



MINISTRY OF ENVIRONMENT

PERMIT

3095

Under the Provisions of the Environmental Management Act

Howe Sound Pulp & Paper Corporation
225-209 Carrall Street
Vancouver, BC V6B 2J2

is authorized to discharge contaminants to the air from a pulp and paper mill located at Port Mellon, 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.

This Permit is amended pursuant to Part 2, Section 16 of the Environmental Management Act and supercedes all previous versions of Permit 3095.

1. AUTHORIZED DISCHARGES

1.1 This section applies to the discharge of air contaminants from a RECOVERY BOILER. The site reference number for this discharge is E218529.

1.1.1 The maximum authorized rate of discharge is 5,950 cubic metres per minute, corrected to 6% oxygen (O2). The authorized discharge period is 24 hours per day.

NOTE: The maximum authorized rate of discharge may be exceeded if the actual loading rate for particulate matter during stack testing does not exceed the allowable loading rate of 1285 kilograms per day.

1.1.2 The characteristics of the discharge must be equivalent to or better than:

Table with 2 columns: Contaminant and Maximum Concentration. Rows include Particulate matter, Total reduced sulphur (as H2S) with corresponding concentration values.

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for Director, Environmental Management Act
South Coast Region

- 1.1.3 The authorized works are a low odour type recovery boiler, a dry bottom electrostatic precipitator, fan, stack and related appurtenances approximately located as shown on 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 Block 3 Plan 21182 of Lot 1364, Lot 6103, Lot 6986, Block 2 of Lot 1364, Lot 6986, Plan 11981, and Lot 1366 all of Group 1, New Westminster District.
- 1.2 This section applies to the operation and the discharge of air contaminants from, a **POWER BOILER**. The site reference number for this discharge is E218534.
- 1.2.1 The maximum authorized rate of discharge is 6,300 cubic metres per minute, corrected to 12% CO₂. The authorized discharge period is 24 hours per day.

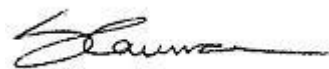
NOTE: The maximum authorized rate of discharge may be exceeded if the actual loading rate for particulate matter (including salt) during stack testing does not exceed the allowable loading rate of 2087 kilograms per day.

- 1.2.2 Subject to Section 2.14, the materials authorized to be combusted in the boiler are limited to:
- a) wood residue* (subject to Section 2.10)
 - b) natural gas
 - c) effluent treatment sludges
 - d) dilute and concentrated noncondensable gases
 - e) fuel oil (subject to Section 2.13)
 - f) construction and demolition waste** (C&D waste)

* Wood residue means clean wood which does not contain plastics, biomedical waste, hazardous waste (as defined in the Hazardous Waste Regulation), paints, stains, coatings, wood preservatives, or manufactured wood products.

** C&D waste must contain at least 70% by weight (oven dried) wood residue, and must not contain more than 1% by weight (oven dried) painted wood and 1% by weight (oven dried) plastic. The permittee must continually endeavour to work with the C&D waste supplier(s) to reduce the amount of contamination (non-clean wood residue) in the C&D waste and aim to achieve 90% wood residue.

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1.2.3 The characteristics of the discharge must be equivalent to or better than:

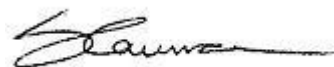
<u>Contaminant</u>	<u>Maximum Concentration</u>
Particulate Matter (excluding salt, NaCl)	80 mg/m ³ at 12% CO ₂ *
Particulate Matter (including salt, NaCl)	115 mg/m ³ at 12% CO ₂ **
Particulate Matter (including salt, NaCl)	160 mg/m ³ at 12% CO ₂
Sulphur Dioxide	300 mg/m ³ (daily avg.)***
Sulphur Dioxide	425 mg/m ³ (hourly avg.)***
Nitrogen Oxides (as NO ₂)	450 mg/m ³ (daily avg.)****
	300 mg/m ³ (monthly avg.)*****
 Arsenic ^a	 maximum average *
 Cadmium ^a	 maximum average *
 Chromium ^a	 maximum average *
 Copper ^a	 maximum average *
 Lead ^a	 maximum average *
 Mercury ^a	 maximum average *

^a Value to be determined by the Director upon completion of Section 3.11 monitoring.

*The running annual average (current and previous three quarters) concentration.

**The running annual average (current and previous three quarters) concentration of particulate (including salt, NaCl) must not exceed 115 mg/m³. Each individual quarterly test must not exceed 160 mg/m³ (including salt, NaCl).

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***Those hours during which low volume high concentration noncondensable gases (CNCGs) and/or oil is burned in the power boiler, subject to the conditions specified in Sections 2.12 and 2.13, must not be included in the calculation of the daily average or the maximum hourly average.

****Those hours during which more than 60 tonnes of steam/hour is generated from natural gas, subject to the conditions specified in Subsection 2.9, must not be included in the calculation of the daily and monthly averages. Regardless of the amount of steam produced from natural gas, the daily average must never exceed 900 mg/m^3 and the monthly average must never exceed 450 mg/m^3 .

- 1.2.4 The authorized works are three wood residue presses, multiclone dust collectors, a two-chamber electrostatic precipitator with four collection fields, a 57 metre high stack and related appurtenances approximately located as shown on Site Plan A.
- 1.2.5 The location of the facilities from which the discharge originates and the point of discharge is the same as Section 1.1 above.
- 1.3 This section applies to the discharge of air contaminants from a **LIME KILN**. The site reference number for this discharge is E218531.

- 1.3.1 The maximum authorized rate of discharge is 1,035 cubic metres per minute. The authorized discharge period is 24 hours per day.

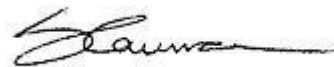
NOTE: The maximum authorized rate of discharge may be exceeded if the actual loading rate for particulate matter during stack testing does not exceed the allowable loading rate of 149 kilograms per day.

- 1.3.2 The characteristics of the discharge must be equivalent to or better than:

<u>Contaminant</u>	<u>Maximum Concentration</u>
Total particulate	100 mg/m ³ .

- 1.3.3 The authorized works are an electrostatic precipitator, stack and related appurtenances approximately located as shown on Site Plan A.

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1.3.4 The location of the facilities from which the discharge originates and the point of discharge is the same as Section 1.1 above.

1.4 This section applies to the discharge of air contaminants from a **SMELT DISSOLVING TANK**. The site reference number for this discharge is E218530.

1.4.1 The maximum authorized rate of discharge is 725 cubic metres per minutes. The authorized discharge period is 24 hours per day.

NOTE: The maximum authorized rate of discharge may be exceeded if the actual loading rate for particulate matter during stack testing does not exceed the allowable loading rate of 209 kilograms per day.

1.4.2 The characteristics of the discharge must be equivalent to or better than:

<u>Contaminant</u>	<u>Maximum Concentration</u>
Total particulate	200 mg/m ³

1.4.3 The authorized works are a Ducon scrubber, stack and related appurtenances approximately located as shown on Site Plan A.

1.4.4 The location of the facilities from which the discharge originates and the point of discharge is the same as Section 1.1 above.

1.5 This section applies to the discharge of air contaminants from a **BLEACH PLANT AND CHEMICAL PREPARATION SCRUBBERS**. The site reference number for this discharge is E218527.

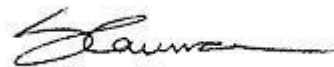
1.5.1 The maximum authorized rate of discharge is 650 cubic metres per minute. The authorized discharge period is 24 hours per day.

1.5.2 The characteristics of the discharge must be equivalent to or better than:

<u>Contaminant</u>	<u>Maximum Concentration</u> (ground level)
Chlorine dioxide (as Cl ₂)	150 ug/m ³ (measured at the point of impingement).

1.5.3 The authorized works are a scrubber, stack and related appurtenances approximately located as shown on Site Plan A.

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1.5.4 The location of the facilities from which the discharge originates and the point of discharge is the same as Section 1.1 above.

1.6 This section applies to the discharge of air contaminants from a **BLEACH PLANT AND CHLORINE DIOXIDE SYSTEM SCRUBBER**. The site reference number for this discharge is E218533.

1.6.1 The maximum authorized rate of discharge is 650 cubic metres per minute. The authorized discharge period is 24 hours per day.

1.6.2 The characteristics of the discharge must be equivalent to or better than:

<u>Contaminant</u>	<u>Maximum Concentration</u> (ground level)
Chlorine dioxide (as Cl ₂)	150 ug/m ³ (measured at the point of impingement).

1.6.3 The authorized works are a scrubber, stack and related appurtenances approximately located as shown on Site Plan A.

1.6.4 The location of the facilities from which the discharge originates and the point of discharge is the same as Section 1.1 above.

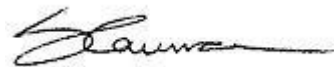
1.7 This section applies to the discharge of air contaminants from **MISCELLANEOUS MILL SOURCES**. The site reference number for this discharge is E218528.

1.7.1 The maximum authorized rate of discharge is 25,500 cubic metres per minute. The authorized discharge period is 24 hours per day.

1.7.2 The characteristics of the discharges must be those typical of the following:

- Pulp and paper machine exhausts;
- Building ventilation;
- TMP exhaust;
- Miscellaneous mill tanks
- Mud and dregs filter.

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- 1.7.3 The authorized works are exhaust fans, vents, ducts and related appurtenances approximately located as shown on Site Plan A.
- 1.7.4 The location of the facilities from which the discharge originates and the point of discharge is the same as Section 1.1 above.

1.8 This section applies to the discharge of air contaminants from **OTHER SOURCES OF TOTAL REDUCED SULPHUR INCLUDING SMELT DISSOLVING TANK, LIME KILN, AND POWER BOILER**. The site reference number for this discharge is E218532.

1.8.1 The maximum authorized rate of discharge is 8,060 cubic metres per minute. The authorized discharge period is 24 hours per day.

1.8.2 The characteristics of the discharge must be equivalent to or better than:

<u>Contaminant</u>	<u>Maximum Concentration</u>
Total reduced sulphur (as S)	0.110 kg/ADUt*

*ADUt means air dry unbleached tonnes of kraft pulp production. The kraft pulp production used to calculate the concentration of total reduced sulphur is the 90th percentile kraft pulp production from the previous 90 days of operation.

1.8.3 The authorized works are, subject to subsection 3.4, (1) collection and incineration system for low volume high concentration noncondensable gases (CNCGs) in the lime kiln or power boiler when the lime kiln is shut down for maintenance or when the lime kiln CNCG feed system is inoperable; (2) collection and incineration system for high volume low concentration noncondensable gases (DNCGs) in the power boiler and related appurtenances approximately located as shown on Site Plan A.

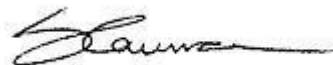
1.8.4 The location of the facilities from which the discharge originates and the point of discharge is the same as Section 1.1 above.

2. GENERAL REQUIREMENTS

2.1 Standard Conditions

Unless otherwise specified, all gaseous volumes must be converted to standard conditions of 293.15 K and 101.325 kPa with zero percent moisture.

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2.2 **Maintenance of Works and Emergency Procedures**

The authorized works must be inspected regularly and maintained in good working order. In the event of an emergency or condition beyond the control of the permittee which prevents effective operation of the authorized works or leads to an unauthorized discharge, the permittee must take appropriate remedial action and notify the Director immediately. The Director may reduce or suspend operations to protect the environment until the authorized works has been restored, and/or corrective steps taken to prevent unauthorized discharges.

2.3 **Bypasses**

Any bypass of the authorized works is prohibited unless the approval of the Director is obtained and confirmed in writing.

2.4 **Process Modifications**

The Regional Manager, Environmental Protection must be notified prior to implementing changes to any process that may adversely affect the quality and/or quantity of the discharge. Despite notification under this section, permitted levels must not be exceeded.

2.5 **Notification**

The Regional Manager, Environmental Protection, must be notified of a change in ownership of the works within 10 days of an ownership change.

2.6 **Emission Quality Limits**

Based on the results of the monitoring program or other information, the Director may amend the permit to specify additional or different emission quality limits and the sampling methods or frequencies the limits are based on.

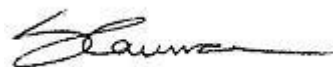
2.7 **Additional Treatment**

If the permittee is not meeting the emission characteristics specified in this Permit or the permittee is causing an adverse impact on the receiving environment, the Director may amend the permit to require the permittee to install additional treatment works or implement other measures as necessary to meet Permit conditions or to prevent the impact on the receiving environment.

2.8 **Combustion Residues and Waste from the Air Pollution Control Facilities**

All combustion residues, including bottom ash from the power boiler, and waste from the air pollution control facilities, such as fly ash from the electrostatic precipitator of the power boiler, must be disposed of at a site and in a manner approved by the Director.

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2.9 **Hazardous Wastes**

The permittee must not burn, store, or discharge any Hazardous Waste unless it is in accordance with the *Environmental Management Act* Hazardous Waste Regulation.

2.10 **Power Boiler Emissions**

a) Maximize the usage of acceptable quality low salt content wood residue in the boiler from land clearing operations and the like (particularly those located within the Sunshine Coast Regional District, without jeopardizing the permittee's ability to secure their fibre supply) in order to facilitate an overall reduction in the emission of pollutants created by disposal of such residues in other manners.

b) To optimize emissions from the power boiler, the daily fuel-mix (wood residue and C&D waste) is limited to a maximum of 70% C&D waste.

c) Submit an annual report to the Regional Manager, Environmental Protection with a copy to the Sunshine Coast Regional District, indicating the quantities of wood residues, and average percent of C&D waste in the fuel-mix (wood residue and C&D waste) for each quarter burnt in the boiler. The report must provide information on the residues in terms of their types (chip purchase contracts, land clearing, etc.), their quantities, their geographic source (Sunshine Coast Regional District or other locations) and such other information as the permittee and the Ministry agree on as reasonable and available.

2.11 **Nitrogen Oxides Limit for the Power Boiler**

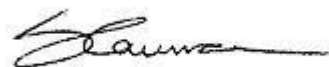
The permittee must maximize the use of wood residue and minimize the use of natural gas to control nitrogen oxide (NO_x) emission from the power boiler.

2.12 **Sulphur Dioxide Limit for the Power Boiler**

The permittee must not allow emissions from the power boiler to exceed the sulphur dioxide (SO₂) limit specified in Section 1.2 unless:

- a) the lime kiln is shut down for maintenance or the low volume high concentration noncondensable gas (CNCG) incineration system at the lime kiln is inoperable; and
- b) the permittee notifies the Regional Manager, Environmental Protection, of the shutdown of the lime kiln at least 72 hours in advance of the planned shutdown for maintenance; and
- c) the low volume high concentration noncondensable gases (CNCGs) that are normally incinerated in the lime kiln are directed to the power boiler for incineration; and/or

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d) fuel oil is being burned, subject to the conditions specified in Section 2.13.

The permittee must record the details of any exceedances in accordance with the above conditions including the reason, duration, and cumulative total hours for each month. The SO₂ values obtained during those periods when CNCGs and/or fuel oil are burned in the power boiler must not be used in the calculation of the daily average value, subject to the conditions as stated above.

2.13 Oil Burned in the Power Boiler

The permittee must maximize the use of wood residue in place of natural gas or fuel oil in the power boiler. The permittee must not burn oil in the power boiler more than 10.0 days per calendar year, unless the natural gas supply to the mill is curtailed by the natural gas supply and pipeline companies or contractual obligations of the permittee or when the additional required natural gas is not available to the mill.

The permittee must comply with the sulphur content limit and all other requirements of the *Environmental Management Act* Sulphur Content in Fuel Regulation or any subsequent regulation if oil is burned in the power boiler. When oil is burned in the power boiler, the sulphur dioxide values obtained for those hours must not be used in the calculation of the daily average value.

The permittee must record, once per month, the details of any burning of oil in the power boiler including the duration, the cumulative total hours to date for the calendar year and the reason.

2.14 Material Burned in the Power Boiler

If the characteristics of the emissions from the power boiler are not acceptable to the Director, he or she may restrict or prohibit specific types of materials from being burned in the boiler.

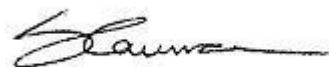
2.15 Fugitive Emission Control

Fugitive emissions created within the operation area must be suppressed. If the air quality becomes a concern, the Director may evaluate the sensitivity of the receiving environment, the contribution of the permittee's sources, plus any other pertinent information. The Director may require additional control measures on fugitive emission sources.

2.16 Stack Sampling Facilities

Sampling ports must be provided with nearby electrical outlets and, where required, approved access ladders and adequately sized platforms, for the discharges covered by Section 1.

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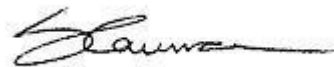
3. MONITORING AND REPORTING REQUIREMENTS

3.1 Operating Conditions

Sampling must occur under "actual operating conditions" that are as close as reasonably practical to the 90th percentile operating condition for the ninety days of operation prior to the date of sampling. The minimum "actual operating conditions" for sampling purposes is the 50th percentile operating conditions for the 90 days of operation prior to the date of sampling. The permittee must document the actual operating conditions and report them to the Regional Manager, Environmental Protection, along with the 90th percentile and 50th percentile operating conditions. The operating conditions to be reported must include the following:

Production Rating:	Unbleached Kraft Pulp (ADUt/d)
Mill Recovery System: (includes smelt dissolving tank)	Black Liquor Solids burned in the Recovery Boiler (kg/d)
Lime Kiln:	Lime Production as CaO (t/d)
Power Boiler:	-Steam generated from wood residue/C&D fuel- mix (t/h) -Total steam generated (t/h) -Effluent Treatment Sludge Burned (t/d) -Percentage of C&D waste in the wood residue/C&D waste fuel-mix

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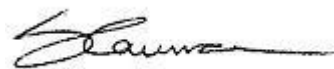
3.2 **Discharge Monitoring**

Source	Reference #	Parameter	Frequency
Recovery Boiler (1.1)	E218529	Discharge Rate	Quarterly
		Particulate Matter	Quarterly
		Total Reduced Sulphur (as H ₂ S)	Continuous
		Sulphur Dioxide	Continuous
Power Boiler (1.2)	E218534	Discharge Rate	Quarterly
		Particulate Matter (including salt)	Quarterly
		Particulate Matter (excluding salt)	Quarterly
		Sulphur Dioxide	Continuous
		Nitrogen Oxides (as NO ₂)	Continuous
		Opacity	Continuous
		Oxygen	Continuous
		Carbon Dioxide	Quarterly
Dioxins & Furans	annually		
Lime Kiln (1.3)	E218531	Discharge Rate	Quarterly
		Particulate Matter	Quarterly
Smelt Dissolving Tank (1.4)	E218530	Discharge Rate	Quarterly
		Particulate Matter	Quarterly
Bleach Plant & Chem. Prep. Scrubber (1.5)	E218527	Discharge Rate	Monthly
		Chlorine Dioxide	Monthly*
Bleach Plant & Chlorine Dioxide System Scrubber (1.6)	E218533	Discharge Rate	Monthly
		Chlorine Dioxide	Monthly*
Other Sources of Total Reduced Sulphur (1.8)	E218532	Discharge Rate	Monthly
		Total Reduced Sulphur (as S)	Monthly**

* As required by the Director

** The total results for all sources combined and the individual results for each separate source must be recorded as m³/min, kg/ADUt, and mg/m³.

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3.3 **Venting of Noncondensable Gasses**

The permittee must maintain a record of duration and frequency of venting incidents of noncondensable gases. Venting of noncondensable gases is not authorized unless:

- (1) All of the following conditions are met:
 - (a) it is caused by an emergency or condition beyond the control of the permittee which prevents continuing operation of approved method of pollution control;
 - (b) the hourly average ambient total reduced sulphur (TRS) level does not exceed $28 \mu\text{g}/\text{m}^3$ (20 ppb) at the Langdale monitoring station or other locations that may be designated by the Director; and
 - (c) the permittee immediately takes appropriate remedial action; or
- (2) It is otherwise approved by the Director.

Based on a review of the venting of noncondensable gases and the $28 \mu\text{g}/\text{m}^3$ (20 ppb) ambient limit specified above, the Director may specify different conditions for the venting of noncondensable gases.

3.4 **Continuous Emission Monitors**

Daily, record the hourly averages, the maximum hourly average and the daily average of TRS and SO_2 values for the discharge described in Section 1.1 above. Daily, record the hourly averages, the maximum hourly average and the daily average of NO_x and SO_2 values for the discharge described in Section 1.2 above. Record the daily average and the maximum hourly average of opacity values for the discharge described in Subsection 1.2 above.

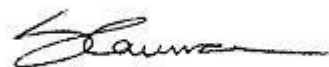
The Director may require more detailed data submissions.

3.5 **Record of Materials Burned in the Power Boiler**

Once each day, record the amounts and types of all materials burned each day in the power boiler such as wood residue, oil, natural gas, C&D waste and/or effluent treatment sludge and the percent of C&D waste in the wood residue/C&D waste fuel-mix.

Once each quarter, a representative composite sample of the fuel-mix (C&D waste and wood residue), being used at the time of stack testing, must be collected and analyzed to determine the physical characteristics of the material. This includes a breakdown by oven dry weight of all wood and non-wood components in the material (e.g. wood, plastic, arborite, asphalt, etc.). The composite sample must consist of no less than three separate samples from the same stockpile.

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During the determination of the particulate emissions, record the salt content (%) of the wood residue and the percentage of fuel-mix (wood residue and C&D waste) burned.

3.6 **Production Figures**

Record the unbleached kraft pulp production (ADUt/d) once per day. Once per year, determine the 90th percentile of total unbleached kraft pulp production.

3.7 **Air Pollution Treatment Review Report**

Once per year, submit an air pollution control review report which assesses the performance of the air pollution control facilities over the previous year. The report must contain a summary of any permit non-compliances, the reasons for the non-compliances and the corrective action taken or required to prevent future non-compliances.

3.8 **Environmental Impact Report**

The permittee must prepare a report once each year on the environmental impact of the air emissions for the calendar year. It must include, but not be limited to:

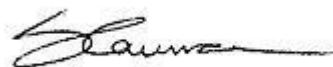
- a) A comparison of ambient air monitoring data with ambient air quality objectives,
- b) A comparison of ambient air monitoring data with previous data using graphs and tables and a discussion on whether the environmental impact is increasing or decreasing and,
- c) If required by the Director, the permittee must commence and submit results of a soil and vegetation study, or other monitoring program to assess impacts from emissions. The terms of reference of the study must be subject to the approval of the Director.

3.9 **Receiving Environment Monitoring**

3.9.1 **Meteorological Data**

The permittee must maintain a meteorological station at the mill site and gather meteorological data (including wind speed, wind direction and temperature) as required by the Director.

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3.9.2 Ambient Air

The permittee must continuously monitor total reduced sulphur (TRS), sulphur dioxide (SO₂), nitrogen oxides (NO_x), and particulate matter (PM_{2.5} and PM₁₀) with data logging and telemetry capabilities to allow instant access and alarms to both the mill and the Regional Environmental Protection Office. TRS, SO₂, NO_x, PM_{2.5} and PM₁₀ monitors are to be located at Langdale, at a site approved by the Director. The PM_{2.5} monitor must be acceptable to the Director and installed by December 1, 2011.

If the data from the TRS, SO₂, NO_x, PM_{2.5} and PM₁₀ monitors or other information indicates that additional monitors are necessary to monitor the impact on air quality, the Director may require the permittee to install additional monitors. The exact location(s) of the ambient air monitoring station(s) must be subject to the approval of the Director.

Record the 24-hour average, annual average, and maximum daily 1-hour average values from the continuous monitors. Record the total time that values exceed the relevant criteria, in hours, during each month.

3.9.3 Computer Dispersion Modelling Study

Dispersion modelling may be required at the discretion of the Director.

3.10 Monitoring Procedures

3.10.1 Air Quality Monitoring Station (AQMS)

The AQMS must be maintained in a manner acceptable to the Director.

3.10.2 Continuous Emissions Monitors (CEM'S)

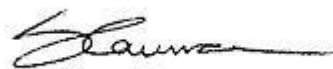
The CEM's must be maintained in a manner acceptable to the Director.

3.10.3 Analytic Procedures

Analyses are to be carried out in accordance with procedures described in the "British Columbia Laboratory Manual (2009 permittee Edition)", or the most recent edition, 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) at the internet at www.crownpub.bc.ca. A copy of the manual is also available for review at all Environmental Protection offices.

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3.10.4 Sampling Location and Techniques

All sampling locations, techniques and equipment require the consent of the Director prior to use. Sampling and monitoring data, which also should include rate of discharge measurements, must be accompanied by process data relevant to the operation of the source of the emissions and to the performance of the pollution treatment equipment involved in the testing.

3.10.5 Source Testing Procedures

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

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) or via the internet at www.crownpub.bc.ca. A copy of the manual is also available for review at all Environmental Protection offices.

3.10.6 Quality Assurance

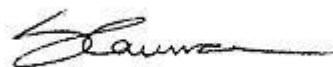
All data of analyses required to be submitted by the permit must be conducted by a laboratory acceptable to the Director. At the request of the Director, the permittee must provide the laboratory quality assurance data, associated field blanks and duplicate analysis results along with the submission of data required under Section 3 of the permit.

3.11 Additional Monitoring – Power Boiler

Additional monitoring must be carried out for a period of 6 months commencing October 1, 2011 as follows:

- (1) For the purposes of the monitoring program, "Quarter" refers to three-month periods commencing October 1, 2011. There must be 2 quarterly sampling events within the 6 month period (one each quarter). The first sample must be collected and analyzed by December 31, 2011 and the second sample must be collected and analyzed by March 31, 2012;
- (2) For the purposes of the monitoring program the C&D waste percentage in the fuel-mix (wood residue/C&D waste) on the days of sampling must be as close as reasonably practical to the 90th percentile C&D waste percentage for the ninety days of operation prior to the date of sampling. The minimum C&D waste

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percentage in the fuel-mix for sampling purposes is the 50th percentile C&D waste percentage for the 90 days of operation prior to the date of sampling. The permittee must record the actual C&D waste percentage on the day of sampling.

(3) Stack tests must be conducted quarterly for the following parameters (units are mg/m^3 unless otherwise indicated):

- Discharge rate (m^3/min)
- Temperature, combustion zone (deg C) (throughout each day of testing)
- total particulate
- Oxygen (O_2)
- Carbon Dioxide (CO_2)
- Hydrochloric Acid (HCl)
- Hydrofluoric Acid (HF)
- Total Metals (Class 1, 2 and 3)
- Total Hydrocarbons
- Continuous emissions (NO_x , SO_2 , O_2 , CO_2) for the period during each stack test
- Steam generated from fuel-mix (t/h)
- Steam generated from natural gas (t/h)
- Polycyclic aromatic hydrocarbons (PAHs)
- Dioxins & Furans (pg/m^3);

(4) Once each quarter, a representative composite sample of the fuel-mix (C&D waste and wood residue), being used at the time of stack testing, must be collected and analyzed for total metals (Class 1, 2, and 3) and chloride. The composite sample must consist of no less than three separate samples from the same stockpile;

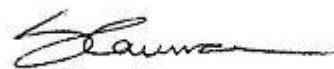
(5) All stack testing must be conducted during operating conditions as specified in Section 3.1;

(6) All sampling and analysis must be conducted in accordance with Section 3.10. Note that for the purpose of Section 3.11, a laboratory that is registered under the Environmental Data Quality Assurance Regulation is considered to be acceptable;

(7) A report must be submitted to the Regional Manager, Environmental Protection, 2nd Floor 10470 152nd Street, Surrey, BC V3R 0Y3, once each quarter. The first report must be submitted no later than January 31, 2012 and the second report must be submitted no later than April 30, 2012. Each report must include, but not be limited to, the following information:

- a) For each day of the quarter, the specific types (e.g. wood residue, pine beetle kill wood, C&D waste, and percentage of C&D waste in the fuel-mix (wood residue and C&D waste), natural gas, fuel oil, effluent treatment sludge) and quantities of all materials burned in the wood residue boiler,

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- b) The results of all required monitoring must be suitably tabulated in spreadsheet format, to the satisfaction of the Director,
- c) The 90th percentile steam generation rate over the 90 days preceding each stack test,
- d) The 50th percentile steam generation rate over the 90 days preceding each stack test,
- e) The quantity of each type of fuel burned, relative to the amount of steam generated by each fuel type, during each day of stack testing described in Section 3.11,
- f) A comparison of the results obtained from the analysis of the fuel-mix,
- g) A summary of the C&D waste percentage information collected pursuant to Section 3.5 and the 90th percentile of the C&D waste percentages from the 90 days preceding each stack test.

3.13 **Reporting**

Maintain data of analyses, continuous ambient and emissions monitoring, venting of noncondensable gases, details of non-compliances, details of burning natural gas and/or oil, discharge rates, operation of the power boiler such as materials burned and production figures for inspection. Submit the data monthly, suitably tabulated, to the Regional Manager, Environmental Protection for the previous month.

All reports must be received by the Regional Manager, Environmental Protection, within 31 days of the end of the reporting period.

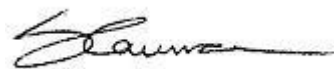
Submit an annual report to the Regional Manager, Environmental Protection with a copy to the Sunshine Coast Regional District, indicating the quantities of wood residues burnt in the boiler.

All annual 90th percentile production figures, air pollution control review reports, and environmental impact reports must be submitted within 31 days of the end of the reporting period.

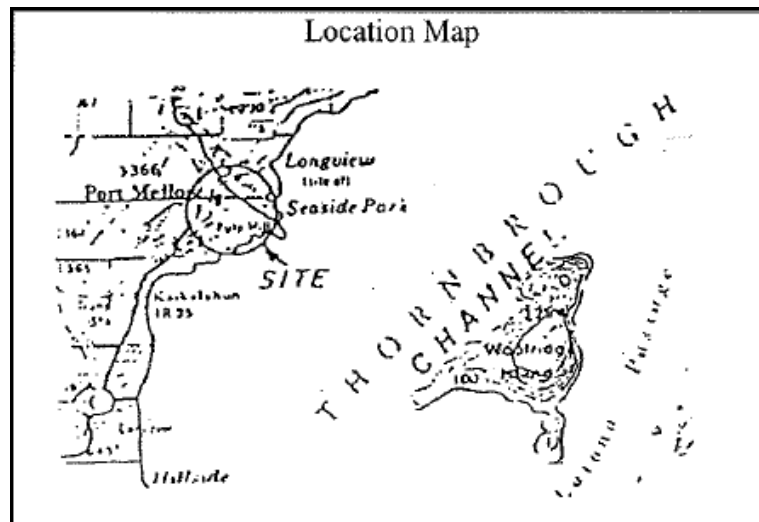
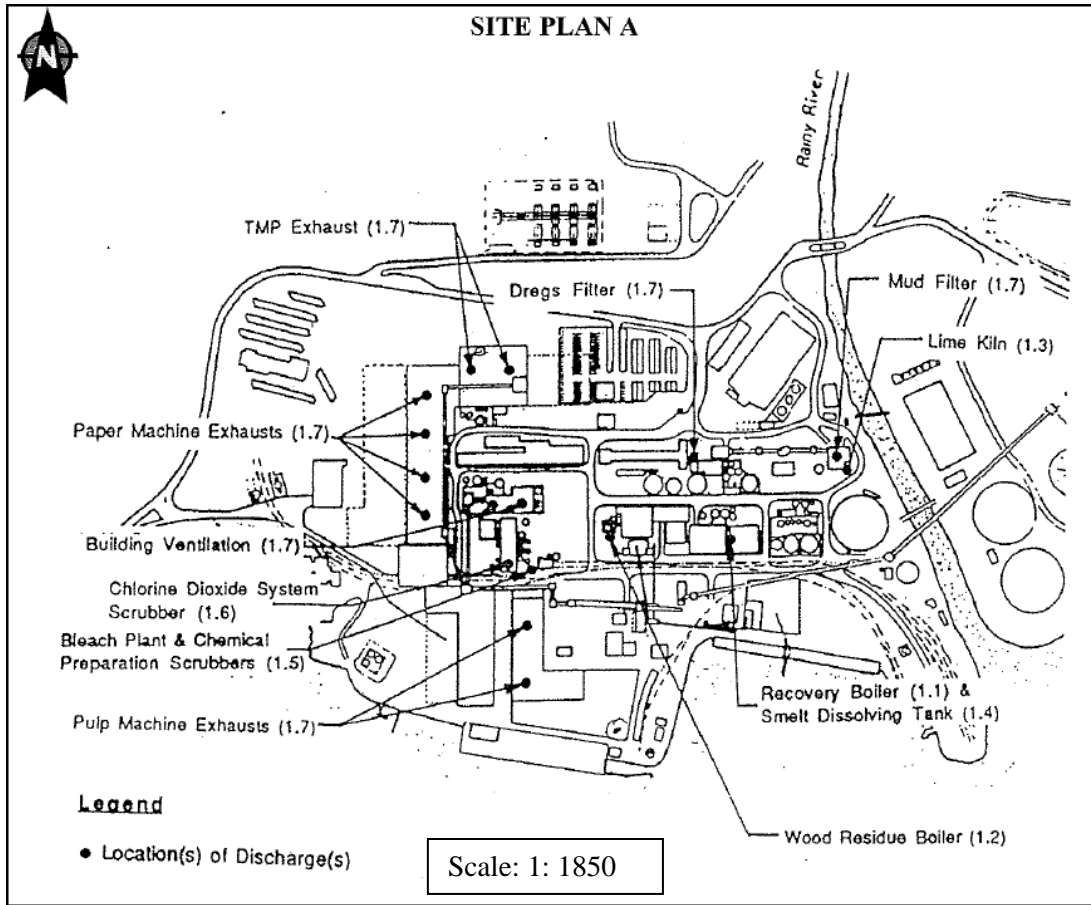
The ambient air monitoring and meteorology data must be reported in a form that is acceptable to the Regional Manager, Environmental Protection.

The permittee must submit annually an environmental report which must include but not be limited to the ambient monitoring and emission testing to the Regional Manager, Environmental Protection, with a copy to the Sunshine Coast Regional District.

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