



APPROVAL TO OPERATE

I-10579

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

AV GROUP NB INC. / GROUPE AV NB INC.

for the operation of the

Atholville Dissolving Grade Pulp Mill

Description of Source:	A 400 air-dry metric tonne per day dissolving grade sulfite pulpmill	
Source Classification:	Air Quality Regulation	Class 1B
Parcel Identifier:	50045541	
Mailing Address:	175 Mill Road	

Atholville, NB E3N 4S7

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

Supersedes Approval: **I-8787**

Valid From: **January 01, 2020**

Valid To: **December 31, 2024**

Recommended by: _____

Issued by: _____

for the Minister of Environment and Local Government

Date

SCHEDULE "A"

A. DESCRIPTION AND LOCATION OF SOURCE

AV Group NB Inc. - Atholville Pulp Mill, located in the Village of Atholville, County of Restigouche, and the Province of New Brunswick, on the property with the Parcel Identifier Number 50045541 is hereby approved to operate, subject to the following Terms & Conditions:

B. DEFINITIONS

1. **"Approval Holder"** means AV GROUP NB INC. / GROUPE AV NB INC.
2. **"Department"** means the New Brunswick Department of Environment and Local Government.
3. **"Facility"** means AV Group NB Inc. magnesium based, acid sulphite pulpmill, owned and operated by the Approval Holder, located in the Village of Atholville, County of Restigouche, and the Province of New Brunswick, on the property with the Parcel Identifier Number 50045541 and producing approximately 400 air-dry metric tonnes per day of bleached dissolving grade sulphite pulp and including the following process units:
 1. One Babcock & Wilcox MgO recovery boiler, installed in 1983 and up-graded in 2004 to a rated capacity of 860 cubic meters per day of red liquor and generating 221,810 lb/hr of steam at 1250 psi and equipped with a Flakt electrostatic precipitator and a ball-bed scrubber and approved to burn red liquor, used oil, waste derived fuel and No.6 fuel oil;

2. One Foster-Wheeler steam generating woodwaste boiler, installed in 1983, with a design rated steam production of 150,000 lb/hr at 1250 psi when burning woodwaste and sludge, and 200,000 lb/hr at 1250 psi when burning No.6 fuel oil and equipped with a multi cyclone dust collection system and retrofitted in 1996 with a Flakt electrostatic precipitator, and approved to burn purchased and self-generated woodwaste, No.6 fuel oil, used oil, oily waste, waste derived fuel, and primary and secondary effluent treatment plant sludges;
3. One Babcock & Wilcox package boiler with a rated capacity of 78.1 Mbtu/hr, burning No.6 and/or No.2 fuel oil, generating approximately 60,000 lb/hr of steam at 235 psi;
4. Seven batch digesters, five with a capacity of approximately 244 m³ and two with a capacity of 280 m³ and with the sulphur dioxide (SO₂) from all seven digesters directed to the gas accumulators and then to the recovery boiler scrubber for SO₂ recovery;
5. An Aqua-chem vapour recompression multiple effect evaporator train with four bodies and eight effects, and with non-condensable gases directed to the recovery boiler scrubber;
6. An SO₂ gas collection system directing SO₂ rich gases recovered from the bleachery area to the recovery boiler scrubber for recovery;
7. A gas collection system directing organics rich gases recovered from the digester and evaporator areas to the recovery boiler combustion zone for incineration or to the recovery boiler scrubber;
8. An EDEpH bleachplant and chlorine dioxide generator with residual chlorine and chlorine dioxide vented to the atmosphere;

9. A portable, but permanent, debarking/chipping plant located near the chip screening building and debarking and chipping approximately 150,000 cubic meters of roundwood per year, and including the storage of approximately 90,000 cubic meters of roundwood;

10. Miscellaneous, minor process vents and stacks including, but not limited to:
 - (a) One cyclone separator on the chip screening building;
 - (b) A digester SO₂ scrubber treating the gases evacuated from the digesters during the chip fill stage;
 - (c) One cyclone separator serving the air evacuation hoods from the maintenance work shops;
 - (d) One cyclone separator from the discharge of the portable chipping plant prior to chips being placed on the chip belt;
 - (e) One bag house on the lime silo;
 - (f) The machine room exhaust stacks which vent low-grade heat and moisture to the atmosphere;
 - (g) Two main evacuation vents from the effluent treatment plant OASES bioreactor;
 - (h) Two chip blowing lines, one for hardwood chips and one for softwood chips;
 - (i) An enclosed biogas flare designed for use when biogas cannot be combusted in the woodwaste boiler.

4. The "Source Testing Guidance Document" means the *New Brunswick Department of the Environment & Local Government - Guidance Document for Source Testing (January 2003)*, or later revision.

5. The "Critical Value" is the opacity reading at which Smoke Density passes from Smoke Density 1 into Smoke Density 2. A "Peak" is when opacity exceeds the Critical Value for a period totalling less than four minutes in any 30-minute period. An "Exceedance" is when opacity exceeds the Critical Value for a period totalling more than four minutes in any 30-minute period.

6. "SWIM" means Environment Canada's Single Window Information Manager, which is a one-window secure online electronic data reporting system accessible at www.ghgreporting.gc.ca.

C. TERMS AND CONDITIONS

7. Emergency Reporting:

The Approval Holder shall immediately report **Environmental Emergencies** at the Atholville Pulpmill where there has been, or is likely to be, the release of a contaminant to the environment, violation of the *Clean Air Act*, the *Air Quality Regulation* or of this Approval and the release is of such a magnitude or duration that:

- (1) there is concern for the health or safety of the general public, and/or,
- (2) there has been, or could be, significant harm to the environment, and/or,
- (3) the release has generated public complaints,

during normal business hours by phone (506-547-2092) to the Bathurst Regional Office. After hours, or when there is no answer at the Bathurst Regional Office, the Approval Holder shall immediately report the environmental emergency to the National Environmental Emergency Centre (NEEC) by phone to 1-800-565-1633.

If available at the time of reporting, this initial verbal Emergency Report shall include:

- (a) a description of the source, including the name of the operator or person responsible for the source;
- (b) the nature, extent, duration and environmental impact of the environmental emergency;
- (c) the cause, or suspected cause, of the environmental emergency;

- (d) any remedial actions taken, or to be taken, to minimize the impact of the environmental emergency; and,
- (e) any actions taken, or to be taken, to prevent a recurrence of the environmental emergency.

Within 24 hours of the time of the initial verbal notification, a written Preliminary Emergency Report shall be emailed to the Bathurst Regional Office (elg.egl-region1@gnb.ca) and to the Approval Engineer assigned to this approval. The Preliminary Emergency Report shall include as much information as is available at the time about the environmental emergency.

If the information in (a) to (e) above is not available at the time of Preliminary Emergency Reporting, follow-up Emergency Reports containing this information shall be submitted as soon as possible, but in no case later than 10 days following the incident, by email to the Bathurst Regional Office and to the Approval Engineer assigned to this approval.

8. **Non-Emergency Reporting:**

The Approval Holder shall report the release of contaminants from the Atholville Pulpmill, or any other environmental incident or situation, which has resulted in a violation of the *Clean Air Act*, the *Air Quality Regulation* or of this Approval, but which is **non-emergency** in nature by email to the Bathurst Regional Office (elg.egl-region1@gnb.ca) and to the Approval Engineer assigned to this approval by the end of the following work day. The Non-Emergency Report shall include:

- (a) a description of the source, including the name of the operator or person responsible for the source;
- (b) the nature, extent, duration and environmental impact of the release or non-emergency environmental incident or situation;
- (c) the cause, or suspected cause, of the release or non-emergency environmental incident or situation;
- (d) any remedial actions taken, or to be taken, to minimize the impact of the release or non-emergency environmental incident or situation; and,

- (e) any actions taken, or to be taken, to prevent a recurrence of the release or non-emergency environmental incident or situation.

9. **Annual SO₂ and Particulate Matter (PM) Emission Caps:**

The Approval Holder shall:

- (a) limit the total combined emission of SO₂ from all process and combustion sources within the pulpmill facility to less than 1000 tonnes per calendar year;
- (b) limit the total combined emission of PM from all combustion sources within the pulpmill facility to less than 150 tonnes per calendar year as determined from Condition 27(h).

10. **Recovery Boiler SO₂ Limit:**

The Approval Holder shall limit the emission of SO₂ from the recovery boiler to less than 500 parts per million by volume, at stack conditions, for any one-hour average, when measured using a method acceptable to the Department.

11. **Recovery Boiler SO₂ Limit - Power Failure:**

Notwithstanding Condition 10, in the event of a power failure in the recovery boiler area such that the ID fan, the FD fan and the sulphur burner fan are not in operation and the gas flowrate in the recovery boiler stack is less than 100 cubic meters per hour, the Approval Holder shall limit the SO₂ concentration in the recovery boiler stack to 1500 parts per million, providing that a report is submitted to the Approval Engineer assigned to this approval by email by the end of the following work day documenting the event and providing sufficient information to demonstrate that there has been no significant emission of SO₂ or impact on the environment.

12. **Recovery Boiler SO₂ Monitor:**

The Approval Holder shall ensure that the recovery boiler stack is equipped with a continuous SO₂ monitor and that the monitor is maintained in a state of good repair and calibration at all times, and is operated at all times that the boiler is operating, except that the monitor may be taken out of service briefly for maintenance, calibration and repair. The monitor shall be equipped with sufficient data logging capability to provide the one-hour average SO₂ concentration in ppm at stack conditions. The monitor shall be equipped with alarming capability and the alarm shall be set at 400 parts per million of SO₂.

13. **Recovery Boiler Oxygen Monitor:**

The Approval Holder shall ensure that the recovery boiler stack is equipped with a continuous oxygen monitor and that the monitor is maintained in a state of good repair and calibration at all times, and is operated at all times that the boiler is operating, except that the monitor may be taken out of service briefly for maintenance, calibration and repair.

14. **Recovery Boiler Particulate Limit:**

The Approval Holder shall limit the emission of particulate matter from the recovery boiler stack to less than 70 mg/m³ of dry gas at 21 degrees C and 101.3 kPa, with impinger catch reported but not included in the calculation of total particulate concentration, when tested following the methods outlined in the Source Testing Guidance Document.

15. **Woodwaste Boiler Opacity Meter:**

The Approval Holder shall ensure that the woodwaste boiler stack is equipped with a continuous opacity monitor and that the monitor is maintained in a state of good repair and calibration at all times, and is operated at all times that the boiler is operating, except that the monitor may be removed from service for short periods of time for maintenance, calibration and repair. The opacity monitor shall be equipped with alarming capability and the alarm shall be set to alarm at 20% opacity.

16. **Woodwaste Boiler Particulate Limit:**

The Approval Holder shall limit particulate emissions from the woodwaste boiler to a maximum of 130 mg/m³ of dry gas at 21 degrees C and 101.3 kPa and corrected to 12% CO₂ and with impinger catch reported but not included in the calculation of total particulate concentration, when tested using following the methods outlined in the Source Testing Guidance Document.

17. **Boilers Emissions Testing:**

The Approval Holder shall:

- (a) conduct a minimum of two emission tests per year on the recovery boiler and woodwaste boiler, with one test done during the period January 1 to June 30, and one test during the period July 1 to December 31;
- (b) ensure the emission tests measure total particulate matter and SO₂ emissions. The second particulate matter test is not required, in any given year, for the recovery boiler if the results of the first test are less than 35 mg/dscm and the second particulate matter test for the woodwaste boiler is not required if the results of the first test are below 65 mg/dscm;
- (c) ensure that all testing is done following the Source Testing Guidance Document;

- (d) ensure that impinger catch is reported but not included in the calculation of particulate concentration;
- (e) ensure that all testing is done during normal boiler operation;
- (f) ensure that the first emission test in 2021 include the measurements of PM2.5 and PM10; and,
- (g) ensure that a report of the test results and boiler operating conditions is included in the Monthly Report following receipt of the test results.

18. **Air Dispersion Modeling:**

By December 31, 2021, the Approval Holder shall submit to the Department an air dispersion model report. The report shall include the results of the air dispersion modeling run using the parameters measured during the first emission test of 2021 from both boilers to predict maximum ground level concentrations of each parameters (using appropriate averaging periods for each). The predicted ground level concentrations shall be compared to the appropriate acceptable limits.

19. **Woodwaste Boiler Fuel Quality:**

The Approval Holder shall ensure that bark that has come in contact with salt water, or any other salt source, is not burned in the woodwaste boiler.

20. **Burning of Self-Generated Used Oil:**

The Approval Holder may burn self-generated used oil in the woodwaste boiler and recovery boiler pursuant to Section 4(5) of the *Used Oil Regulation*.

21. **Burning of Waste Derived Fuel:**

The Approval Holder may burn waste derived fuel pursuant to Section 16(3)(d)(ii) of the *Used Oil Regulation* and subject to the following restrictions:

- (a) waste derived fuel may be burned only in the woodwaste boiler and the recovery boiler;
- (b) the waste derived fuel is stored in:
 - i) one of the licensed onsite permanent petroleum storage tanks which has successfully been tested to the API 653 standard within the last 10 years; or,
 - ii) a new petroleum storage tank meeting all the requirements of the Department; and,
- (c) an analysis for the parameters required in Section 14(2) of the *Used Oil Regulation* shall be obtained from the waste derived fuel supplier for each load of waste derived fuel received, and waste derived fuel may be received and burned only if the waste derived fuel meets the specifications listed in the *Used Oil Regulation*.

22. **Burning of Oily Waste:**

The Approval Holder may burn, in the woodwaste boiler, small quantities of oily waste, spilled oil, commercial absorbents approved by the Department, oily rags, bark or sawdust used to absorb spilled oil, such as might result from regular maintenance work or the cleanup of small spills, providing that these materials are added directly to the woodwaste stream to the boiler and are not exposed to rain.

23. **Gas Collection System No.1:**

The Approval Holder shall operate a Gas Collection System which shall collect gases from the bleachery vents and unbleached washer exhaust and shall direct these gases to the recovery boiler scrubber for recovery.

24. **Gas Collection System No.2:**

The Approval Holder shall operate a Gas Collection System which shall collect gases from the heavy liquor tank vent, weak liquor tank vent, acid drain tank vent, acid clarifier vent, and evaporator sump No.1 vent and shall direct these gases to the recovery boiler furnace.

25. **Operation of Bleachplant:**

The Approval Holder shall operate the bleachplant as follows:

- (a) By September 30th of each year, the Approval Holder shall measure, following the format of the Source Testing Guidance Document, the chlorine, chlorine dioxide and chloroform emissions from all sources associated with the bleachplant including the chlorine dioxide generator. A report summarizing the test results and including operating data demonstrating that the measurements were taken during normal operation shall be submitted to the Department in the following Monthly Air Quality Report.
- (b) The Approval Holder shall operate the Bleachplant CEM at all times that the ClO₂ generator is in operation, except that the monitor may be removed from service for short periods of time for maintenance, calibration and repair;
- (c) The Approval Holder shall use the Bleachplant CEM reading for the purpose of minimizing Cl₂ and ClO₂ emissions to the atmosphere;
- (d) The Approval Holder shall limit the emissions from the ClO₂ generator stack to a maximum of 4.0 kgs/hr of Cl₂ and to a maximum of 4.0 kgs/hr of ClO₂; and,
- (e) If the limits in (d) are exceeded, or if visible green or yellow emissions are observed from the bleachplant stacks, the Approval Holder shall report the event to the Bathurst Regional Office and the Approval Engineer assigned to this approval by email by the end of the following working day.

26. **Ambient Monitoring:**

The Approval Holder shall operate an Ambient Air Quality Monitoring Network as follows:

- a) The network shall consist of two sulphur dioxide monitors capable of continuous feedback to the facility, and one meteorological tower measuring wind speed and wind direction capable of continuous feedback to the Facility, at locations acceptable to the Department;

- b) The air quality monitors shall be certified by the United States Environmental Protection Agency for the contaminants monitored;
- c) The air quality monitors shall be installed, maintained and operated in accordance with the quality assurance requirements provided by the Department;
- d) All sulphur dioxide monitors must log 5-minute averages, one-hour averages, 24-hour averages and annual averages readings, expressed in parts per billion at standard conditions; and,
- e) All ambient air quality monitors must log internal diagnostic data, with continuous feedback to the Facility.

27. **Annual Air Quality Report:**

By January 31st of each year, the Approval Holder shall submit to the Department an Annual Air Quality Report, including:

- (a) the amount of fuel oil burned in each combustion unit, including used oil and waste derived fuel, the % sulphur content of the fuel and the basis for this information;
- (b) the amount of purchased and self-generated bark, knots, primary and secondary sludge, and sawdust burned in each combustion unit, an estimation of the sulphur content of each fuel and the basis for this information;
- (c) a calculation of the annual SO₂ emission from the recovery boiler based on the CEM reading from Condition 12 and the flow from the annual PM stack test from Condition 17;
- (d) a calculation of the annual SO₂ emission from the woodwaste boiler based on the SO₂ emission rate determined from Condition 17;
- (e) a mass balance calculation of the annual SO₂ emission from the package boiler based on the fuel usage;

- (f) an itemized list of process emission sources and their annual SO₂ emissions and the basis for this information;
- (g) a calculation showing the total annual SO₂ emission from the Atholville pulpmill that being (c) + (d) + (e) + (f) reported in tonnes per year and in kilograms per tonne of annual production;
- (h) a summary of the particulate stack tests done pursuant to Condition 17 and a calculation of the annual particulate emissions from each boiler, taking into account the operating time of the boiler and the total from the mill and reported in tonnes per year and in kilograms per tonne of annual production;
- (i) the annual average ambient SO₂ concentration at the Beauvista and Boom Road monitoring stations;
- (j) a summary of the number of exceedances of the ambient SO₂ limits;
- (k) a summary of the number of exceedances of the recovery boiler SO₂ limit;
- (l) the number of hours that the package boiler operated during the year; and,
- (m) the annual average reading from the bleachplant CEM for Cl₂ and ClO₂ in kg/hr and the number hours the limit of 4 kg/hr was exceeded during the year.

28. **MONTHLY AIR QUALITY REPORT:**

By the end of the following month, the Approval Holder shall submit a Monthly Air Quality Report for the previous month to the Department, which may be in electronic format, containing the following information:

- (a) a cover letter signed by an AV Group NB Inc. official stating that the Monthly Air Quality Report has been reviewed and is felt to be an accurate reporting of the activities at the Atholville pulpmill for that month;
- (b) a summary of the environmental performance for the month including any violations of the *Air Quality Regulation* or of this Approval, a summary of any incidents reported pursuant to the Emergency Reporting Condition and the Non-emergency Reporting Condition of the Approval and a summary of any operating problems related to the continuous stack emission monitoring devices, pollution control equipment, or ambient monitoring equipment;
- (c) a table and graph showing the hourly average concentrations of SO₂ discharged from the recovery boiler stack reported in ppm by volume at stack conditions;
- (d) a graph showing the daily maximum, minimum and average opacity for the woodwaste boiler and a Table showing opacity "peaks" and "exceedances" for the woodwaste boiler;
- (e) a statement of the number of hours of operation of the package boiler;
- (f) tables and graphs showing the one-hour average and 24-hour rolling average SO₂ levels in parts per billion (ppb) and meteorological conditions measured at the ambient monitoring stations;
- (g) the results of any performance tests done that month;
- (h) the quantity of waste derived fuel burned that month and the analysis of the waste derived fuel, and if no waste derived fuel was burned that month, a statement of that fact;

- (i) tables and graphs showing the one-hour average of Cl₂ and the one-hour average of ClO₂ for the Bleachplant CEM in ppm and in kgs/hr;

29. **Reporting of GHG emissions**

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 the authority of subsection 46(1) of the *Canadian Environmental Protection Act, 1999* (CEPA 1999).

30. **Ambient Air Monitoring Continuous Reporting**

Each hour, the Approval Holder shall submit to the Department, an automated report containing the complete hourly data from all ambient monitoring analyzers and meteorology devices for the Facility for the preceding 24-hour period. The report shall be submitted electronically in a form and format acceptable to the Department and using the procedures and technologies acceptable to the Department.

31. **Annual Ambient Air Monitoring Report**

By March 31 of each year, the Approval Holder shall submit to the Department, a report containing complete hourly data from all ambient air monitoring analyzers and meteorology devices for this Facility for the preceding calendar year. All data in this report shall be finalized in accordance with quality assurance and quality control procedures provided by the Department. The report shall be submitted electronically in a form and format acceptable to the Department and using procedures and technologies acceptable to the Department.

Prepared by: _____

André Fortin, P.Eng.

Approvals Engineer

Authorizations Branch