



APPROVAL TO OPERATE

I-11612

Pursuant to paragraph 5 (3) (a) of the *Air Quality Regulation - Clean Air Act*, this Approval to Operate is hereby issued to:

Arauco Canada Limited

for the operation of the

St. Stephen Wood Composite Products Manufacturing Mill

Description of Source: **Medium Density Fibreboard Plant**

Source Classification: **Air Quality Regulation** **Class 1B**

Parcel Identifier: **15161250, 15188154, 15188113,
15188139, 15188147, 15188162**

Mailing Address: **P.O. Box 490
151 Church Street**

St. Stephen, NB E3L 3A6

Conditions of Approval: **See attached Schedule "A" of this Approval**

Supersedes Approval: **I-10403**

Valid From: **July 01, 2022**

Valid To: **June 30, 2027**

Recommended by: _____

Issued by: _____
for the Minister of Environment and Climate Change

_____ Date

SCHEDULE "A"

A. DESCRIPTION AND LOCATION OF SOURCE

Arauco Canada Limited is a wood composite products manufacturing mill located in St. Stephen, New Brunswick. The plant manufactures medium density fibreboard (MDF) from hardwood chips, softwood shavings, and other sources of residual wood fibre. The raw materials for MDF production are stored in the Raw Material Storage (RMS) building. The raw materials are then transferred to refining areas for processing, screening, and drying. The refined material is mixed with resin transferred to a MDF production line. Various thicknesses and sizes of MDF are upgraded through the processes including sanding, and/or painting. The mill has the capacity to produce approximately 360 tonnes per day of MDF.

Arauco Canada Limited also operates the former Woodchem Urea Formadehyde Resin Plant. The resin plant is designed to produce 37,500 tonnes per year of urea formaldehyde resin.

The Arauco Canada Limited operation, in the Town of St. Stephen, County of Charlotte, and the Province of New Brunswick, and identified by Parcel Identifiers (PID) 15188154, 15188113, 15188139, 15188147, 15188162 and 15161250 is hereby approved under the *Air Quality Regulation - Clean Air Act* and **is subject to the following:**

B. DEFINITIONS

"**Approval Holder**" means Arauco Canada Limited.

"**Department**" means the New Brunswick Department of Environment and Local Government.

"Minister" means the Minister of Environment and Climate Change and includes any person designated to act on the Minister's behalf.

"Inspector" means an Inspector designated under the *Clean Air Act*, the *Clean Environment Act*, or the *Clean Water Act*.

"normal business hours" means the hours when the Department's offices are open. These include the period between 8:15 a.m. and 4:30 p.m. from Monday to Friday excluding statutory holidays.

"after hours" means the hours when the Department's offices are closed. These include statutory holidays, weekends, and the hours before 8:15 a.m. and after 4:30 p.m. from Monday to Friday.

"environmental emergency" means a situation where there has been or will be a release, discharge, or deposit of a contaminant or contaminants to the atmosphere, soil, surface water, and/or groundwater environments of such a magnitude or duration that it could cause significant harm to the environment or put the health of the public at risk.

"Facility" means the property, buildings, and equipment as identified in the Description of Source above, and all contiguous property in the title of the Approval Holder at that location. For the purpose of this Approval, the Facility includes the Production Lines, the Heat Energy System, the Finishing Lines, the Resin Plant, the Wood Chip Processing and Storage, and associated equipment.

"Production Lines" means the unit operations and ancillary equipment that are used to dry, blend, form, and press wood chips and shavings with a catalyst and urea formaldehyde resin mixture to produce wood composite products.

"**Heat Energy System**" means the unit operations and ancillary equipment that burns fuel oil or woodwaste to produce heat for steam production, drying, and space heating.

"**Resin Plant**" means the unit operations and ancillary equipment that are used to produce the urea formaldehyde resin mixture.

"**Finishing Lines**" means the unit operations and ancillary equipment that are used to upgrade the medium density fibre board from the main Production Lines

"**Wood Chip Storage and Processing**" means the land, buildings, unit operations, and ancillary equipment that is used to store, clean, refine, and dry the wood chips prior to use in the Production Lines to produce the wood composite products.

"**SWIM**" means Environment Canada's Single Window Information Manager, which is a one-window secure online electronic data reporting system accessible at: <http://ec.ss.ec.gc.ca>.

C. TERMS AND CONDITIONS

GENERAL

1. This Facility has been classified as a **Class 1B** source, pursuant to the *Air Quality Regulation 97-133* filed under the *Clean Air Act*. The Approval Holder shall pay the appropriate fee **on or before April 1 of each year**.
2. The Approval Holder shall operate the Facility in compliance with the *Air Quality Regulation 97-133* filed under the *Clean Air Act* of the Province of New Brunswick. Violation of this Approval or any condition stated herein constitutes a violation of the *Clean Air Act* of the Province of New Brunswick.

3. The terms and conditions of this Approval are severable. If any term or condition of this Approval is held invalid, is revoked or is modified, the remainder of the Approval shall not be affected.
4. The Approval Holder shall notify the Minister in writing of any plans to modify the operation of the Facility that would result in a significant change in the characteristics or increased rate of discharge or concentration of any air contaminant to the atmosphere **at least 240 days prior** to the modification.
5. In the event of facility closure, the Approval Holder shall notify the Minister in writing **at least one hundred and eighty (180) days prior** to the anticipated closure date.

EMERGENCY REPORTING

- 6a. Immediately following the discovery of an environmental emergency, the Approval Holder shall notify the Department in the following manner.

During normal business hours, telephone the applicable Department Regional Office **until personal contact is made** (i.e. no voice mail messages will be accepted) and provide as much information that is known about the environmental emergency. The telephone numbers for the six Regional Offices within the Department are provided in the table below.

After Hours, telephone **Environment and Climate Change Canada's National Environmental Emergencies Centre (NEEC) until personal contact is made** and provide all information known about the *Environmental Emergency*. The telephone number for the **NEEC is 1-800-565-1633**.

- 6b. Within 24-hours of the time of initial notification, a **Preliminary Emergency Report** shall be emailed by the Approval Holder to the Department’s Central Office and applicable Regional Office using the contact information provided below. The Preliminary Emergency Report shall clearly communicate as much information that is available at the time about the environmental emergency.

Within five (5) days of the time of initial notification, a **Detailed Emergency Report** shall be emailed by the Approval Holder to the applicable Regional Office and to the Department’s Central Office using the contact information provided below. The Detailed Emergency Report shall include, as minimum, the following: i) a description of the problem that occurred; ii) a description of the impact that occurred; iii) a description of what was done to minimize the impact; and iv) a description of what was done to prevent recurrence of the problem.

Office location	Phone	Fax	Email
Saint John Regional Office	(506) 658-2558	(506) 658-3046	Elg.egl-region4@gnb.ca
Central Office	-	(506) 453-2390	Approval Engineer

LIMITS

7. The Approval Holder shall ensure that odour, dust or noise being released from the Facility does not cause adverse impacts to any off-site receptor. In the event emissions are suspected by the Department to be adversely impacting any off-site receptor, the Approval Holder may be required to investigate the degree of impact and/or develop, submit, and implement a Prevention and Control Plan in accordance with a timetable established by the Department. The plan shall be submitted in writing to the Department for review and approval prior to implementation.

8. The Approval Holder shall ensure that the emissions originating from the sources at the Facility be controlled to prevent the exceedance of the maximum ground level concentrations outlined in Schedule B and Schedule C of the *Air Quality Regulation 97-133*, filed under the *Clean Air Act* of the Province of New Brunswick.
9. The Approval Holder shall ensure the exhaust gas exiting all stacks as a result of the operation of the drying units at the Facility do not exceed the particulate matter emission limit of 200 milligrams per cubic metre (mg/m^3) corrected to reference conditions of 25°C and 101.3 kPa.
10. The Approval Holder shall ensure that the total combined release of formaldehyde (HCHO) from all sources at the Facility does not exceed one hundred and fifteen (115) tonnes of formaldehyde per calendar year.
11. The Approval Holder shall ensure that the total combined release of sulphur dioxide (SO_2) from all sources at the Facility does not exceed fifty (50) tonnes of sulphur dioxide per calendar year.
12. The Approval Holder shall ensure that the total combined emissions of particulate matter (PM) from all sources at the Facility does not exceed four hundred and fifty (450) tonnes of particulate matter per calendar year.
13. The Approval Holder shall ensure that the total combined release of nitrogen oxides (NO_x) from all sources at the Facility does not exceed four hundred and eighty (480) tonnes of nitrogen oxides, expressed as nitrogen dioxide (NO_2), per calendar year.
14. The Approval Holder shall ensure that the smoke density of the exhaust gas exiting any stack or vent at the Facility conforms with the requirements embodied in Section 14 of the *Air Quality Regulation 97-133* filed under the *Clean Air Act*.

TESTING AND MONITORING

15. The Approval Holder shall ensure that all source testing events undertaken by the Approval Holder or on behalf of the Approval Holder are completed in accordance with the requirements embodied in the Department's Guidance Document for Source Testing.
16. The Approval Holder shall ensure that where any Terms and Conditions of this Approval require source testing for Particulate Matter (PM), a Particle Size Distribution Study is to be undertaken to determine the concentration in milligrams per cubic meter and emission rate in grams per second of Total Particulate Matter, PM₁₀ and PM_{2.5} being released from the source.
17. **Prior to October 31, 2023, and again prior to October 30, 2026**, the Approval Holder shall conduct source testing on the Fibrex II Dryer exhaust stacks to determine the concentration in milligrams per cubic metre (mg/m³) and emission rate in grams per second (g/s) of particulate matter (PM), sulphur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), and formaldehyde (HCHO).
18. **Prior to October 31, 2024**, the Approval Holder shall conduct source testing on the Fibrex II Dryer exhaust stacks to determine the concentration in milligrams per cubic metre (mg/m³) and emission rate in grams per second (g/s) of particulate matter (PM), sulphur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), and formaldehyde (HCHO).
19. **Prior to October 31, 2024**, the Approval Holder shall conduct source testing to determine the concentration (ug/m³) and emission rate (g/s) of formaldehyde being released from the Formaldehyde Scrubbing System that services the Resin Reactors and the Product Tank Farm at the Urea Formaldehyde Resin Plant. All source testing activities should be done under normal operating conditions of the Formaldehyde Scrubbing System.

20. **Prior to October 31, 2024**, the Approval Holder shall conduct source testing to determine the concentration ($\mu\text{g}/\text{m}^3$) and emission rate (g/s) of formaldehyde, methanol, and dimethyl ether being released from the Catalytic Converter Vent at the Urea Formaldehyde Resin Plant. All source testing activities should be done under normal operating conditions of the Catalytic Converter Vent.
21. The Approval Holder shall conduct performance tests on the Fibrex II Boiler and Fibrex II Konus Boiler, at such times and in such a manner as the Department may in writing require.
22. The Approval Holder shall complete an air quality dispersion modelling study immediately following any source testing activities required for a given year. The study shall determine the maximum 1 hour, 24 hour, and annual ground level concentrations in micrograms per cubic metre for the parameters specified in the source testing activities for that year and representing all point sources at the facility. The maximum concentrations shall be shown graphically as concentration contours in relation to the facility and off-site receptors within a five kilometre radius. The model to be used shall be a multisource model that is acceptable to the Department. The modelling shall use the previous year's hourly meteorological data from the nearest weather station.
23. The Approval Holder shall operate one High Volume Total Suspended Particulate Sampler to provide an indication of the 24-hour average concentration of Total Suspended Particulate (TSP) impacting ground level surrounding the Facility as a result of on-site activities. The monitor shall be located, maintained, and operated in a manner and according to a schedule that is acceptable to the Department.
24. The Approval Holder shall operate one ambient monitor which will provide an indication of fine particulate matter (less than or equal to 10 microns in diameter (PM_{10})) impacting ground level surrounding the facility as a result of on-site activities. The monitor shall be located, maintained, and operated in a manner and according to a schedule that is acceptable to the Department.

25. The Approval Holder shall complete Total Suspended Particulate Analysis by Polarized Light Microscopy when a particulate ambient air quality result exceeds 120 micrograms per cubic meter.

REPORTING

26. In the event the Approval Holder receives a complaint from the public regarding unfavorable environmental impacts associated with the Facility, the Approval Holder is to report this complaint by email to the Department's applicable Regional Office within one business day of receiving the complaint.
27. In the event the Approval Holder violates any Term and Condition of this Approval or the *Air Quality Regulation*, the Approval Holder is to immediately report this violation by email to the Department's applicable Regional Office and the Central Office. In the event the violation may cause the health or safety of the general public to be at risk and/or significant harm to the environment could or has resulted, the Approval Holder shall follow the Emergency Reporting procedures contained in this Approval.
28. **By September 30 of each year**, the Approval Holder shall ensure that a Pre-test Plan pertaining to the source testing as required in items 17, 18,19 and 20 under the Terms and Conditions section of this Approval, is completed in accordance with the requirements embodied in the Department's Guidance Document for Source Testing and that such Pre-Test Plan is filed with the Department for review and approval.
29. **By November 30 of each year**, the Approval Holder shall ensure that a Final Report on the source testing as required in items 17, 18, 19 and 20 under the Terms and Conditions section of this Approval, is completed in accordance with the requirements embodied in the Department's Guidance Document for Source Testing and that such the Final Report is filed with the Department for review.

30. The Approval Holder shall submit a greenhouse gas emissions report by June 1st of each year, for the previous calendar year, to the Department by means of the SWIM system. Reporting shall be consistent with Environment Canada's Greenhouse Gas Emissions Reporting Program (GHGRP). Reporting requirements are published annually in the Canada Gazette, Part 1 under authority of subsection 46(1) of the *Canadian Environmental Protection Act, 1999* (CEPA 1999).
31. **By the end of each month**, the Approval Holder shall submit to the Approvals Branch in Fredericton and the Saint John Regional Office, a Monthly Air Quality Report for the previous calendar month. The report can be submitted either by e-mail, fax or mail provided that the submitted copies are signed. The report shall contain the following information:
- (a) copies of any reports related to the Emergency Response section of this Approval;
 - (b) a summary of any operating problems related to the ambient air quality monitors;
 - (c) a summary report on the results obtained from the operation of the two Hi-Volume Samplers operated at the Facility. As a minimum the report shall consist of the following:
 - i) the date of sampling;
 - ii) the concentration in micrograms per cubic metre corrected to standard conditions of 101.3 kPa and 21°C at each monitor for each sampling event;
 - iii) the number of exceedances if any; and
 - vi) the monthly average concentration in micrograms per cubic metre at each monitor; and
 - (d) copies of any Total Suspended Particulate Analysis by Polarized Light Microscopy reports

32. **By February 15 of each year**, the Approval Holder shall submit to the Approvals Branch in Fredericton an Annual Air Quality Report including:
- (a) an itemized list of all fuel fired point sources;
 - (b) for each fuel fired point source, provide: run time in hours, the amount of each type of fuel burned including used oil, and the percent sulphur content of each type;
 - (c) provide the annual emission in tonnes of sulphur dioxide (SO₂), particulate matter (PM), nitrogen oxides (NO_x), carbon monoxide (CO) and formaldehyde (HCHO) for each Heat Energy System by using the most recent source testing results or by using emission factors;
 - (d) an electronic copy of all particulate monitoring results collected during the year; and
 - (e) a copy of the final report on the annual air quality dispersion modelling study.

Prepared by: _____

Joyce Wang, P.Eng.

Approval Engineer

Authorizations Branch