



DEPARTMENT ORDER

**Sappi North America, Inc.
Somerset Operations
Somerset County
Skowhegan, Maine
A-19-77-13-M**

**Departmental
Findings of Fact and Order
New Source Review
NSR #13**

FINDINGS OF FACT

After review of the air emission license amendment application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes (M.R.S.) § 344 and § 590, the Maine Department of Environmental Protection (the Department) finds the following facts:

I. REGISTRATION

A. Introduction

FACILITY	Sappi North America, Inc.
LICENSE TYPE	06-096 C.M.R. ch. 115, Minor Revision
NAICS CODES	322121
NATURE OF BUSINESS	Pulp and Paper Mill
FACILITY LOCATION	1329 Waterville Road, U.S. Route 201 Skowhegan, Maine

B. NSR License Description

Sappi North America, Inc. (Sappi) has requested a minor revision to amend previous NSR Licenses to address and clarify the following:

- 1) Changes to 06-096 Code of Maine Regulations (C.M.R.) ch. 106 resulted in a lower sulfur content of in fuel oil imported, distributed or offered for sale in Maine. Fuel oil fired in No. 2 Power Boiler now meets the definition of a "very low sulfur fuel" as defined in 40 C.F.R. 60, Subpart Db, *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units*, (Subpart Db).

The Subpart Db SO₂ emission limits for No. 2 Power Boiler are as follows:

- a. 0.2 lb/MMBtu or
- b. 0.80 lb/MMBtu and 90% reduction of potential SO₂ emissions from fuel oil.

Presently, the No. 2 Power Boiler is licensed to meet an SO₂ emission standard of 0.27 lb/MMBtu and a 90% SO₂ reduction efficiency. Due to the reduction in sulfur

content of the fuels fired, Sappi has requested the No. 2 Power Boiler be licensed at an SO₂ emission rate of 0.20 lb/MMBtu instead of the 0.27 lb/MMBtu with no requirement for % SO₂ reduction efficiency. Because the % SO₂ reduction efficiency will no longer be calculated, monitoring of inlet SO₂ shall no longer be required. However, Sappi intends to continue operating this monitor as a scrubber diagnostic tool.

- 2) The repeal of 06-096 C.M.R. ch. 122, *Chlorine and Chlorine Dioxide Emission Standard*, became effective on October 16, 2011. This regulation limited bleach plant emissions to 3.0 lb/hr Cl₂ and 3.0 lb/hr ClO₂. These limits have since been carried forward in the Part 70 license under the authority 06-096 C.M.R. ch. 140, BPT. Bleach Plant emissions are also regulated through 40 C.F.R Part 63, Subpart § 63.445(c)(2) which requires bleaching systems to achieve a treatment outlet concentration of 10 parts per million or less by volume of total chlorinated hazardous air pollutants (HAP).

Since 06-096 C.M.R. ch. 122 has been repealed, and Subpart S contains bleach plant emissions limits for chlorinated HAP, Sappi has requested to convert to a concentration emission limit instead of the present mass flow rate emission limit.

C. Definitions

Distillate Fuel means the following:

- Fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials (ASTM) in ASTM D396;
- Diesel fuel oil numbers 1 or 2, as defined in ASTM D975;
- Kerosene, as defined in ASTM D3699;
- Biodiesel, as defined in ASTM D6751; or
- Biodiesel blends, as defined in ASTM D7467.

Very low sulfur oil means for units constructed, reconstructed, or modified on or before February 28, 2005, oil that contains no more than 0.5 weight percent sulfur or that, when combusted without SO₂ emission control, has a SO₂ emission rate equal to or less than 215 ng/J (0.5 lb/MMBtu) heat input. [40 C.F.R. § 60.41b]

D. Application Classification

The application submitted by Sappi does not violate any applicable federal or state requirements and does not reduce reporting, testing, or recordkeeping requirements. It does remove the requirement to determine No. 2 Power Boiler % SO₂ scrubber efficiency; however, the use of the outlet SO₂ emission limit of 0.20 lb/MMbtu is allowed as an option in Subpart Db and is expected to result in SO₂ emissions reductions.

The revisions proposed for testing of Bleach Plant emissions does not reduce the amount of monitoring or testing.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 C.M.R. ch. 100. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

B. No. 2 Power Boiler SO₂ Limit

Maine rule 06-096 C.M.R. ch. 106 *Low Sulfur Regulation* (Chapter 106) was amended on January 12, 2016. Sappi currently operates with only one No. 6 fuel oil storage tank and one distillate fuel oil storage tank. The No. 6 fuel oil tank supplies fuel to the No. 1 Power Boiler, No. 2 Power Boiler, Recovery Boiler, and Lime Kiln. The distillate fuel oil tank supplies fuel to the No. 2 Power Boiler, the Recovery Boiler, and the Package Boiler. Since neither the No. 1 Power Boiler nor the Package Boiler operate with a flue gas desulfurization system and no other fuel oil storage tanks are utilized for the boilers or Lime Kiln, Sappi fuel oil purchases are in compliance with the sulfur content limits of Chapter 106.

The No. 2 Power Boiler was constructed in 1989 and fires No. 6 fuel oil in combination with natural gas, biomass, tire derived fuel (TDF), distillate fuel oil and on-site generated waste water treatment plant sludge. The No. 2 Power Boiler Best Available Control Technology (BACT) emission limit for SO₂ was established as 0.27 lb/MMBtu on a 30-day rolling average basis (A-19-71-F-A, 8/23/1989).

As specified in EPA's 40 C.F.R. Part 60 Subpart 60.42b(a), NSPS SO₂ emission limits applicable to No. 2 Power Boiler are:

- 1) 0.20 lb/ MMBtu or
- 2) 0.80 lb/MMBtu and 90% reduction of the potential SO₂ emission from fuel oil.

EPA added the 0.20 lb/MMBtu standard to 40 C.F.R. Part 63 Subpart Db on 2/27/2006. As stated in 52 Federal Register 9866 dated 2/27/06, the 0.20 lb/MMBtu option was provided for existing units constructed or modified prior to February 28, 2005, in order to allow units with difficulty achieving high levels of SO₂ control to overcome compliance demonstration problems occurring when burning low sulfur fuels.

Therefore, Sappi has proposed replacing the 0.27 lb/MMBtu SO₂ emission limit and the 90% SO₂ scrubber removal efficiency requirement with the 0.20 lb/MMBtu SO₂ emission limitation a 30-day rolling average basis.

The Department approves the replacement of the 90% SO₂ scrubber efficiency and the 0.27 lb/MMBtu requirements with the 0.2 lb/MMBtu SO₂ emission limit on a 30-day rolling average basis.

C. Cl₂ and ClO₂ Limits

On October 16, 2011, 06-096 C.M.R. ch. 122, *Chlorine and Chlorine Dioxide Emission Standard* (Chapter 122), was repealed. This regulation established a 3.0 lb/hr chlorine and 3.0 lb/hr chlorine dioxide emission limit for bleach plants. Historically, Sappi has demonstrated compliance with the 3.0 lb/hr Cl₂ and ClO₂ emission limits through stack testing with non-detect results. However, recently the bleach plant scrubber outlet stack flow was found to be cyclonic and technically cannot be used to accurately calculate flue gas flow rate or mass flow rates of Cl₂ and ClO₂ as needed. Sappi is requesting to replace the 3.0 lb/hr Cl₂ and 3.0 lb/hr ClO₂ emission limits with an equivalent concentration-based limit. Using historic gas flows, the proposed chlorine and chlorine dioxide limit of 9 ppm would result in a limit equivalent to the 3.0 lb/hr based on the bleach plant's average flow rate. It is also more stringent than the 10-ppm limit for total chlorinated HAP contained 40 C.F.R. part 63, Subpart S.

The Department approves the use of the Bleach Plant treatment outlet concentration of 9 ppm or less by dry volume of chlorine and 9 ppm or less by dry volume of chlorine dioxide.

D. Incorporation Into the Part 70 Air Emission License

Per *Part 70 Air Emission License Regulations*, 06-096 C.M.R. ch. 140 § 1(C)(8), for a modification at the facility that has undergone NSR requirements or been processed through 06-096 C.M.R. ch. 115, the source must apply for an amendment to their Part 70 license within one year of commencing the proposed operations, as provided in 40 C.F.R. Part 70.5. An application to incorporate the requirements of this NSR license into the Part 70 air emission license has been submitted to the Department.

E. Annual Emissions

Total annual emission shall not change because of this licensing action.

ORDER

The Department hereby grants New Source Review Minor Revision A-19-77-13-M pursuant to the preconstruction licensing requirements of 06-096 C.M.R. ch. 115 and subject to the specific conditions below.

Severability. The invalidity or unenforceability of any provision of this License Amendment or part thereof shall not affect the remainder of the provision or any other provisions. This License Amendment shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

SPECIFIC CONDITIONS

The following shall replace Condition (aa) 2) in A-19-71-K-A (3/25/94) and A-19-71-F-A (8/23/89)

- (aa) No. 2 Power Boiler
- 2) As provided in 40 C.F.R. § 60.42b(a), SO₂ emissions shall not exceed 0.2 lb/MMBtu on a 30-day rolling average basis. To demonstrate compliance, Sappi shall monitor SO₂ emissions on the outlet of the SO₂ Wet Scrubber with a continuous emissions monitoring system.

The following shall replace Condition (1) in A-19-71-Z-A (5/27/97)

- (1) Sappi Bleach Plant shall:
- a. Achieve a treatment outlet concentration of 9 parts per million or less by dry volume of chlorine.
- b. Achieve a treatment outlet concentration of 9 parts per million or less by dry volume of chlorine dioxide.

DONE AND DATED IN AUGUSTA, MAINE THIS 24th DAY OF February, 2020.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: 

GERALD D. REID, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 9/25/2019

Date of application acceptance: 9/27/2019

Date filed with the Board of Environmental Protection:

This Order prepared by Lisa P. Higgins, Bureau of Air Quality.

