/PG9563
 Longitude : 124 : 17 : 34.0
 Latitude : 056 : 06 : 50.9
 Location Description : APPROX 150KM N OF MACKENZIE. LAT/LONG DERIVED FROM BC ENVIRONMENT REFERENCING THE TRANSPORTATION CENTERLINE NETWORK(TCN), NAD 83
 City : MACKENZIE
 Province : BC
 Postal Code :

STATUS

Status : UNKNOWN STATUS
 Category : NOT APPLICABLE
 Initial Approval Date : 1998-05-30
 Last Approval Date : 2001-01-26
 Pending Date : 2000-12-29

NOTATIONS

Initiated	Notation	Notes	Required Actions	Participants	Role
1998-03-16	HISTORICAL SITE NOTIFICATION ISSUED (MMA 28.3(3))	Auto-created by the Mailout Process		RAPER, WALLY	Ministry Contact
1996-07-11	CASE MANAGEMENT ITEM	MEETING REGARDING FUEL STORAGE, DISCHARGING CONTAMINATED WASTE WATER TO THE ENVIRONMENT.		RAPER, WALLY	Ministry Contact

SITE PARTICIPANTS

Participant	Start Date	End Date	Note	Role
FINLAY FOREST INDUSTRIES (MACKENZIE)	1995-06-13			LEASEE/RENTER/TENANT
				NOTICE RECEIPT(MMA30.21(3))-DONT FLAG
RAPER, WALLY	1995-07-11	2004-03-31		MAIN MINISTRY CONTACT

2

SITE DETAILS REPORT

DOCUMENTS					
Title	Document Date	Received Date	Participant	Role	Notes
SITE ASSOCIATIONS					
Site Id	Common Name	Date	Notes		
SUSPECT LAND USE					
Description	Note				
PETRO. PROD., PRODUCE WATER STRG ABOVEGROUND TANK					
PARCEL DESCRIPTIONS					
Land Title # (PID)	Crown Land # (PIN)	Land File #	Date Noted	Legal/Land Descriptions	
		N/A 1468	1998-03-19	CASSIAR LAND DISTRICT, PRINCE GEORGE FOREST REGION, MACKENZIE FOREST DISTRICT, REG 74, COMPT 3 UTM GRID: ZONE 10, EAST 410500, NORTH 6218600	

3

This is Exhibit "46"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 46

Date Printed: 2010-01-29

Site Details Report

SELECTION CRITERIA

Destination Type:	Cache
Destination Name:	
Site Id:	5987
Regional File No.:	%
Victoria File No.:	%
Include Subdivisions (Y/N)?	Y
Include Site Profiles (Y/N)?	N

report version v.5.2.0

1

SITE DETAILS REPORT

Site Id : 5987 Region: PRINCE GEORGE, OMINECA-PEACE
Common Name : FINLAY FOREST, NABESCHE CAMP

LOCATION

Site Address : KM 14 NABESCHE FSR
Victoria File :
Regional File : 26250-20/PR8720
Longitude : 123 : 05 : 30.0
Latitude : 056 : 10 : 30.0
Location Description : MACKENZIE

City : MACKENZIE
Province : BC
Postal Code :

STATUS

Status : INACTIVE - NO FURTHER ACTION Initial Approval Date : 2000-03-31
Category : UNRANKED Last Approval Date : 2002-05-10
Pending Date : 2002-05-02

NOTATIONS

Initiated	Notation	Notes	Required Actions	Participants	Role
1999-06-23	PERMIT ABANDONMENT NOTICE RECEIVED			GARDNER, LARRY (PRINCE GEORGE) MEDJAR, BLAKE (PRINCE GEORGE)	Ministry Contact ISSUED BY
1999-03-30	WASTE MANAGEMENT PERMIT ISSUED			FAIRSERVICE, ROBIN	ISSUED BY Ministry Contact

SITE PARTICIPANTS

Participant	Start Date	End Date	Note	Role
FAIRSERVICE, ROBIN	1990-03-30	2000-10-27		ALTERNATE MINISTRY CONTACT
FINLAY FOREST INDUSTRIES (MACKENZIE)	1990-03-30			LEASEE/INTERVENANT
GARDNER, LARRY (PRINCE GEORGE)	1999-06-23	2003-05-26		MAIN MINISTRY CONTACT
MEDJAR, BLAKE (PRINCE GEORGE)	1999-06-23	1999-12-31		ALTERNATE MINISTRY CONTACT

SITE DETAILS REPORT

DOCUMENTS					
Title	Document Date	Received Date	Participant	Role	Notes
SITE ASSOCIATIONS					
Site Id	Common Name	Date	Notes		
SUSPECT LAND USE					
Description				Note	
LANDFILL - GENERAL USE				CAMP LANDFILL	
PARCEL DESCRIPTIONS					
Land Title # (PID)	Crown Land # (PIN)	Land File #	Date Noted	Legal/Land Descriptions	

3

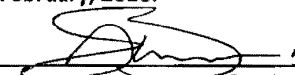
This is Exhibit "47"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 47

Date Printed: 2010-01-29

Site Details Report

SELECTION CRITERIA

Destination Type:	Cache
Destination Name:	
Site Id:	2155
Regional File No.:	%
Victoria File No.:	%
Include Subdivisions (Y/N)?	Y
Include Site Profiles (Y/N)?	N

report version v.5.2.0

SITE DETAILS REPORT

Page 1 of 3

Site Id : 2155 Region: PRINCE GEORGE, OMINECA-PEACE
Common Name : FINLAY FOREST INDUSTRIES - INGENIKA

LOCATION

Site Address : INGENIKA ARM OF WILLISTON LAKE
Victoria File :
Regional File : 26250-20/PG9459
Longitude : 124 : 59 : 23.8
Latitude : 056 : 47 : 35.1
Location Description : INGENIKA ARM

City : INGENIKA
Province : BC
Postal Code :

STATUS

Status : INACTIVE - NO FURTHER ACTION Initial Approval Date : 1998-04-02
Category : UNRANKED Last Approval Date : 2005-06-27
Pending Date : 2005-06-22

NOTATIONS

Initiated	Notation	Notes	Required Actions	Participants	Role
2004-03-19	NOTICE OF INDEPENDENT REMEDIATION COMPLETION SUBMITTED (MMA 28(2))			KNEZEVIC-STEVANOVIC, ANDUELA B SEACOR ENVIRONMENTAL INC (PRINCE GEORGE)	Ministry Contact SUBMITTED BY
1999-01-11	MONITORING REPORT SUBMITTED			FINLAY FOREST INDUSTRIES (INGENIKA ARM) MITCHELL, IAN J D (MELP)	SUBMITTED BY Ministry Contact
1998-01-23	HISTORICAL SITE NOTIFICATION ISSUED (MMA 28.3(3))	Auto-created by the Mailbox Process		MITCHELL, IAN J D (MELP)	Ministry Contact

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SITE DETAILS REPORT

NOTATIONS

Initiated	Notation	Notes	Required Actions	Participants	Role
1996-05-01	WASTE MANAGEMENT APPROVAL ISSUED	AS-14029 ISSUED. PREVIOUS APPROVAL CANCELLED DUE TO LARGE INCREASE IN VOLUME OF SOILS.		FINLAY FOREST INDUSTRIES (INGENIKA ARM) MITCHELL, IAN J D (MELP)	RECEIVED BY Ministry Contact
1994-08-18	SITE INVESTIGATION REPORT SUBMITTED			FINLAY FOREST INDUSTRIES (INGENIKA ARM) MITCHELL, IAN J D (MELP)	REQUESTED BY Ministry Contact
				SEACOR ENVIRONMENTAL ENGINEERING INC (VANCOUVER WEST 6TH AVENUE)	SUBMITTED BY
1994-08-18	REMEDIATION PLAN REPORT SUBMITTED			FINLAY FOREST INDUSTRIES (INGENIKA ARM) MITCHELL, IAN J D (MELP)	REQUESTED BY Ministry Contact
				SEACOR ENVIRONMENTAL ENGINEERING INC (VANCOUVER WEST 6TH AVENUE)	SUBMITTED BY
1994-08-18	CONCENTRATION CRITERIA APPROACH USED			FINLAY FOREST INDUSTRIES (INGENIKA ARM) MITCHELL, IAN J D (MELP)	REQUESTED BY Ministry Contact
1994-08-18	WASTE MANAGEMENT APPROVAL ISSUED	NO. AR-12946. NOT AVAILABLE. NOTE: APPROVAL NOT ACTED ON DUE TO LARGE INCREASE IN SOIL VOLUME AND DELAY IN IMPLEMENTING WORK. NEW APPROVAL ISSUED IN 1996		FINLAY FOREST INDUSTRIES (INGENIKA ARM) MITCHELL, IAN J D (MELP)	REQUESTED BY Ministry Contact

SITE PARTICIPANTS

Participant	Start Date	End Date	Note	Role
ANALYTICAL SERVICE LABORATORIES LTD (VANCOUVER)	1984-08-15		ALAN W. MAYNARD	ANALYTICAL LAB
FINLAY FOREST INDUSTRIES (INGENIKA ARM)	1885-01-01		HISTORICAL START DATE	OPERATOR
KNEZEVIC-STEVANOVIC, ANJELKA B	2004-03-19			NOTICE RECIPIENT(MMAA20.2(13))-DON'T FLAG
MITCHELL, IAN J D (MELP)	1984-08-15	1999-07-17		ALTERNATE MINISTRY CONTACT
SEACOR ENVIRONMENTAL ENGINEERING INC (VANCOUVER WEST 6TH AVENUE)	1994-05-18		PHILIP LOWRY	MAIN MINISTRY CONTACT
SEACOR ENVIRONMENTAL INC (PRINCE GEORGE)	2004-03-19			ENVIRONMENTAL CONSULTANT/CONTRACTOR
				ENVIRONMENTAL CONSULTANT/CONTRACTOR

SITE DETAILS REPORT

Page 3 of 3

DOCUMENTS

Title	Document Date	Received Date	Participant	Role	Notes
REMEDIAL ACTIVITIES FUEL FACILITY SUP 16346, INGENIKA AREA, WILLISTON LAKE BC	1998-11-12	1999-01-07	FINLAY FOREST INDUSTRIES (INGENIKA AREA)	COMMISSIONER	
			SEACOR ENVIRONMENTAL ENGINEERING INC (VANCOUVER WEST 6TH AVENUE)	AUTHOR	
ENVIRONMENTAL SITE REVIEW FINLAY FOREST INDUSTRIES FUEL FACILITY SUP 16346 INGENIKA AREA, WILLISTON LAKE B.C.	1994-08-15	1994-08-18	FINLAY FOREST INDUSTRIES (INGENIKA AREA)	COMMISSIONER	
			MITCHELL, IAN J.D (MELP)	REVIEWER	
			SEACOR ENVIRONMENTAL ENGINEERING INC (VANCOUVER WEST 6TH AVENUE)	AUTHOR	

SITE ASSOCIATIONS

Site Id	Common Name	Date	Notes
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SUSPECT LAND USE

Description	Note
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CONTAMINATED SOIL STORAGE, TREATMENT OR DISPOSAL
PETRO. PROD., /PRODUCE WATER STRG ABOVEGROUND/TANK
PETRO. PROD., WHOLESale BULK STORAGE OR DISTRIBUTION
USED FOR 7 YEARS, NOW DECOMMISSIONED

PARCEL DESCRIPTIONS

Land Title # (PID)	Crown Land # (PIN)	Land File #	Date Noted	Legal/Land Descriptions
		16340	2000-07-18	SUP 16340: CASSIAR LAND DISTRICT, PRINCE GEORGE FOREST REGION, MACKENZIE FOREST DISTRICT, REG 77, COMP 65, UTM GRID: ZONE 10, EAST 381000, NORTH 631100

7

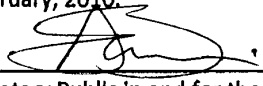
This is Exhibit "48"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 48

Date Printed: 2010-01-29

Site Details Report

SELECTION CRITERIA

Destination Type: Cache

Destination Name:

Site Id:

2178

Regional File No.:

%

Victoria File No.:

%

Include Subdivisions (Y/N)?

Y

Include Site Profiles (Y/N)?

N

report version v.5.2.0

SITE DETAILS REPORT

Site Id : 2178 Region: PRINCE GEORGE, OMINECA-PEACE
Common Name : TAYLOR AND TAYLOR CONTRACTING, OTTERTAIL

LOCATION

Site Address : NABESCHE LOGGING CAMP (OTTERTAIL CAMP)
Victoria File :
Regional File : 26250-20/PG9582
Longitude : 123 : 07 : 20.0
Latitude : 056 : 07 : 35.0
Location Description : PEACE OPERATING AREA LOGGING CAMP UNDER CONTRACT TO FINLAY FOREST INDUSTRIES, PR08/720
City : OTTERTAIL AREA
Province : BC
Postal Code :

STATUS

Status : UNKNOWN STATUS Initial Approval Date : 1998-05-12
Category : NOT APPLICABLE Last Approval Date : 2000-01-05
Pending Date : 2000-01-05

NOTATIONS

Initiated	Notation	Notes	Required Actions	Participants	Role
1998-10-11	HISTORICAL SITE NOTIFICATION ISSUED (NMA 26.3(1))	Auto-created by the Mailbut Process		RAPER, WALLY	Ministry Contact
1995-10-18	CASE MANAGEMENT ITEM	INFORMATION LETTER SENT TO TAYLOR AND TAYLOR		FINLAY FOREST INDUSTRIES (MACKENZIE) RAPER, WALLY	RECEIVED BY ISSUED BY Ministry Contact
1995-10-18	CASE MANAGEMENT ITEM	ENTERED INTO SITE DUE TO POSSIBLE CONCERNS IN THE FUEL STORAGE AREA		TAYLOR AND TAYLOR CONTRACTING (PRINCE GEORGE) RAPER, WALLY	RECEIVED BY ISSUED BY Ministry Contact

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SITE DETAILS REPORT

SITE PARTICIPANTS

Participant	Start Date	End Date	Note	Role
FINLAY FOREST INDUSTRIES (MACKENZIE)	1995-04-12		LEGAL PERMIT HOLD OF PR08720	NOTICE RECIPIENT(WMAA20.21(3))-DON'T FLAG
			LEGAL PERMIT HOLD OF PR08720	LEASEE/ENTER/TENANT
			LEGAL PERMIT HOLD OF PR08720	POTENTIALLY AFFECTED PARTY
MITCHELL, IAN J D (MELP)	1995-05-09	1999-07-17		ALTERNATE MINISTRY CONTACT
RAPER, WALLY	1995-05-09	2004-03-31		MAIN MINISTRY CONTACT
REGIONAL FIRE COMMISSIONER, NORTHERN REGION (PRINCE GEORGE)	1995-04-12			ASSOCIATED PROVINCIAL GOVERNMENT CONTACT
TAYLOR AND TAYLOR CONTRACTING (PRINCE GEORGE)	1995-04-12		CONTRACTED FOR MAINTENANCE OF OTTERTAIL CAMP	NOTICE RECIPIENT(WMAA20.21(3))-DON'T FLAG
			CONTRACTED FOR MAINTENANCE OF OTTERTAIL CAMP	OPERATOR

DOCUMENTS

Title	Document Date	Received Date	Participant	Role	Notes
FIRE SAFETY INSPECTION, OTTERTAIL CAMP	1995-05-09	1995-10-01	RAPER, WALLY REGIONAL FIRE COMMISSIONER, NORTHERN REGION (PRINCE GEORGE) TAYLOR AND TAYLOR CONTRACTING (PRINCE GEORGE)	REVIEWER AUTHOR RECIPIENT	FIRE INSPECTION REPORT FORWARDED TO ENVIRONMENTAL PROTECTION DUE TO CONCERNS IN THE FUEL STORAGE AREA

SITE ASSOCIATIONS

Site Id	Common Name	Date	Notes
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SUSPECT LAND USE

Description	Note
FORESTRY (PRIMARY)	

PARCEL DESCRIPTIONS

Land Title # (PID)	Crown Land # (PIN)	Land File #	Date Noted	Legal/Land Descriptions
		S11761	2000-07-18	SPECIAL USE PERMIT S11761.

3

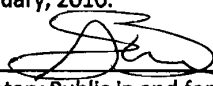
This is Exhibit "49"
referred to in the Affidavit
of Maureen Bilawchuk
sworn before me this 4 day of
February, 2010.

A Notary Public in and for the Province of
British Columbia

Exhibit 49



Victoria File #

26250-20/6254

COPY

September 18, 2003

Land and Water British Columbia Inc.
507 - 345 Wallace Street
Nanaimo, BC V9R 5B6



26250-20/6254

Site: 6254

Attention: Neil Banera

Re: Bowater - Gold River Pulp Mill, Gold River, BC
Site #: 6254

RAF
G.L. & son
A.L.

Dear Neil Banera:

This letter follows upon our discussion on August 12, 2003 regarding the potential contamination of Crown-owned water lots in the vicinity of Gold River which are administered by Land and Water BC Inc.

These water lots were not investigated during the previous applications for a Certificate of Compliance and a Conditional Certificate of Compliance of the upland portion of the site operated by Bowater Pulp and Paper Ltd. However, it is reasonable to expect that the water lots and their associated sediment beds would be returned to the Crown in a condition that meets provincial environmental quality standards and criteria. Because of the historic pulp and paper mill operation on the adjacent uplands, the Contaminated Sites Regulation of the *Waste Management Act* would be applicable to the off-site. Our office can provide further guidance on the applicable standards and criteria as well as overall site investigation requirements.

At our meeting, we also discussed the concern expressed by the Village of Gold River with respect to their potential acquisition of the public wharf facility in Gold River currently owned and managed by the Department of Transportation (DoT). Previous investigations by DoT indicated the presence of polychlorinated dibenzo-p-dioxins and dibenzofurans in sediments around the wharf structure. DoT is planning to dredge and dispose of sediments associated with routine maintenance prior to any divestiture. However, the Village of Gold River has expressed concern over the possible recontamination of sediments in the vicinity of the wharf and any liability that may be assumed with future dredging activities. This concern is also warranted for the potential liability associated with future use of the adjacent water lots.

Ministry of
Water, Land and
Air Protection

Environmental Protection Division
Environmental Management Branch
Contaminated Sites Program

Mailing Address:
PO Box 6342 Stn Prov Govt
Victoria BC V8W 9M1
Phone: (250) 387-2218
Fax: (250) 387-9935

Location:
3rd Floor, 2975 Jutland Road
Victoria BC



At this time, our office recommends that Land and Water BC Inc. contact Bowater Pulp and Paper Canada Ltd., to request investigations into the potential off-site contamination arising from the historic pulp and paper mill operations on the adjacent uplands. It is entirely possible that the dioxin and furan contamination identified by DoT may also be present in the sediments of the water lots and that it originated from historical pulp and paper mill operations. As such, there are concerns regarding the quality of the sediment not only along the foreshore of the mill site but also throughout the harbour. This investigation will also necessarily encompass the public wharf facility as the investigation determines the extent of the contamination in the Inlet. Further, the investigation may focus predominantly on the dioxins and furans, but Bowater Pulp and Paper Ltd. should also consider any other possible contaminants associated with their historical activities which may have impacted the water lots and surrounding area.

If you have any further questions, please contact me at (250) 387-2218.

Yours truly,



Doug Walton
Assistant Regional Waste Manager

cc: Dave Lewis, Mayor, Village of Gold River
Robert Sisler, Transport Canada
Brian Mooney, Bowater Pulp and Paper Company
✓ Blake Medlar, MWLAP - Nanaimo
Alan McCammon, MWLAP - Surrey