



Resolute Forest Products Canada Inc.  
2001 Neebing Avenue  
Thunder Bay, Ontario  
P7E 6S3

Site Location: 2001 Neebing Avenue  
Thunder Bay City, District of Thunder Bay  
P7E 6S3

*You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:*

### **Description Section**

A newsprint, specialty papers and kraft market pulp manufacturing facility, consisting of the following processes and support units:

- Fibre Line;
- Kraft Bleach Plant;
- Kraft Chemical Plant;
- Kraft Digester;
- Kraft Pulp Machine;
- Kraft Recaust Area;
- Kraft Recovery Area (C Recovery Boiler);
- Newsmill Finishing & Shipping;
- Paper Machines 3, 4 and 5;
- Recycle Plant;
- Thermal Mechanical Pulping;
- Water Quality Operations;
- Maintenance Garage;
- Chip Transfer Operation;
- Steam Plant, including four (4) steam condensing turbines, designated as Turbine No. 3, 4, 5 and 6, with electrical generation capacities of 18, 19.5, 26 and 60 megawatts, respectively, and the following boilers :

- one (1) natural gas fired steam boiler, designated as Power Boiler No. 4, with a maximum heat input of 275.512 million kilojoules per hour, discharging into the atmosphere through a stack, having a exit diameter of 4.0 metres, extending 51 metres above grade and 33.6 metres above the roof;
- two (2) wood boilers, designated as Power Boilers No. 3 and 6, as described in Schedule "C" and Schedule "D", respectively;

including the *Equipment* and any other ancillary and support processes and activities, exhausting to the atmosphere as described in the *ESDM Report*, and operating at *Facility Production Limits* listed in the table below:

### **Facility Production Limits**

<b>Facility</b>	<b>Annual Production Limits</b>
Kraft Mill	360,000 air dried tonnes per year
News Mill	401,500 air dried tonnes per year
Recycle Plant	164,250 air dried tonnes per year
Thermal Mechanical Pulp Plant	365,000 air dried tonnes per year

*For the purpose of this environmental compliance approval, the following definitions apply:*

1. "*Acceptable Maximum Ground Level Concentration*" means a concentration accepted by the *Ministry*, as described in the *Guide to Applying for Approval (Air & Noise)*, for a *Compound of Concern* listed in the *Original ESDM Report* that has no *Ministry Point of Impingement Limit* and no *Jurisdictional Screening Level*, or the concentration at a *Point of Impingement* exceeds the *Jurisdictional Screening Level*.
2. "*Acoustic Assessment Report*" means the report, prepared in accordance with *Publication NPC-233* and Appendix A of the *Basic Comprehensive User Guide*, by RWDI Air Inc. and dated July 19, 2011, submitted in support of the application, that documents all sources of noise emissions and *Noise Control Measures* present at the *Facility* and includes all up-dated *Acoustic Assessment Reports* as required by the Documentation Requirements conditions of this *Approval* to demonstrate continued compliance with the *Performance Limits* following the implementation of any Modification.
3. "*Acoustic Assessment Summary Table*" means a table prepared in accordance with the *Basic Comprehensive User Guide* summarising the results of the *Acoustic Assessment Report*, up-dated as required by the Documentation Requirements conditions of this *Approval*.
4. "*Acoustical Consultant*" means a person currently active in the field of environmental acoustics and noise/vibration control, who is familiar with *Ministry* noise guidelines and procedures and has a combination of formal university education, training and experience necessary to assess noise emissions from a *Facility*.
5. "*Acoustic Audit*" means an investigative procedure consisting of measurements and/or acoustic modelling of all sources of noise emissions due to the operation of the *Facility*, assessed to determine compliance with the Performance Limits for the *Facility* regarding noise emissions, completed in accordance with the procedures set in *Publication NPC-103* and reported in accordance with *Publication NPC-233*.
6. "*Acoustic Audit Report*" means a report presenting the results of an *Acoustic Audit*, prepared in accordance with *Publication NPC-233*.
7. "*Air Standards Manager*" means the Manager, Human Toxicology and Air Standards Section, Standards Development Branch, or any other person who represents and carries out the duties of the Manager, Human Toxicology and Air Standards Section, Standards Development Branch, as those

duties relate to the conditions of this *Approval*.

8. "*Approval*" means this entire *Approval* document and any *Schedule* to it, including the application and *Supporting Documentation*.

9. "*Basic Comprehensive User Guide*" means the *Ministry* document titled "Basic Comprehensive Certificates of Approval (Air) User Guide" dated March 2011, as amended.

10. "*Company*" means **Resolute Forest Products canada Inc.** that is responsible for the construction or operation of the *Facility* and includes any successors and assigns in accordance with section 19 of the *EPA*.

11. "*Compound of Concern*" means a contaminant that, based on generally available information, may be emitted to the atmosphere in a quantity from the *Facility* that is non-negligible in accordance with section 8 of *O. Reg. 419/05* either in comparison to the relevant *Ministry Point of Impingement Limit* or if a *Ministry Point of Impingement Limit* is not available for the compound then, based on generally available toxicological information, the compound may cause an adverse effect as defined by the *EPA* at a *Point of Impingement*.

12. "*Description Section*" means the section on page one of this *Approval* describing the *Company's* operations and the *Equipment* located at the *Facility* and specifying the *Facility Production Limit* for the *Facility*.

13. "*Director*" means a person appointed under Section 20.3 of Part II.1 of the *EPA*.

14. "*District Manager*" means the District Manager of the appropriate local district office of the *Ministry*, where the *Facility* is geographically located.

15. "*Emission Summary Table*" means the most updated table contained in the *ESDM Report*, which is prepared in accordance with section 26 of *O. Reg. 419/05* and the *Procedure Document* listing the appropriate *Point of Impingement* concentration for each *Compound of Concern* from the *Facility* and providing comparison to the corresponding *Ministry Point of Impingement Limit* or *Maximum Concentration Level Assessment*, or *Jurisdictional Screening Level*.

16. "*Environmental Assessment Act*" means the Environmental Assessment Act, R.S.O. 1990, c.E.18, as amended.

17. "*EPA*" means the Environmental Protection Act, R.S.O. 1990, c.E.19, as amended.

18. "*Equipment*" means equipment or processes described in the *ESDM Report*, this *Approval* and in the *Supporting Documentation* referred to herein and any other equipment or processes.

19. "*Equipment with Specific Operational Limits*" means any *Equipment* related to the thermal oxidation of waste or waste derived fuels (**including the Power Boilers No. 3, 4 and 6, and the steam condensing turbines No. 3, 4, 5 and 6**), fume incinerators or any other *Equipment* that is specifically referenced in any published *Ministry* document that outlines specific operational guidance that must be considered by the *Director* in issuing an *Approval*.

20. "*ESDM Report*" means the most current Emission Summary and Dispersion Modelling Report that describes the *Facility*. The *ESDM Report* is based on the *Original ESDM Report*, is prepared after the issuance of this *Approval* in accordance with section 26 of *O. Reg. 419/05* and the *Procedure Document* by the *Company* or its consultant, and is periodically updated to incorporate all *Modifications* to and changes on discharge from the *Facility*, as required by the *Documentation Requirements* conditions of this *Approval*.

21. "*Facility*" means the entire operation located on the property where the *Equipment* is located.

22. "*Facility Production Limit*" means the production limit placed on the main product(s) or raw

materials used by the *Facility* that represents the design capacity of the *Facility* and assists in the definition of the operations approved by the *Director*.

23. "*Independent Acoustical Consultant*" means an *Acoustical Consultant* who is not representing the *Company* and was not involved in preparing the *Acoustic Assessment Report* or the design/implementation of *Noise Control Measures* for the *Facility* and/or *Equipment*. The *Independent Acoustical Consultant* shall not be retained by the *Acoustical Consultant* involved in the noise impact assessment or the design/implementation of *Noise Control Measures* for the *Facility* and/or *Equipment*.

24. "*Jurisdictional Screening Level*" means a screening level for a *Compound of Concern* that is listed in the Ministry publication titled "Jurisdictional Screening Level (JSL) List, A Screening Tool for Ontario Regulation 419: Air Pollution - Local Air Quality", dated February 2008, as amended.

25. "*Log*" means the up-to-date log that is used to track all *Modifications* to the *Facility* since the date of this *Approval* as required by the Documentation Requirements conditions of this *Approval*.

26. "*Maximum Concentration Level Assessment*" means the Maximum Concentration Level Assessment for the purposes of an *Approval*, described in the *Basic Comprehensive User Guide*, prepared by a *Toxicologist* using currently available toxicological information, that demonstrates that the concentration at any *Point of Impingement* for a *Compound of Concern* that does not have a *Ministry Point of Impingement Limit* is not likely to cause an adverse effect as defined by the *EPA*. The concentration at *Point of Impingement* for a *Compound of Concern* must be calculated in accordance with *O. Reg. 419/05*.

27. "*Ministry*" means the ministry of the government of Ontario responsible for the *EPA* and includes all officials, employees or other persons acting on its behalf.

28. "*Ministry Point of Impingement Limit*" means the applicable Standard listed in Schedule 2 or 3 of *O.Reg. 419/05* or a limit listed in the *Ministry* publication titled "Summary of Standards and Guidelines to support Ontario Regulation 419: Air Pollution - Local Air Quality (including Schedule 6 of *O. Reg. 419* on Upper Risk Thresholds)", dated February 2008, as amended.

29. "*Modification*" means any construction, alteration, extension or replacement of any plant, structure, equipment, apparatus, mechanism or thing, or alteration of a process or rate of production at the *Facility* that may discharge or alter the rate or manner of discharge of a *Compound of Concern* to the atmosphere or discharge or alter noise or vibration emissions from the *Facility*.

30. "*Noise Abatement Action Plan*" means a noise abatement program developed by the *Company* to achieve compliance with the sound level limits set in *Publication NPC-205* and/or *Publication NPC-232*, as applicable.

31. "*Noise Control Measures*" means measures to reduce the noise emissions from the *Facility* and/or *Equipment* including, but not limited to, silencers, acoustic louvres, enclosures, absorptive treatment, plenums and barriers.

32. "*O. Reg. 419/05*" means the Ontario Regulation 419/05, Air Pollution – Local Air Quality, as amended.

33. "*Original ESDM Report*" means the Emission Summary and Dispersion Modelling Report which was prepared in accordance with section 26 of *O. Reg. 419/05* and the *Procedure Document* by Resolute Forest Products Canada Inc. and dated August 17, 2009 submitted in support of the application, and includes any changes to the report made up to the date of issuance of this *Approval*.

34. "*Performance Limits*" means the performance limits specified in Condition 3.2 of this *Approval* titled Performance Limits.

35. "*Point of Impingement*" has the same meaning as in section 2 of *O. Reg. 419/05*.

36. "*Point of Reception*" means Point of Reception as defined by *Publication NPC-205* and/or *Publication NPC-232*, as applicable.

37. "*Procedure Document*" means *Ministry* guidance document titled "Procedure for Preparing an Emission Summary and Dispersion Modelling Report" dated March 2009, as amended.

38. "*Processes with Significant Environmental Aspects*" means the *Equipment* which, during regular operation, would discharge a contaminant or contaminants into the atmosphere at an amount which is not considered as negligible in accordance with section 8 of *O. Reg. 419/05* and the *Procedure Document*.

39. "*Publication NPC-205*" means the *Ministry* Publication NPC-205, "Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban)", October, 1995, as amended.

40. "*Publication NPC-207*" means the *Ministry* draft technical publication "Impulse Vibration in Residential Buildings", November 1983, supplementing the Model Municipal Noise Control By-Law, Final Report, published by the *Ministry*, August 1978, as amended.

41. "*Publication NPC-232*" means the *Ministry* Publication NPC-232, "Sound Level Limits for Stationary Sources in Class 3 Areas (Rural)", October, 1995, as amended.

42. "*Publication NPC-233*" means the *Ministry* Publication NPC-233, "Information to be Submitted for Approval of Stationary Sources of Sound", October, 1995, as amended.

43. "*Publication NPC-103*" means the *Ministry* Publication NPC-103 of the Model Municipal Noise Control By-Law, Final Report, August 1978, published by the *Ministry* as amended.

44. "*Schedules*" means the following schedules attached to this *Approval* and forming part of this *Approval* namely:

Schedule A - *Supporting Documentation*;

Schedule B - *Noise Abatement Action Plan*

Schedule C - Power Boiler No. 3 and Requirements

Schedule D - Power Boiler No. 6 and Requirements

45. "*Supporting Documentation*" means the documents listed in Schedule A of this *Approval* which forms part of this *Approval*.

46. "*Toxicologist*" means a qualified professional currently active in the field of risk assessment and toxicology that has a combination of formal university education, training and experience necessary to assess the *Compound of Concern* in question.

47. "*Written Summary Form*" means the electronic questionnaire form, available on the *Ministry* website, and supporting documentation, that documents the activities undertaken at the *Facility* in the previous calendar year that must be submitted annually to the *Ministry* as required by the section of this *Approval* titled Reporting Requirements.

*You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:*

## **TERMS AND CONDITIONS**

### **1. GENERAL**

1.1 Except as otherwise provided by this *Approval*, the *Facility* shall be designed, developed, built, operated and maintained in accordance with the terms and conditions of this *Approval* and in

accordance with the following *Schedules* attached hereto:

Schedule A - *Supporting Documentation*

Schedule B - *Noise Abatement Action Plan*

Schedule C - *Power Boiler No. 3 and Requirements*

Schedule D - *Power Boiler No. 6 and Requirements*

## **2. LIMITED OPERATIONAL FLEXIBILITY**

2.1 Pursuant to section 20.6(1) of the *EPA* and subject to Conditions 2.2 and 2.3 of this *Approval*, future alterations, extensions or replacements are approved in this *Approval* if the future alterations, extensions or replacements are *Modifications* to the *Facility* that:

(a) are within the scope of the intended operations of the *Facility* as described in the *Description Section* of this *Approval*;

(b) do not result in an increase of the *Facility Production Limit* above the level specified in the *Description Section* of this *Approval*; and

(c) result in compliance with the *Performance Limits*.

2.2 Condition 2.1 does not apply to:

(a) the addition of any new *Equipment with Specific Operational Limits* or to the *Modification* of any existing *Equipment with Specific Operational Limits* at the *Facility*. The *Company* shall operate any *Equipment with Specific Operational Limits* approved by this *Approval* in accordance with the *Original ESDM Report* and Conditions in this *Approval*; or

(b) *Modifications* to the *Facility* that would be subject to the *Environmental Assessment Act*.

2.3 Condition 2.1 of this *Approval* shall:

**(a) expire on February 1, 2013, if the Company does not comply with standards under Schedule 3 of O. Reg. 419/05 for all contaminants by February 1, 2013; or**

**(b) expire ten (10) years from the date of this *Approval*, if the Company complies with standards under Schedule 3 of O. Reg. 419/05 for all contaminants by February 1, 2013,**

unless this *Approval* is revoked prior to the expiry date. The *Company* may apply for renewal of Condition 2.1 of this *Approval* by including an *ESDM Report* and an *Acoustic Assessment Report* that incorporate all *Modifications* made to the *Facility* as of the date of the renewal application in the application as supporting information.

## **3. REQUEST FOR MAXIMUM CONCENTRATION LEVEL ASSESSMENT AND PERFORMANCE LIMITS**

### **3.1 REQUEST FOR MAXIMUM CONCENTRATION LEVEL ASSESSMENT**

3.1.1 If the *Company* proposes to make a *Modification* to the *Facility*, the *Company* shall determine if the proposed *Modification* will result in:

(a) a discharge of a *Compound of Concern* that was not previously discharged; or

(b) an increase in the concentration at a *Point of Impingement* of a *Compound of Concern*.

3.1.2 If a proposed *Modification* mentioned in Condition 3.1.1 will result in the discharge of a *Compound of Concern* that was not previously discharged, the *Company* shall submit a *Maximum Concentration Level Assessment* to the *Director* for review by the *Air Standards Manager* in the

following circumstances:

- (a) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* or a *Jurisdictional Screening Level*.
- (b) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* and the concentration at a *Point of Impingement* will exceed the *Jurisdictional Screening Level*.
- (c) Prior to the proposed *Modification*, a contaminant was discharged in a negligible amount and the proposed *Modification* will result in the discharge of the contaminant being considered a *Compound of Concern* and the *Compound of Concern* does not have a *Ministry Point of Impingement Limit* or a *Jurisdictional Screening Level*.
- (d) Prior to the proposed *Modification*, a contaminant was discharged in a negligible amount and the proposed *Modification* will result in the discharge of the contaminant being considered a *Compound of Concern*. Additionally, the *Compound of Concern* does not have a *Ministry Point of Impingement Limit* and the concentration at a *Point of Impingement* will exceed the *Jurisdictional Screening Level*.

3.1.3 If a proposed *Modification* mentioned in Condition 3.1.1 will result in an increase in the concentration at a *Point of Impingement* of a *Compound of Concern*, the *Company* shall submit a *Maximum Concentration Level Assessment* to the *Director* for review by the *Air Standards Manager* in the following circumstances:

- (a) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* or a *Jurisdictional Screening Level* and the concentration at a *Point of Impingement* will exceed the *Acceptable Maximum Ground Level Concentration*.
- (b) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* or a *Jurisdictional Screening Level* and the concentration at a *Point of Impingement* will exceed the most recently accepted *Maximum Concentration Level Assessment* submitted under Condition 3.1.2 or this Condition.
- (c) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* and the concentration at a *Point of Impingement* will exceed the *Jurisdictional Screening Level* and the *Acceptable Maximum Ground Level Concentration*.
- (d) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* and the concentration at a *Point of Impingement* will exceed the *Jurisdictional Screening Level* and the most recently accepted *Maximum Concentration Level Assessment* submitted under Condition 3.1.2 or this Condition.

- (e) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit*, *Acceptable Maximum Ground Level Concentration* or a *Maximum Concentration Level Assessment* and the concentration at a *Point of Impingement* will exceed the *Jurisdictional Screening Level*.

3.1.4 Subject to the Operational Flexibility set out in Condition 2 of this *Approval*, the *Company* may make the *Modification* if the submission of a *Maximum Concentration Level Assessment* under Condition 3.1.2 or 3.1.3 is not required.

3.1.5 A *Company* that is required to submit an assessment under Condition 3.1.2 or 3.1.3 shall submit the assessment at least thirty (30) days before the proposed *Modification* occurs.

3.1.6 The *Ministry* shall provide to the *Company* written confirmation of the receipt of the assessment under Condition 3.1.2 or 3.1.3.

3.1.7 If the *Ministry* notifies the *Company* that it does not accept the assessment submitted under Condition 3.1.2 or 3.1.3, the *Company* shall:

(a) revise and resubmit the assessment; or

(b) notify the *Ministry* that the *Company* will not be modifying the *Facility*.

3.1.8 The re-submission under Condition 3.1.7(a) is considered by the *Ministry* as a new submission.

3.1.9 If an assessment is submitted under Condition 3.1.2, the *Company* shall not modify the *Facility* unless the *Ministry* accepts the assessment.

3.1.10 If an assessment is submitted under Condition 3.1.3, the *Company* shall not modify the *Facility* unless the *Ministry*:

(a) accepts the assessment; or

(b) does not respond to the *Company* with respect to the assessment within thirty (30) days from the date of the written confirmation mentioned in Condition 3.1.6.

### 3.2. **PERFORMANCE LIMITS**

3.2.1 Subject to Condition 3.2.2, the *Company* shall, at all times, ensure that all *Equipment* that is a source of a *Compound of Concern* is operated to comply with the following *Performance Limits*:

(a) for a *Compound of Concern* that has a *Ministry Point of Impingement Limit*, the maximum concentration of that *Compound of Concern* at any *Point of Impingement* shall not exceed the corresponding *Ministry Point of Impingement Limit*;

(b) for a *Compound of Concern* that has an *Acceptable Maximum Ground Level Concentration* and no *Maximum Concentration Level Assessment*, the maximum concentration of that *Compound of Concern* at any *Point of Impingement* shall not exceed the corresponding *Acceptable Maximum Ground Level Concentration*;

(c) for a *Compound of Concern* that has a *Maximum Concentration Level Assessment*, the maximum concentration of that *Compound of Concern* at any *Point of Impingement* shall not exceed the most recently accepted corresponding *Maximum Concentration Level Assessment*.

3.2.2 If the *Company* has modified the *Facility* and was not required to submit a *Maximum Concentration Level Assessment* with respect to a *Compound of Concern* under Condition 3.1.2 or 3.1.3, the *Company* shall, at all times, ensure that all *Equipment* that is a source of the *Compound of Concern* is operated such that the maximum concentration of the *Compound of Concern* shall not exceed the concentration listed for the *Compound of Concern* in the most recent version of the *ESDM Report*. *ESDM Reports* are required to be updated to reflect all *Modifications* under Condition 4.1(a).

3.2.3 The *Company* shall, at all times following the completion date of the *Noise Abatement Action Plan*, ensure that the noise emissions from the *Facility* comply with the limits set out in *Ministry Publication NPC-205*.

3.2.4 The *Company* shall, at all times, ensure that the vibration emissions from the *Facility* comply with the limits set out in *Ministry Publication NPC-207*.

## 4. **DOCUMENTATION REQUIREMENTS**

4.1 The *Company* shall, at all times, maintain documentation that describes the current operations of the *Facility*, including but not limited to:

(a) a current *ESDM Report* that demonstrates compliance with the *Performance Limits* for the *Facility* regarding all *Compounds of Concern* and reflects all *Modifications* made at the *Facility*;

(b) a current *Acoustic Assessment Report* that demonstrates compliance with the *Performance Limits* for the *Facility* regarding noise emissions;



(c) an up-to-date *Log* that describes each *Modification* to the *Facility*; and

(d) a record of the changes to the *ESDM Report* and *Acoustic Assessment Report* that documents how each *Modification* is in compliance with the *Performance Limits*.

4.2 The *Company* shall, during regular business hours, make the current *Emission Summary Table* and *Acoustic Assessment Summary Table* available for inspection at the *Facility* by any interested member of the public.

4.3 Subject to Condition 4.5, the *Company* shall prepare and complete **no later than July 1 of each year** documentation that describes the activities undertaken at the *Facility* in the previous calendar year, including but not limited to:

(a) a list of all *Compounds of Concern* for which a *Maximum Concentration Level Assessment* was submitted to the *Director* for review by the *Air Standards Manager* pursuant to Condition 3.1.2 or 3.1.3 of this *Approval*;

(b) if the *Company* has modified the *Facility* and was not required to submit a *Maximum Concentration Level Assessment* with respect to a *Compound of Concern* under Condition 3.1.2 or 3.1.3, a list and concentration level of all such *Compounds of Concern*:

(c) a review of any changes to *Ministry Point of Impingement Limits* that affect any *Compounds of Concern* emitted from the *Facility*; and

(d) a table of the changes in the emission rate of any *Compound of Concern* and the resultant increase or decrease in the *Point of Impingement* concentration reported in the *ESDM Report*.

4.4 Subject to Condition 4.5, the *Company* shall, at all times, maintain the documentation described in Condition 4.3.

4.5 Conditions 4.3 and 4.4 do not apply if Condition 2.1 has expired.

4.6 The *Company* shall, within three (3) months after the expiry of Condition 2.1 of this *Approval*, update the *ESDM Report* and the *Acoustic Assessment Report* such that they describe the *Facility* as it was at the time that Condition 2.1 of this *Approval* expired.

## 5. REPORTING REQUIREMENTS

5.1 Subject to Condition 5.2, the *Company* shall provide the *Ministry* and the *Director* **no later than July 1 of each year**, a *Written Summary Form* that shall include the following:

(a) a declaration that the *Facility* was in compliance with section 9 of the *EPA, O.Reg. 419/05* and the conditions of this *Approval*;

(b) a summary of each *Modification* that took place in the previous calendar year that resulted in a change in the previously calculated concentration at the *Point of Impingement* for any *Compound of Concern* or resulted in a change in the sound levels reported in the *Acoustic Assessment Summary Table* at any *Point of Reception*.

5.2 Condition 5.1 does not apply if Condition 2.1 has expired.

## 6. OPERATION AND MAINTENANCE

6.1 The *Company* shall prepare and implement, not later than three (3) months from the date of this *Approval*, operating procedures and maintenance programs for all *Processes with Significant Environmental Aspects*, which shall specify as a minimum:

(a) frequency of inspections and scheduled preventative maintenance;

- (b) procedures to prevent upset conditions;
- (c) procedures to minimize all fugitive emissions;
- (d) procedures to prevent and/or minimize odorous emissions;
- (e) procedures to prevent and/or minimize noise emission; and
- (f) procedures for record keeping activities relating to the operation and maintenance programs.

6.2 The *Company* shall ensure that all *Processes with Significant Environmental Aspects* are operated and maintained at all times in accordance with this *Approval*, the operating procedures and maintenance programs.

**6.3. The *Company* shall monitor and report emissions of TRS, TSP, TEOM and meteorological data of wind speed and wind direction in accordance with the *Air Quality Monitoring Manual* and the following requirements:**

**(a) Monitoring data shall be obtained and collected at the ambient air monitoring stations located in the community listed below or at locations acceptable to and approved in writing by the *District Manager*:**

Location	Ambient Air Monitoring Station Number	Parameters to be Monitored
Frederica Street	63500	<b>TRS</b> TEOM 2.5 [particulate] TSP [Hi-Vol particulate] Wind speed and wind direction.
Vickers Heights	63510	<b>TRS</b> TEOM 2.5 [particulate] TSP [Hi-Vol particulate] Wind speed and wind direction

**(b) Ambient air monitoring stations shall be located, operated and maintained in accordance with the *Air Quality Monitoring Manual*;**

**(c) Emissions of *TRS* and dustfall and meteorological data of wind speed/velocity, as noted in Condition 6(a), shall be reported to the *District Manager* in accordance with the *Air Quality Monitoring Manual*, or any other method acceptable to and approved in writing by the *District Manager*; and**

**(d) Emissions of *TRS* and dustfall and meteorological data of wind speed/velocity shall be made available to the public in a timely and accessible manner, acceptable to and approved in writing by the *District Manager*.**

**7. COMPLAINTS RECORDING PROCEDURE**

7.1 If at any time, the *Company* receives any environmental complaints from the public regarding the operation of the *Equipment* approved by this *Approval*, the *Company* shall respond to these complaints according to the following procedure:

(a) the *Company* shall record and number each complaint, either electronically or in a log book, and shall include the following information: the time and date of the complaint and incident to which the complaint relates, the nature of the complaint, wind direction at the time and date of the incident to which the complaint relates and, if known, the address of the complainant;

(b) the *Company*, upon notification of a complaint, shall initiate appropriate steps to determine all possible causes of the complaint, and shall proceed to take the necessary actions to appropriately deal with the cause of the subject matter of the complaint; and

(c) the *Company* shall complete and retain on-site a report written within one (1) week of the complaint date, listing the actions taken to appropriately deal with the cause of the subject matter of the complaint and any recommendations for remedial measures, and managerial or operational changes to reasonably avoid the recurrence of similar incidents.

## **8. RECORD KEEPING REQUIREMENTS**

8.1 Any information requested by any employee in or agent of the *Ministry* concerning the *Facility* and its operation under this *Approval*, including, but not limited to, any records required to be kept by this *Approval*, shall be provided to the employee in or agent of the *Ministry*, upon request, in a timely manner.

8.2 The *Company* shall retain, for a minimum of seven (7) years from the date of their creation, except as noted below, all reports, records and information described in this *Approval* and shall include but not be limited to:

(a) If the *Company* has updated the *ESDM Report* in order to comply with Condition 4.1(a) of this *Approval*, a copy of each new version of the *ESDM Report*;

(b) If the *Company* has updated the *Acoustic Assessment Report*, in order to comply with Condition 4.1(b) of this *Approval*, a copy of each new version of the *Acoustic Assessment Report*;

(c) supporting information used in the emission rate calculations performed in the *ESDM Reports* and *Acoustic Assessment Reports* to document compliance with the *Performance Limits* (superseded information must be retained for a period of three (3) years after *Modification*);

(d) the *Log* that describes each *Modification* to the *Facility*;

(e) all documentation prepared in accordance with Condition 4.3 of this *Approval*;

(f) copies of any *Written Summary Forms* provided to the *Ministry* under Condition 5.1 of this *Approval*;

(g) the operating procedures and maintenance programs, including records on the maintenance, repair and inspection of the *Equipment* related to all *Processes with Significant Environmental Aspects*; and

(h) the complaints recording procedure, including records related to all environmental complaints made by the public as required by Condition 7.1 of this *Approval*.

## **9. REVOCATION OF PREVIOUS APPROVALS**

9.1 This *Approval* replaces and revokes all Certificates of Approval (Air) issued under section 9 EPA and Environmental Compliance Approvals issued under Part II.1 EPA to the *Facility* and dated prior to the date of this *Approval*.

## **10. NOISE ABATEMENT ACTION PLAN**

10.1 The *Company* shall implement the *Noise Abatement Action Plan* described in *Schedule "B"*.

10.2 The *Company* shall ensure that the *Noise Abatement Action Plan* shall achieve compliance of the noise emissions from the *Facility* with the limits set out in *Ministry Publication NPC-205*.

10.3 The *Company* shall, not later than the date(s) specified in the *Noise Abatement Action Plan*, ensure that all reports on the progress of the *Noise Abatement Action Plan* are submitted to the

*District Manager* and the *Director* .

## 11. ACOUSTIC AUDIT

11.1 The *Company* shall carry out acoustic audit measurements on the actual noise emissions due to the operation of the *Facility* , following the completion of the *Noise Abatement Action Plan* . The *Company* :

(a) shall carry out acoustic audit measurements in accordance with the procedures in *Publication NPC-103* ;

(b) shall submit an *Acoustic Audit Report* on the results of the *Acoustic Audit* , prepared by an *Independent Acoustical Consultant* , in accordance with the requirements of *Publication NPC-233* , to the *District Manager* and the *Director* , not later than the date specified in the *Noise Abatement Action Plan* .

11.2 The *Director* :

(a) may not accept the results of the *Acoustic Audit* if the requirements of *Publication NPC-233* were not followed;

(b) may require the *Company* to repeat the *Acoustic Audit* if the results of the *Acoustic Audit* are found unacceptable to the *Director* .

## SCHEDULE A

### **Supporting Documentation**

- |   |
|---|
| <p>(a) Application for Approval (Air &amp; Noise), dated August 17, 2009, signed by Chris Walton and submitted by the <i>Company</i>;</p> <p>(b) Emission Summary and Dispersion Modelling Report, prepared by AbiBow Canada Inc. and dated August 17, 2009 ;</p> <p>(c) AAR or other Noise Report entitled “AbiBow Canada Inc. – Thunder Bay Operations. Final Report, acoustic Assessment Report,” dated July 19, 2011, and prepared by RWDI Air Inc.</p> |
|---|

## SCHEDULE “B”

### **Noise Abatement Action Plan**

The *Noise Abatement Action Plan* shall consist of the *Noise Control Measures* detailed in Appendix G, Table G.2 Noise Abatement Action Plan dated July 19, 2011 (with mitigation specifications as per Table G.1) of the report document “AbiBow Canada Inc. – Thunder Bay Operations. Final Report, Acoustic Assessment Report”, dated July 19, 2011 and prepared by RWDI Air Inc. to be implemented according to the following schedule;

- No later than the day four (4) months following the issue date of the ECA – complete *Noise Control Measures* for Phase 1 of the *Noise Abatement Action Plan*.
- No later than the day seven (7) months following the issue date of the ECA- the results of an Interim Sound Survey (#1) documenting the sound levels due to the Facility at the Points of Reception, and highlighting the changes in these sound levels brought about by the implementation of mitigation measures, shall be submitted to the Environmental Approval Services Section of the Ministry, as well as to the Thunder Bay District Office of the Ministry.

- December 31, 2014 – complete *Noise Control Measures* for Phase 2 of the *Noise Abatement Action Plan*.
- March 31, 2014 - the results of an Interim Sound Survey (#2) documenting the sound levels due to the Facility at the Points of Reception, and highlighting the changes in these sound levels brought about by the implementation of mitigation measures, shall be submitted to the Environmental Approval Services Section of the Ministry, as well as to the Thunder Bay District Office of the Ministry.
- December 31, 2018 – complete *Noise Control Measures* for Phase 3 of the *Noise Abatement Action Plan*.
- March 31, 2019 - submit (to the Environmental Approval Services Section of the Ministry, as well as to the Thunder Bay District Office of the Ministry) an *Acoustic Audit Report* on the results of an independent *Acoustic Audit* conducted to demonstrate compliance with MOE noise guidelines following completion of the *Noise Abatement Action Plan*.

## SCHEDULE "C"

### Power Boiler No. 3 and Requirements

- one (1) Wood Waste Combustion System, designated as Power Boiler No. 3, having a maximum combustion capacity of 43.36 tonnes per hour of unpreserved wood bark, when only bark is used, or a maximum feed rate of 12 tonnes per hour of wood fibre waste from the deinking process with a correspondingly lower amount of bark, when both bark and wood fibre are used. The maximum steam production of the above noted system is 113.5 tonnes per hour and the average steam production is 90.8 tonnes per hour. The Wood Waste Combustion System is equipped with the following:

- one (1) boiler complete with dump grate and pneumatic discharge, furnace dimensions of 4.6 metre depth by 5.9 metre width and approximate furnace volume of 390 cubic metres;
- one (1) forced draft combustion air fan having a capacity of 40.8 cubic metres per second at 38 degrees Celsius;
- one (1) induced draft exhaust fan having a capacity of 107.4 cubic metres per second at 213 degrees Celsius;
- one (1) multiclone complete with 230 tubes; and
- one (1) venturi type scrubber to control suspended particulate matter from the boiler, having a diameter of 5.88 metres, an overall height of 15 metres, a maximum volumetric capacity of 60 normal cubic metres per hour, using as scrubbing fluid a sodium hydroxide solution in water, having a concentration of 50 percent sodium hydroxide, at a maximum rate of 7,945 litres per minute and operating at pressure drop of 4.36 kilopascals. The scrubber is equipped with an entrainment separator-mist eliminator and vents to the atmosphere through a stack, having an exit diameter of 2.06 metres, terminating 50.29 metres above grade,

1. For the purposes of this Schedule, the following shall apply:

- 1.1 "Act" means the *Environmental Protection Act* of Ontario;
- 1.2 "Company" means Resolute Forest Products Canada Inc.;
- 1.3 "Director" means any Ministry employee appointed under Section 20.3 of Part II.1 of the

2. The Company shall ensure that the Wood Waste Combustion System is operated to comply, at all times, with the following performance requirements:

2.1 The temperature of the combustion gases exiting the combustion chamber at a point representing a combustion gas residence time of 1 second, shall be at least 1000 degrees Celsius;

2.2 The concentration of oxygen in the flue gas shall not be below 6 percent by volume on a dry and undiluted basis, calculated as a ten-minute average;

2.3 Emission Concentration Limits:

(i) The concentration of organic matter having a carbon content expressed as equivalent methane, in the undiluted gases from the Wood Waste Combustion System and being an average of ten measurements taken at approximately 1 minute intervals shall not exceed 100 parts per million by volume on a dry basis; and

(ii) The concentration of particulate matter at the venturi type scrubber stack exit shall not exceed 90 milligrams per dry cubic metre of undiluted gases normalized to 11 percent oxygen at a reference temperature of 25 degrees Celsius and a reference pressure of 101.3 kilopascals.

### **OPERATION AND MAINTENANCE**

3. The Company shall ensure that the Equipment is properly operated and maintained at all times. The Company shall:

3.1 Prepare, not later than three (3) months after receiving this certificate and update, as necessary, a manual outlining the operating procedures and a maintenance program for the Equipment, including:

(a) routine operating and maintenance procedures, including those recommended by the Equipment supplier;

(b) the operating procedures to be maintained to continuously meet the requirements of Condition No. 2 of this Schedule; and

3.2 Implement the recommendations of the operating manual.

### **MONITORING**

4. The Company shall monitor the emissions and operation of the Equipment as follows:

#### **CONTINUOUS MONITORING**

4.1 Install, conduct and maintain a program to continuously monitor and verify compliance with the performance requirements listed in Condition No. 2 of this Schedule for the following parameters: boiler combustion chamber temperature, carbon monoxide and oxygen; and

4.2 The continuous monitors shall be equipped with continuous recording devices and shall

5. The Company shall ensure that the noise emissions from the Equipment comply with the limits determined in accordance with Publication NPC-205.

### **RECORD RETENTION**

6. The Company shall retain, for a minimum of seven (7) years from the date of their creation, all records and information related to or resulting the monitoring and recording activities required by this Schedule. These records shall be made available to staff of the Ministry upon request. The Company shall retain:

- 6.1 All records on maintenance, repair and inspection of the Equipment;
- 6.2 All records produced by the continuous monitoring systems; and
- 6.3 All records on the calibration and maintenance of the continuous monitoring systems.

### ***The reasons for the imposition of these terms and conditions are as follows:***

- 1. Condition No. 1 is included to define the special terms that are used throughout the Schedule.
- 2. Condition No. 2 is included to outline the minimum performance requirements considered necessary to prevent an adverse effect resulting from the operation of the Equipment.
- 3. Condition No. 3 is included to emphasize that the Equipment must be maintained and operated according to a procedure that will result in compliance with the Act, the regulations and this Schedule.
- 4. Condition No. 4 is included to require the Company to gather accurate information so that the environmental impact and subsequent compliance with the Act, the regulations and this Schedule can be verified.

Act;

1.4 "District Manager" means the District Manager Thunder Bay District Office, Northern Region of the Ministry;

1.5 "Ministry" means Ontario Ministry of the Environment;

1.6 "Wood Waste Combustion System" means the boiler system as described in this Schedule "C", and designated as Power Boiler No. 3 by the Company;

1.7 "Equipment" means the Wood Waste Combustion System including the venturi type scrubber described in the Company's application, this Environmental Compliance Approval and in the supporting documentation referred to herein, to the extent approved by this Environmental Compliance Approval;

1.8 "Facility" means the entire operation located at 2001 Neebing Avenue, Thunder Bay, Ontario;

1.9 "Baseline Parameters" means those parameters set out in Table "1" attached to this Schedule; and

1.10 "Publication NPC-205" means the Ministry Publication NPC-205, "Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban)", October 1995, as amended.

### **PERFORMANCE**

comply with the requirements stipulated in Table 2.

### **BASELINE PARAMETERS**

4.3 The Company shall, within three (3) months from the date of issuance of this Environmental Compliance Approval, conduct and maintain a program to monitor the Baseline Parameters of the scrubber;

4.5 The Company shall, as part of a regular inspection program, determine and record the Baseline Parameters in accordance with Table 1.

**NOISE**

**TABLE 1**

**VENTURI SCRUBBER BASELINE PARAMETERS**

The Company shall measure, inspect and record the following parameters once daily:

- (1) static pressure drop across the throat of the venturi scrubber;
- (2) flow rate of the recirculated scrubbing fluid of the venturi scrubber, with an alarm set to low flow conditions;
- (3) pH of the scrubbing fluid.

**TABLE 2**

**(1) PARAMETER:** Oxygen

**INSTALLATION:** The Continuous Oxygen Monitor shall be installed at an accessible location where the measurements are representative of the actual concentration of oxygen in the undiluted gases leaving the afterburner of Power Boiler No. 3 and shall meet the following installation specifications.

**PARAMETERS SPECIFICATION**

- 1. Range (percentage): 10 < - 0 - < 20
- 2. Calibration Gas Ports: close to the sample point

**PERFORMANCE:** The Continuous Oxygen Monitor shall meet the following minimum performance specifications for the following parameters.

**PARAMETERS SPECIFICATION**

- 1. Span Value (percentage): 2 times the average normal concentration of the source
- 2. Relative Accuracy: < 10 percent of the mean value of the reference method test data
- 3. Calibration Error: 0.25 percent O2
- 4. System Bias: < 4 percent of the mean value of the reference method test data
- 5. Procedure for Zero and Span Calibration Check: all system components checked
- 6. Zero Calibration Drift (24-hour): < 0.5 percent O2
- 7. Span Calibration Drift (24-hour): < 0.5 percent O2
- 8. Response Time (90 percent response to a step change): < 90 seconds
- 9. Operational Test Period: > 168 hours without corrective maintenance



**CALIBRATION:** Daily calibration drift checks on the monitor shall be performed and recorded in accordance with the requirements of Report EPS 1/PG/7.

**DATA RECORDER:** The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time resolution of 2 minutes or better.

**RELIABILITY:** The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent, thereafter.

**(2) PARAMETER: Carbon Monoxide**

**INSTALLATION:** The Continuous Carbon Monoxide Monitor shall be installed at an accessible location where the measurements are representative of the actual concentration of carbon monoxide in the undiluted stack gases leaving the boiler and shall meet the following installation specifications.

**PARAMETERS SPECIFICATION**

1. Range (parts per million, ppm): 0 to > 20 ppm
2. Calibration Gas Ports: close to the sample point

**PERFORMANCE:** The Continuous Carbon Monoxide Monitor shall meet the following minimum performance specifications for the following parameters:

PARAMETERS	SPECIFICATION
1. Span Value (nearest ppm equivalent):	2 times the average normal concentration
2. Relative Accuracy:	< 10 percent of the mean value of the reference method test data + 5 ppm whichever is greater
3. Calibration Error:	< 2 percent of actual concentration
4. System Bias:	< 4 percent of the mean value of the reference method test data
5. Procedure for Zero and Span Calibration Check:	all system components checked
6. Zero Calibration Drift (24-hour):	< 5 percent of span value
7. Span Calibration Drift (24-hour):	< 5 percent of span value
8. Response Time (90 percent response to a step change):	< 90 seconds
9. Operational Test Period :	> 168 hours without corrective maintenance

**CALIBRATION:** Daily calibration drift checks on the monitor shall be performed and recorded in accordance with the requirements of Report EPS 1/PG/7.

**DATA RECORDER:** The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time

resolution of 2 minutes or better.

**RELIABILITY:** The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent, thereafter.

**(3) PARAMETER: Temperature**

**INSTALLATION:** The sample point for the Continuous Temperature Monitor shall be located downstream of the boiler flame at a distance required to achieve a combustion gas residence time of 1 second.

**PERFORMANCE:** The Continuous Temperature Monitor shall meet the following minimum performance specifications for the following parameters:

PARAMETERS	SPECIFICATION
1. Type:	shielded "K" type thermocouple, or equivalent
2. Accuracy:	± 1.5 percent of the minimum gas temperature

**DATA RECORDER:** The data recorder must be capable of registering continuously the measurement of the monitor without a significant loss of accuracy and with a time resolution of 1 minute or better.

**RELIABILITY:** The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 95 percent of the time for each calendar quarter.

**(4) PARAMETER: Opacity**

**INSTALLATION:** The continuous Opacity Monitor shall be installed at an accessible location where the measurements are representative of the actual opacity of the gases leaving the Equipment and shall meet the following design and installation specifications.

PARAMETERS	SPECIFICATION
1. Wavelength at Peak Spectral Response (nm):	500 - 600
2. Wavelength at Mean Spectral Response (nm):	500 - 600
3. Detector Angle of View:	< 5 degrees
4. Angle of Projection:	< 5 degrees
5. Range (percent of opacity):	0 - 100

**PERFORMANCE:** The Continuous Opacity Monitor shall meet the following minimum performance specifications for the following parameters:

PARAMETERS	
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	<b>SPECIFICATION</b>
1. Span Value (percent opacity):	2 times the average normal opacity of the source
2. Calibration Error:	< 3% opacity
3. Attenuator Calibration:	< 2% opacity
4. Response Time (95% response to a step change):	< 10 seconds
5. Schedule for Zero and Calibration Checks:	daily minimum
6. Procedure for Zero and Calibration Checks:	all system components checked
7. Zero Calibration Drift (24-hour):	< 2% opacity
8. Span Calibration Drift (24-hour):	< 2% opacity
9. Conditioning Test Period:	> 168 hours without corrective maintenance
10. Operational Test Period :	> 168 hours without corrective maintenance

**CALIBRATION:** The monitor shall be calibrated, to ensure that it meets the drift limits specified above, during the periods of the operation of the Equipment. The results of all calibrations shall be recorded at the time of calibration.

**DATA RECORDER:** The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time resolution of 30 seconds or better.

**RELIABILITY:** The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 95 percent of the time, on a monthly basis, when the Equipment is in operation.

### **TABLE 3**

all in accordance with the application for Certificate of Approval (Air) submitted by Avenor Inc., dated February 13, 1996, signed by R.F. McMullen and all supporting information included, letter and Facsimiles from Avenor Inc., dated respectively, February 29, June 7 and July 25, 1996, all signed by S. Meredith.

## **SCHEDULE "D"**

### **Power Boiler No. 6 and Requirements**

- operation of Power Boiler No. 6 and particulate emission control with an electrostatic precipitator with emissions that are exhausted via a stack extending 60.96 metres above grade and having an exit diameter of 3.35 metres. The boiler system is equipped with the following:

- one (1) Combustion Engineering Model VU40 boiler equipped with natural gas burners with the maximum heat input of 275 megawatts (MW), complete with vibrating conveyor grate complete with fuel distributors and distributor air fan and pneumatic discharge, furnace dimensions of 7.3 metres depth by 7.6 metres width and approximate furnace volume of 1,340 cubic metres;
- one (1) forced draft combustion air fan, having a capacity of 96 cubic metres per second at 38

degrees Celsius;

- one (1) induced draft exhaust fan, equipped with Variable Frequency Drive, having a capacity of 204 actual cubic metres per second at 224 degrees Celsius;

- one (1) Combustion Engineering, Model Viscodyne settling chamber;

- one (1) Joy Manufacturing, Type SYGR14 Size6 8-13 multicone;

- one (1) Environmental Elements Corporation, electrostatic precipitator consisting of one chamber and operating with 3 energized fields out of total of four fields with the total active collection area of approximately 6,958 square metres and a gas volume of 167 cubic metres at operating temperature of 194 degrees Celsius;

- one (1) combustion air system, comprising dampers, nozzles and associated instrument, including upgraded overfire air system;

- one (1) fuel infeed system, comprising reclaimer, taper slot screen, fuel-sizing equipment, conveyors, chutes, screw-metering feeders, metal detector and associated instrumentation;

for the maximum combustion rate of biomass in the boiler at 55 Bone Dry tonnes per day;

***For the purpose of this Schedule and the terms and conditions specified below, the following definitions apply:***

(1) "Act" means the *Environmental Protection Act*;

(2) "Application" means the Application for Approval (Air & Noise), dated November 3, 2005, signed by Chris Walton and submitted by the Company;

(3) "Biomass" means bacteria and sludge from the Company's liquid effluent secondary treatment system;

(5) "Company" means Resolute Forest Products Canada Inc.;

(6) "Director" means any Ministry employee appointed under Section 20.3 of Part II.1 of the Act;

(7) "District Manager" means the District Manager, Thunder Bay District Office, Northern Region of the Ministry;

(8) "Equipment" means the Power Boiler No. 6, combustion air fan and induced draft fan, a Viscodyne settling chamber, a Joy Manufacturing multicone, an Environmental Elements Corporation electrostatic precipitator, combustion air system, fuel infeed system, associated instrumentation and continuous emission monitors as specified in this Certificate;

(9) "Facility" means the entire operation located at 2001 Neebing Avenue, Thunder Bay, Ontario;

(10) "Hog Fuel" means clean woodwaste consisting of wood chips, sawdust, wood scrap, bark and other woodwaste which have not been treated by chemicals;

(11) "Manual" means a document or a set of documents that provide written instructions to staff of the Company;

(12) "Ministry" means the Ontario Ministry of the Environment;

(13) "Publication NPC-205" means the Ministry Publication NPC-205, "Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban)", October 1995, as amended; and

(14) "Sludge" means waste wood fibre from the liquid effluent primary treatment system.

*You are hereby notified that this approval is issued to you subject to the terms and conditions outlined below:*

## **TERMS AND CONDITIONS**

### **Noise**

1. The Company shall ensure that the noise emissions from the Equipment comply with the limits set in Publication NPC-205.

### **Operation and Maintenance**

2. The Company shall ensure that the Equipment is properly operated and maintained at all times. The Company shall:

(1) have prepared, and update, as necessary, a Manual outlining the operating procedures and a maintenance program for the Equipment, including routine operating and maintenance procedures, including those recommended by the Equipment suppliers;

(2) have developed a list of operating parameters affecting the collection efficiency of the electrostatic precipitator (such as voltage, sparking frequency, rapping frequency, a gas flow indicator and similar) and record the values of these parameters on hourly basis or some other time period which is acceptable to the District Manager;

(3) update, not later than three (3) months after the date of this Environmental Compliance Approval, the Manual to incorporate the operating procedures and a maintenance program for the Equipment modifications described in the Application;

(4) implement the recommendations of the Manual; and

(5) retain, for a minimum of two (2) years from the date of their creation, all records on the operation and maintenance of the Equipment, and make these records available for inspection by staff of the Ministry.

### **Boiler Operation**

3. Notwithstanding the obligations outlined in Condition 2 of this Schedule, the Company shall:

(1) operate Power Boiler No. 6 and associated waste feed system such as to ensure that the boiler combustion gases are subjected to a temperature of 1,000 degrees Celsius for at least 1 second;

(2) ensure that the concentration of oxygen in the flue gas is maintained as close to 6% as operationally possible and sufficient to ensure an efficient combustion as indicated by the continuous monitors for carbon monoxide and oxygen in the combustion gas;

(3) prepare and update as necessary an operations manual for the combustion of various waste and fuels that outlines the operating procedure to be maintained to continuously meet the requirements of Condition 3 of this Schedule.

### **Measurement of Hog Fuel, Sludge and Biomass**

4. The Company shall measure and record the feed rates of Sludge, Biomass and Hog Fuel to the boiler on daily basis and retain these records for a minimum of three (3) years.

### **Stack Emission Limits**

5. The Company shall ensure that the Equipment shall be operated at all times of normal operation such as not to exceed the concentration of particulate in the stack gas of 90 milligrams per dry cubic metre of flue gas normalized to 11% oxygen at a reference temperature of 25 degrees Celsius and a reference pressure of 101.3 kilopascals.

### **Emission and Process Monitoring**

6. The Company shall install and maintain monitoring equipment to measure and record on continuous basis the following parameters:

- (1) oxygen in the combustion gas;
- (2) carbon monoxide in the combustion or emission gas;
- (3) opacity of the stack gas; and
- (4) temperature of the boiler combustion gases;

The monitoring equipment shall include recording devices and shall comply with the requirements outlined in Table 1.

*The reasons for the imposition of these terms and conditions are as follows:*

1. Condition No. 1 is included to provide the minimum performance requirement considered necessary to prevent an adverse effect resulting from the operation of the Equipment.
2. Condition No. 2 is included to ensure that the Equipment must be maintained and operated and staff trained according to a procedure that will result in compliance with the Act, the regulations and this Environmental Compliance Approval. In addition, the Company is required to keep records and to provide information to staff of the Ministry so that compliance with the Act, the regulations and this Environmental Compliance Approval can be verified.
3. Condition No. 3 is included to ensure that the Company shall operate the boiler in such a manner as to ensure good combustion required to achieve compliance with the Act, the regulations and this Environmental Compliance Approval.
4. Condition No. 4 is included to ensure that a record required to establish compliance with this Environmental Compliance Approval is maintained in everyday operation.
5. Condition No. 5 is included to ensure that the stack emissions of contaminants shall comply with the limits in applicable Ministry guidelines, the regulations and this Environmental Compliance Approval.
6. Condition No. 6 is included to specify process and emission monitoring to ensure that no adverse effect will occur in daily operation of the Equipment.

**TABLE 1**

**(1) PARAMETER:** Oxygen

**INSTALLATION:** The Continuous Oxygen Monitor shall be installed at an accessible location where the measurements are representative of the actual concentration of oxygen in the undiluted gases leaving the afterburner of the Equipment and shall meet the following installation specifications.

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**PARAMETERS SPECIFICATION**

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1. Range (percentage): 10 < - 0 - < 20
  2. Calibration Gas Ports: close to the sample point
- 

**PERFORMANCE:** The Continuous Oxygen Monitor shall meet the following minimum performance specifications for the following parameters.

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**PARAMETERS SPECIFICATION**

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1. Span Value (percentage): 2 times the average normal concentration of the source
  2. Relative Accuracy: < 10 percent of the mean value of the reference method test data
  3. Calibration Error: 0.25 percent O<sub>2</sub>
  4. System Bias: < 4 percent of the mean value of the reference method test data
  5. Procedure for Zero and Span Calibration Check: all system components checked
  6. Zero Calibration Drift (24-hour): < 0.5 percent O<sub>2</sub>
  7. Span Calibration Drift (24-hour): < 0.5 percent O<sub>2</sub>
  8. Response Time (90 percent response to a step change): < 90 seconds
  9. Operational Test Period: > 168 hours without corrective maintenance
- 

**CALIBRATION:** Daily calibration drift checks on the monitor shall be performed and recorded in accordance with the requirements of Report EPS 1/PG/7.

**DATA RECORDER:** The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time resolution of 2 minutes or better.

**RELIABILITY:** The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent, thereafter.

**(2) PARAMETER: Carbon Monoxide**

**INSTALLATION:** The Continuous Carbon Monoxide Monitor shall be installed at an accessible location where the measurements are representative of the actual concentration of carbon monoxide in the undiluted stack gases leaving the Equipment and shall meet the following installation specifications.

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**PARAMETERS SPECIFICATION**  
 -----

- 1. Range (parts per million, ppm): 0 to > 20 ppm  
 2. Calibration Gas Ports: close to the sample point  
 -----

**PERFORMANCE:** The Continuous Carbon Monoxide Monitor shall meet the following minimum performance specifications for the following parameters:

PARAMETERS	SPECIFICATION
1. Span Value (nearest ppm equivalent):	2 times the average normal concentration
2. Relative Accuracy:	< 10 percent of the mean value of the reference method test data + 5 ppm whichever is greater
3. Calibration Error:	< 2 percent of actual concentration
4. System Bias:	< 4 percent of the mean value of the reference method test data
5. Procedure for Zero and Span Calibration Check:	all system components checked
6. Zero Calibration Drift (24-hour):	< 5 percent of span value
7. Span Calibration Drift (24-hour):	< 5 percent of span value
8. Response Time (90 percent response to a step change):	< 90 seconds
9. Operational Test Period :	> 168 hours without corrective maintenance

**CALIBRATION:** Daily calibration drift checks on the monitor shall be performed and recorded in accordance with the requirements of Report EPS 1/PG/7.

**DATA RECORDER:** The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time resolution of 2 minutes or better.

**RELIABILITY:** The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent, thereafter.

**(3) PARAMETER: Temperature**

**INSTALLATION:** The sample point for the Continuous Temperature Monitor shall be located downstream of the Equipment flame at a distance required to achieve a combustion gas residence time of 1 second.

**PERFORMANCE:** The Continuous Temperature Monitor shall meet the following minimum performance specifications for the following parameters:

PARAMETERS	SPECIFICATION
1. Type:	shielded "K" type thermocouple, or equivalent
2. Accuracy:	± 1.5 percent of the minimum gas temperature



**DATA RECORDER:** The data recorder must be capable of registering continuously the measurement of the monitor without a significant loss of accuracy and with a time resolution of 1 minute or better.

**RELIABILITY:** The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 95 percent of the time for each calendar quarter.

**(4) PARAMETER: Opacity**

**INSTALLATION:** The continuous Opacity Monitor shall be installed at an accessible location where the measurements are representative of the actual opacity of the gases leaving the Equipment and shall meet the following design and installation specifications.

PARAMETERS	SPECIFICATION
1. Wavelength at Peak Spectral Response (nm):	500 - 600
2. Wavelength at Mean Spectral Response (nm):	500 - 600
3. Detector Angle of View:	< 5 degrees
4. Angle of Projection:	< 5 degrees
5. Range (percent of opacity):	0 - 100

**PERFORMANCE:** The Continuous Opacity Monitor shall meet the following minimum performance specifications for the following parameters:

PARAMETERS	SPECIFICATION
1. Span Value (percent opacity):	2 times the average normal opacity of the source
2. Calibration Error:	< 3% opacity
3. Attenuator Calibration:	< 2% opacity
4. Response Time (95% response to a step change):	< 10 seconds
5. Schedule for Zero and Calibration Checks:	daily minimum
6. Procedure for Zero and Calibration Checks:	all system components checked
7. Zero Calibration Drift (24-hour):	< 2% opacity
8. Span Calibration Drift (24-hour):	< 2% opacity
9. Conditioning Test Period:	> 168 hours without corrective maintenance
10. Operational Test Period :	> 168 hours without corrective maintenance

**CALIBRATION:** The monitor shall be calibrated, to ensure that it meets the drift limits specified above, during the periods of the operation of the Equipment. The results of all calibrations shall be recorded at the time of calibration.

**DATA RECORDER:** The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time resolution of 30 seconds or better.

**RELIABILITY:** The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 95 percent of the time, on a monthly basis, when the Equipment is in operation.

all in accordance with the Application for Approval (Air & Noise), dated November 3, 2005 and signed by Chris Walton, Bowater Canadian Forest Products Division, and all supporting information associated with the application, and all the information and documentation contained in the documents listed in Table 2.

## TABLE 2

1. Application for a Certificate of Approval (Air) No. 8-6015-91 by Bowater Pulp and Paper Inc. dated June 1, 1991 and signed by R. McMullen.
2. Application for a Certificate of Approval (Air) No. 8-6015-99 RE1 by Bowater Pulp and Paper Inc. dated April 2, 1998 and signed by B. Mooney.
3. Environmental Elements Corporation, M.O. 420638: Section 2, Description of Equipment: Section 3, Technical Tabulation: Section 4, Operating Conditions and Guarantees.
4. Application for Amendment of Approval (Air)- #6 Power Boiler (Master File No. 01.05.06.01.01), Letter from Bowater Pulp and Paper Inc. dated April 15, 1998 and signed by Brian Mooney.
5. #6 Boiler Electrostatic Precipitator C of A Information Request (Master File No. 01.05.06.01.01), Letter from Bowater Pulp and Paper Inc. dated November 4, 1998 and signed by Brian Mooney.
6. #6 Power Boiler Electrostatic Precipitator, Draft C of A, (Master File No. 01.05.06.01.01), Letter from Bowater Pulp and Paper Canada Inc. dated December 4, 1998 and signed by Brian Mooney.
7. Statistical Comparison- Sludge vs. Virgin Wood, for R.F. McMullen, Manager, Environmental Affairs, Canadian Pacific Forest Products, 2001 Neebing Avenue, Thunder Bay, Ontario P7C 4W3, by Environmental Protection Laboratories, 6850 Goreway Drive, Etobicoke, Ontario L4V 1P1, September 8, 1993.

*The reasons for the imposition of these terms and conditions are as follows:*

## GENERAL

Condition No. 1 is included to require the *Approval* holder to build, operate and maintain the *Facility* in accordance with the *Supporting Documentation* considered by the *Director* in issuing this *Approval*.

## LIMITED OPERATIONAL FLEXIBILITY, REQUEST FOR MAXIMUM CONCENTRATION LEVEL ASSESSMENT AND PERFORMANCE LIMITS

Conditions No. 2 and 3 are included to limit and define the *Modifications* permitted by this *Approval*, and to set out the circumstances in which the *Company* shall submit a *Maximum Concentration Level*

*Assessment* prior to making *Modifications*. The holder of the *Approval* is approved for operational flexibility for the *Facility* that is consistent with the description of the operations included with the application up to the *Facility Production Limit*. In return for the operational flexibility the *Approval* places performance based limits that cannot be exceeded under the terms of this *Approval*. *Approval* holders will still have to obtain other relevant approvals required to operate the *Facility*, including requirements under other environmental legislation such as the *Environmental Assessment Act*.

## **DOCUMENTATION REQUIREMENTS**

Condition No. 4 is included to require the *Company* to maintain ongoing documentation that demonstrates compliance with the *Performance Limits* of this *Approval* and allows the *Ministry* to monitor on-going compliance with these *Performance Limits*. The *Company* is required to have an up to date *ESDM Report* and *Acoustic Assessment Report* that describe the *Facility* at all times and make the *Emission Summary Table* and *Acoustic Assessment Summary Table* from these reports available to the public on an ongoing basis in order to maintain public communication with regard to the emissions from the *Facility*.

## **REPORTING REQUIREMENTS**

Condition No. 5 is included to require the *Company* to provide a yearly *Written Summary Form* to the *Ministry* to assist the *Ministry* with the review of the site's compliance with the *EPA*, the regulations and this *Approval*.

## **OPERATION AND MAINTENANCE**

Condition No. 6 is included to require the *Company* to properly operate and maintain the *Processes with Significant Environmental Aspects* to minimize the impact to the environment from these processes. Condition No. 6 is included to also monitor the contaminant emissions to ensure that no adverse effect will occur in daily operation of the *Facility*.

## **COMPLAINTS RECORDING PROCEDURE**

Condition No. 7 is included to require the *Company* to respond to any environmental complaints regarding the operation of the *Equipment*, according to a procedure that includes methods for preventing recurrence of similar incidents and a requirement to prepare and retain a written report.

## **RECORD KEEPING REQUIREMENTS**

Condition No. 8 is included to require the *Company* to retain all documentation related to this *Approval* and provide access to employees in or agents of the *Ministry*, upon request, so that the *Ministry* can determine if a more detailed review of compliance with the *Performance Limits* is necessary.

## **REVOCAION OF PREVIOUS APPROVALS**

Condition No. 9 is included to identify that this *Approval* replaces all Section 9 Certificate(s) of Approval and Part II.1 Approvals that have been previously issued for this *Facility*.

## **NOISE ABATEMENT ACTION PLAN**

Condition No. 10 is included to require the *Company* to implement a *Noise Abatement Action Plan* designed to ensure that the noise emissions from the *Facility* will be in compliance with applicable limits set in the *Ministry*'s noise guidelines.

## **ACOUSTIC AUDIT**

Condition No. 11 is included to require the *Company* to gather accurate information and submit an *Acoustic Audit Report* in accordance with procedures set in the *Ministry's* noise guidelines, so that the environmental impact and subsequent compliance with the *EPA*, the regulation and this *Certificate* can be verified.

*In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me, the Environmental Review Tribunal and in accordance with Section 47 of the Environmental Bill of Rights, 1993, S.O. 1993, c. 28 (Environmental Bill of Rights), the Environmental Commissioner, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:*

1. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

*The Notice should also include:*

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. The municipality or municipalities within which the project is to be engaged in.

*And the Notice should be signed and dated by the appellant.*

*This Notice must be served upon:*

The Secretary* Environmental Review Tribunal 655 Bay Street, Suite 1500 Toronto, Ontario M5G 1E5	AND	The Environmental Commissioner 1075 Bay Street, Suite 605 Toronto, Ontario M5S 2B1	AND	The Director appointed for the purposes of Part II.1 of the Environmental Protection Act Ministry of the Environment 2 St. Clair Avenue West, Floor 12A Toronto, Ontario M4V 1L5
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**\* Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 314-4506 or [www.ert.gov.on.ca](http://www.ert.gov.on.ca)**

*This instrument is subject to Section 38 of the Environmental Bill of Rights, 1993, that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek leave to appeal within 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry at [www.ebr.gov.on.ca](http://www.ebr.gov.on.ca), you can determine when the leave to appeal period ends.*

*The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.*

DATED AT TORONTO this 12th day of October, 2012

Ian Parrott, P.Eng.  
Director  
appointed for the purposes of Part II.1 of  
the *Environmental Protection Act*

AH/  
c: District Manager, MOE Thunder Bay - District