DEPARTMENT ORDER

Sappi North America, Inc.
Somerset Operations
Somerset County
Skowhegan, Maine
A-19-77-14-A

Departmental
Findings of Fact and Order
New Source Review
NSR #14

FINDINGS OF FACT

After review of the air emission license 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 Modification
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) owns and operates an integrated kraft pulp and paper mill located in Skowhegan, Maine (the Mill). Currently, the Mill produces bleached kraft pulp, which is used to produce coated papers on paper machines #1, #2, and #3. Paper Machine #1 was rebuilt in 2017 to produce higher basis weight paper products and, as part of the project, a new size press, new on-machine coating and sizing dryers, and new natural gas-fired dryers were added. Sappi is proposing to re-rate the maximum allowable working pressure rating of the existing steam-heated dryer cans on Paper Machine #1. Although the Department has no authority regarding the pressure rating of steam vessels, if Sappi is successful in obtaining approvals from the appropriate authority to increase the pressure rating of their steam-heated dryer cans, this will allow the Mill to increase production of fine coated paper and bleached board paper from this machine, which is addressed in this licensing action.

C. Project Description

The Mill is an integrated bleach kraft pulp and paper mill producing market bleached kraft pulp, coated fine paper, and bleached board. The purpose of this application is to upgrade Paper Machine #1 equipment to increase fine paper and bleached board production. Specifically, the proposed upgrade includes re-rating between 34 and 38 of the existing Paper Machine #1 steam-heated dryer cans and swapping out 4 existing steam-heated dryer cans with spare dryer cans meeting the desired rating. The upgrade is currently planned for Spring 2022.

D. Application Classification

All rules, regulations, or statutes referenced in this air emission license refer to the amended version in effect as of the issued date of this license.

The application does not violate any applicable federal or state requirements and does not reduce monitoring, reporting, testing, or recordkeeping requirements. However, this application does seek to modify a Best Available Control Technology (BACT) analysis performed in accordance with New Source Review.

The modification of a major source is considered a major or minor modification based on whether or not expected emissions increases exceed the "Significant Emission Increase" levels as given in *Definitions Regulation*, 06-096 Code of Maine Rules (C.M.R.) ch. 100. For a major stationary source, the expected emissions increase from each new, modified, or affected unit may be calculated as equal to the difference between the post-modification projected actual emissions and the baseline actual emissions for each NSR regulated pollutant.

1. Baseline Actual Emissions

Baseline actual emissions (BAE) are equal to the average annual emissions from any consecutive 24-month period within the ten years prior to submittal of a complete license application. Sappi has indicated the 24-month baseline period from which to determine baseline actual emissions for all pollutants for emission units affected as part of this project in the table below.

BAE for existing modified and affected equipment are based on actual annual emissions reported to the Department through *Emissions Statements*, 06-096 C.M.R. ch. 137 with the following exception:

Emissions of PM_{10} and $PM_{2.5}$ reported to the annual emissions inventory report are for the filterable portion only. BAE of PM_{10} and $PM_{2.5}$ in the table below were adjusted to include emissions of condensable particulate matter (CPM).

Baseline Actual Emissions

Pollutant	PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)	SO_2 (tpy)	NO_x (tpy)	CO (tpy)	VOC (tpy)
Baseline Period	**2013-2014**	**2013-2014**	**2013-2014**	**2018-2019**	**2014-2015**	**2014-2015**	**2017-2018**
Paper Machine #1	6.6	14.8	14.8	0.0	0.0	0.0	33.7
Paper Machine #1 Natural Gas Dryers	0.0	0.0	0.0	0.1	0.0	0.0	0.3
Power Boiler #1	98.4	140.8	75.8	730.7	624.3	688.8	2.7
Power Boiler #2	48.7	81.8	81.1	7.2	504.4	612.5	0.3
Total	**153.7**	**237.4**	**171.7**	**738.0**	**1,128.7**	**1,301.3**	**37.0**

2. Projected Actual Emissions

Project Actual Emissions (PAE) was based on the following assumptions: steam demand from Power Boilers #1 and # 2 is projected to increase by 1.8 percent per year over current levels and Paper Machine #1 production, sizing dryer natural gas use, and coating dryer natural gas use are projected to increase by 10 percent over current levels. These assumptions have been incorporated into the projected actual emissions.

The projected actual emissions (PAE) are calculated from the emissions from the affected or modified units. Those emissions are presented in the following table.

Projected Actual Emissions

Equipment	PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)	SO_2 (tpy)	NO_x (tpy)	CO (tpy)	VOC (tpy)
Paper Machine #1	8.5	20.5	19.0	0.0	0.0	0.0	65.6
Paper Machine #1 Natural Gas Dryers	0.2	1.0	1.0	0.1	9.7	10.3	0.7
Power Boiler #1	97.6	139.7	75.2	734.2	682.8	765.2	2.8
Power Boiler #2	45.0	67.1	66.7	18.4	459.3	553.3	0.3
Total	**151.3**	**228.3**	**161.9**	**752.7**	**1,151.8**	**1,328.8**	**69.4**

Note: PM_{10} and $PM_{2.5}$ emissions are higher than PM emissions due to condensable particulate matter being included in the definitions of PM_{10} and $PM_{2.5}$ but not in the definition of PM.

3. Emissions Increases

Emissions increases are calculated by subtracting BAE from the PAE. The emissions increases are then compared to the significant emissions increase levels.

Pollutant	Baseline Actual Emissions (ton/year)	Projected Actual Emissions (ton/year)	Net Emissions Increase (ton/year)	Significant Emissions Increase Levels (ton/year)
PM	153.7	151.3	-2.4	25
PM_{10}	237.4	228.3	-9.1	15
$PM_{2.5}$	171.7	161.9	-9.8	10
SO_2	738.0	752.7	+14.7	40
NO_x	1,128.7	1,151.8	+23.1	40
CO	1,301.3	1,328.8	+27.5	100
VOC	37.0	69.4	+32.4	40

Projected Actual Emission assumptions and comments:

a. The natural gas dryers began operating in mid-2018.

b. Power Boiler #1 PM_{10} and $PM_{2.5}$ emission factors are from a June 2013 stack test and engineering study (0.065 lb/MMBtu and 0.035 lb/MMBtu, respectively). The PM_{10} and $PM_{2.5}$ emission factors included filterable and condensable fractions. These were used as they are the most recent site-specific emission factors available. The PM (filterable only) emission factor is from a November 2019 stack test (0.045 lb/MMBtu). These results are the most recent and are at typical operating load and are considered the most representative of current and future operating scenarios with regard to fuel mix and load.

c. Power Boiler #2 was tested for Total PM (filterable and condensable) during the same June 2013 study, but not for PM_{10} or $PM_{2.5}$ The calculations for PM_{10} and $PM_{2.5}$ conservatively use the June 2013 Total PM test results for fuels fired during the test; biomass, Tire Derived Fuel (TDF), and sludge. PM_{10} and $PM_{2.5}$ emission factors from AP-42 were used for natural gas and fuel oil firing.

d. There is a small decrease in Power Boiler #1 PM emissions based on a slight decrease in anticipated fuel firing from baseline to projected actual.

e. It is anticipated that Power Boiler #2 will increase natural gas firing which will result in most of the pollutants emissions decreasing when comparing baseline to projected.

f. Recent trends in SO_2 emissions measured by a continuous emission monitors indicated an increase in SO_2 emission possibly driven by an increased firing of TDF compared to the baseline years.

4. Classification

Since emissions increases are not projected to exceed significant emissions increase levels, this NSR license is determined to be a minor modification under *Minor and Major Source Air Emission License Regulations,* 06-096 C.M.R. ch. 115. An application to incorporate the requirements of this NSR license into the Part 70 air emission license shall be submitted no later than 12 months from commencement of operations associated with the Paper Machine #1 following completion of the project to re-rate the Paper Machine #1 steam-heated dryer cans.

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.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in 06-096 C.M.R. ch. 100. BACT is a top-down approach to selecting air emission controls considering economic, environmental, and energy impacts.

B. Project Details

Paper and board produced on Paper Machine #1 is dried through direct contact of the product with the hot surfaces of paper drying cylinders, also known as “dryer cans”. These dryer cans are heated with pressurized steam supplied by Power Boilers #1 and #2, which condenses inside the dryer cylinders as it transfers heat to the dryer shell. The steam inside the dryer can is saturated; therefore, the steam temperature is directly related to the steam pressure. As the steam pressure is increased, the steam temperature also increases, which leads to an increase in the dryer can surface temperature, thereby improving the drying rate of the paper machine.

Dryer cans are designed and manufactured to meet pressure vessel codes, the most common of which is the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code. These codes dictate the maximum allowable working pressure of the dryer cans, which is dependent on shell thickness and material.

Production on Paper Machine #1 is currently limited by the drying rate of the machine. Steam dryer groups Nos. 4, 5, and 6 contain a total of 38 steam-heated drying cans, each with a nameplate maximum allowable working pressure rating of 75 pounds per square inch (psi) as established by the ASME Boiler and Pressure Vessel Code. Based on the dryer can shell material and wall thickness of each dryer can, Sappi has determined that the dryer cans could be re-rated to safely accommodate a maximum allowable working pressure of 85 psi, which would allow Sappi to increase the amount of heat delivered to the paper machine steam-heated dryer cans, which would result in the ability to increase paper production from Paper Machine #1.

Sappi is proposing to re-rate, through third-party certification, these existing Paper Machine #1 steam-heated dryer cans to allow for an increased maximum steam pressure within each can. The re-rating process does not physically alter the drying cans, but involves rigorous inspections, tests, insurance authorizations and, finally, stamping of the dryer can with the new maximum allowable working pressure rating. If existing dryer cans cannot meet the required specifications, Sappi will replace those dryer cans with on-site spares that meet the required specifications. Following installation of the re-rated and replaced dryer cans, Sappi anticipates that paper and board production on Paper Machine #1 will increase by approximately 10 percent over current production levels. The additional fiber needed to supply Paper Machine #1 to achieve higher levels of production will not be produced by the Sappi kraft pulp mill but will instead be purchased market pulp. Therefore, the kraft pulp mill emission units located at the Mill will not be affected by this project.

To fully utilize the higher maximum allowable working pressure of the dryer cans and derive thermal benefits from this project, additional steam lines will be constructed from Power Boilers #1 and #2 to the Paper Machine #1 steam header. Paper Machine #1 steam demand is expected to increase by approximately 15.1 thousand pounds per hour (kpph) following implementation of this project. Because Power Boilers #1 and #2 will experience increased utilization due to this project, they are considered affected units, but are not considered modified units because they will not undergo a physical or operational change.

In addition, the natural gas-fired coating and sizing dryers are expected to increase natural gas firing by 10 percent in proportion with the anticipated production increases on Paper Machine #1 and are also considered affected units.

The following is a summary of the BACT determination for Paper Machine #1, by pollutant (PM, PM_{10}, $PM_{2.5}$, and VOC).

1. Particulate Matter (PM, PM_{10}, $PM_{2.5}$)

   Emissions of PM, PM_{10}, and $PM_{2.5}$ are generated in small quantities from paper machines as particulate dust is freed from the paper web as it passes through the machine. The building containing Paper Machine #1 has multiple venting points to the atmosphere along the former, press, drying, coating, and winding sections of the machine. Paper machines are not permanently enclosed structures so particulate dust is considered to be emitted fugitively within the paper machine building and in very low concentrations from building vents located above the paper machine.

   Potential control technologies for PM emissions from Paper Machine #1 include add-on control equipment such as fabric filters, electrostatic precipitators (ESP), cyclones, and wet scrubbers, and good operating and housekeeping practices. The following is a review of these technologies:

   a. Fabric Filters
      Fabric filters, which are commonly referred to as baghouses, use fabric filter media to remove filterable PM from the exhaust gases of appropriately suited air emission sources. Baghouses can achieve filterable PM removal efficiencies greater than 99 percent; however, due to the high moisture loading of the paper machine exhaust and ventilation streams, the performance of the filtering media would be adversely affected and could contribute to material failures due to plugging and corrosion. For these reasons, baghouses are not considered technically feasible for this application.

   b. Wet ESP
      An ESP removes filterable PM from a gas stream through the use of electric fields. The incoming exhaust gas is ionized, which negatively charges the filterable PM and causes it to be attracted to and collected on positively charged plates. In wet ESPs, the plates are either intermittently or continuously washed with a spray of liquid, usually water, and the wet effluent is then collected, treated, or otherwise disposed of. Wet ESPs are used when the material to be collected is wet and can result in PM, PM_{10} and $PM_{2.5}$ removal efficiencies greater than 99%. Paper machine vents have a high moisture content but operate at lower flow rates than typical ESP applications. In addition, ESPs are difficult to install in sites with limited space since ESPs must be relatively large to obtain the low gas velocities necessary for efficient PM collection. The relatively large space requirements of an ESP results in high capital costs. While a wet ESP is a technically feasible option for controlling PM from Paper Machine #1, it is not economically feasible due to the high capital costs and low concentration of particulate loading in paper machine

vents. None of the paper machines identified in the RACT/BACT/LAER Clearinghouse (RBLC) employed the use of wet ESPs to control PM emissions.

c. High Efficiency Venturi Scrubber
Venturi scrubbers remove PM, including PM_{10} and $PM_{2.5}$, from gas streams through impaction and inertial and diffusional interception. In a venturi scrubber, a throat section is built into the duct that forces the gas stream to accelerate as the duct narrows and then expands. As the gas enters the venturi throat, both gas velocity and turbulence increase. Depending on the scrubber design, a scrubbing liquid (typically water) is sprayed countercurrent to the exhaust gas stream. Contact between the larger scrubbing liquid droplets and the suspended particulate removes the PM from the gas stream and collection efficiencies greater than 99 percent are achieved for PM as small as 0.05 microns. However, due to the pressure drop across the venturi throat that enables this control equipment to achieve high PM reduction efficiencies, the operating costs are high. The capital cost needed to duct each paper machine emission vent to a scrubber is also prohibitively expensive. Given the high annualized costs associated with this equipment and the minimal emission reductions achieved due to the relatively low particulate emissions present in the first place, this technology is economically unjustifiable. The only paper machines identified in the RBLC that employ the use of wet scrubbers for PM control are tissue machines that generate much higher levels of PM than paper machines due to the release of the paper web produced by large Yankee dryers via a doctor blade. Paper machines do not employ these process components.

d. Multicyclones
Multicyclones use centrifugal force to separate particles from a gas stream within a conical chamber. The incoming gas is forced into circular motion down the cyclone near the inner surface of the cyclone tube. At the bottom of the cyclone, the gas turns and spirals up through the center of the tube and out of the top of the cyclone. Particles in the gas stream are forced toward the cyclone walls by the centrifugal force of the spinning gas, but are opposed by the fluid drag of the gas traveling through and out the cyclone; however, some smaller particles may escape with the gas stream. Cyclones are best suited for removal of larger particulate with collection efficiencies less than 40 percent for $PM_{2.5}$. The capital and operating costs for multicyclones are lower than that of venturi scrubbers and wet ESPs; however, the cost to duct each paper machine room vent to a multicyclone is prohibitively expensive. This is especially true given the relatively low levels of PM emissions that would be controlled by this device. Given the high costs associated with this equipment and the minimal emission reductions achieved, this technology is economically unjustifiable. The only paper machines identified in the RBLC that employed the use of multicyclones for PM control were tissue machines which generate much higher levels of PM than paper machines due to the release

of the paper web from large Yankee dryers via a doctor blade. Paper machines do not employ these process components.

e. Good Operating and Housekeeping Practices
Good operating and housekeeping practices include operating the paper machine according to the manufacturer's recommendations and conducting preventative maintenance on the machine. Sappi currently operates Paper Machine #1 according to the manufacturer's recommendations and will continue to conduct preventative maintenance activities on this machine following completion of this project.

Selection of BACT: Sappi proposes that operating Paper Machine #1 in accordance with good operating and housekeeping practices represents BACT for PM, PM_{10}, and $PM_{2.5}$. Sappi will limit PM, PM_{10}, and $PM_{2.5}$ emissions from Paper Machine #1 to 0.04 lb/ADT, 0.09 lb/ADT, and 0.09 lb/ADT, respectively, based on the National Council for Air and Stream Improvement (NCASI) emission factor for all paper production types published in NCASI Technical Bulletin 942.

The Department finds using good operating and housekeeping practices to be BACT for PM emissions from Paper Machine #1. PM, PM_{10}, and $PM_{2.5}$ emissions from Paper Machine #1 shall be quantified as part of the annual inventory required by 06-096 C.M.R. ch. 137, *Emission Statements.*

2. Volatile Organic Compounds (VOC)

Emissions of VOC from paper machines can be attributed to many different sources. Small amounts of VOC are present in the water carrying the pulp to the paper machines and dryers and can be released as the water is removed from the sheet. The most often detected compound is methanol, a byproduct of chemical and mechanical pulping and bleaching processes. VOC are also present in papermaking additives (defoamers, slimicides, retention aids, wet strength agents, wire and felt cleaners, etc.) and can be released in the papermaking process.

Potential control technologies for VOC emissions from Paper Machine #1 include Activated Carbon Adsorption, Biofiltration, Thermal Oxidation, and use of low VOC coatings and additives. The following is a review of these technologies:

a. Activated Carbon Adsorption
Adsorption is a phenomenon where VOC migrates from a gas stream and adsorbs to the surface of the solid, usually activated carbon. When the solid surface has adsorbed as much as it can, the VOC is desorbed as part of an adsorbent regeneration process. When desorbed, the VOC vapors are usually at a high enough concentration such that the VOC can be recovered or thermally destroyed in an incinerator or other combustion unit. While carbon adsorption is commonly used

to treat high volume, low concentration VOC gas streams, there are no known applications on a paper machine. Paper machine exhaust gases contain particulate dust that could impede the adsorption of VOC on the activated carbon bed resulting in reduced concentration/collection efficiencies and increasing the frequency of regeneration, which is an energy intensive operation. Applying PM control prior to implementing a carbon adsorption technology would reduce particulate dust in the gas stream, but as described in the previous section, installing such PM controls would be cost prohibitive. For these reasons, carbon adsorption is not considered a technically feasible control technology.

b. Biofiltration

Biofiltration is a VOC removal method that uses microorganisms to remove VOC from a gas stream. A traditional biofiltration system typically includes a fixed-bed reactor where microorganisms are immobilized onto inter-packing bed materials to develop biofilms. The gas stream to be treated is fed through the bottom of the biologically active media where organic pollutants are metabolized by microbes into carbon dioxide and water. Biofiltration offers advantages over other VOC control methods in that operating and capital costs are lower since the destruction of VOC occurs at ambient temperatures rather than the higher temperatures required for oxidation and incineration. However, traditional designs require a large footprint, which is not available at the location of Paper Machine #1. In addition, the microbes in the bioreactor are sensitive to temperature with the optimal temperature range for VOC metabolization being between 85and 105 degrees Fahrenheit. Exhaust gases from paper machines are typically higher than 105 degrees Fahrenheit and would kill the microbes in the filter media. Cooling of the exhaust gases prior to treatment in a biofiltration system would require large heat exchangers and/or large amounts of dilution air. The performance of the biofilter media could also be affected by the particulate loading of the paper machine exhaust gas streams. For these reasons, biofiltration is not considered a technically feasible control technology for this application.

c. Thermal Oxidation

Thermal oxidation is a control technology that could be used to reduce VOC in the paper machine exhaust gases. Different thermal oxidation technologies include catalytic oxidation, regenerative and recuperative thermal oxidation, and direct thermal oxidation. The use of a thermal oxidizer of any type would require collection of a large volume of exhaust gases having very low VOC concentration from various locations, which would lead to prohibitively expensive capital costs. Catalytic oxidation is considered technically infeasible due to the high moisture content in the paper machine exhaust gases that would foul and poison the catalyst. Direct thermal oxidation with no heat recovery would result in exorbitant fuel costs given the high exhaust gas volumetric flow rate and low VOC concentrations from the paper machine and would also contribute additional emissions of combustion pollutants. The use of a regenerative thermal oxidizer (RTO), which preheats the entering gas stream from a ceramic-packed bed still hot from a previous gas stream treatment cycle, requires less fuel than direct-fired methods, but is costly and difficult to install and would be highly maintenance intensive. No paper machines have been identified in the control technology review that use an RTO to control emissions of VOC. These technologies are, therefore, considered to be technically infeasible.

d. Use of Low VOC Coatings and Additives

The use of lower VOC coatings and additives is a technically feasible option for controlling emissions of VOC from paper machines. In fact, all the paper machines listed in the RBLC with BACT limits for VOC controlled emissions using this practice, either with or without corresponding numerical VOC emission limits. The control technology review identified a wide range of VOC emission limits from paper machines ranging from 0.51 lb/ton (Georgia Pacific – Brewton Mill) to 1.0 lb/air dried ton finished product (Woodland Pulp).

Because there are no add-on control technologies that are economically and technically justifiable to control emissions of VOC from Paper Machine #1, Sappi proposes to use low VOC coatings and additives where possible to limit annual VOC emissions to 65.6 tons per year, which is equivalent to 0.31 lb/finished ton at projected actual production levels and is consistent with VOC BACT emission limits established for other paper machines.

VOC emissions will be estimated based on actual chemical use assuming that 100 percent of VOC is volatilized. This is a highly conservative approach to estimating VOC emissions from paper machines since many paper machine additives will react with the web substrate limiting actual VOC emissions to the unreacted portion of VOC only. In addition, some of the VOC retained in the white water recycle loop may be volatilized by the wastewater treatment plant, and some of the VOC will oxidize in the drying sections of the machine where the paper web is exposed to higher temperatures.

The Department finds that use of low VOC coatings and additives where possible and an annual VOC emissions limit of 65.6 tons per year from Paper Machine #1 (which is equivalent to 0.31 lb/finished ton at projected actual production levels) is BACT for VOC emissions from Paper Machine #1.

3. Periodic Monitoring

   a. Future Project Emissions Reporting

      (1) Sappi shall monitor, calculate, and maintain a record of the annual emissions, in tons per year on a calendar year basis, of NO_x and VOC for all emission units that are part of the Paper Machine #1 dryer can upgrade (modified or affected) including emissions from Paper Machine #1, Paper Machine #1 Natural Gas Dryers, Power Boiler #1 and Power Boiler #2. Sappi shall monitor, calculate, and maintain a record of the annual emissions for a period of 10 years following the resumption of regular operations after the change.
      [40 C.F.R. § 52.21(r)(6)]

      (2) If the annual emissions, in tons per year, from the project exceed the baseline actual emissions, excluding any emission increase unrelated to the project and due to demand growth, for any of these pollutants by an amount equal to or greater than the significant emissions increase level for that pollutant as identified above, Sappi shall submit a report to the Department and EPA within 60 days after the end of the calendar year which contains the following:

         (i) The facility name, address, and phone number;
         (ii) The annual emissions for the project; and
         (iii) Any other information that the facility wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).
         [40 C.F.R. § 52.21(r)(6)(v)]

   b. Sappi shall maintain records of production and additives and coating used in the paper or substrate formation associated with Paper Machine #1. Annual production, PM, PM_{10}, and $PM_{2.5}$ and VOC emissions based on site specific and industry emission factors are to be reported in the annual emissions reporting required in 06-096 C.M.R. ch. 137, *Emission Statements* and in Specific Condition (46) of Air Emission License A-19-70-E-R/A (issued 4/9/2021).

C. <u>Incorporation Into the Part 70 Air Emission License</u>

Pursuant to *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.

D. Annual Emissions

The following ton/year totals are calculated from those emission limits which have been identified in this license and are used only to calculate the annual license fee. This table has been updated to include emissions from Paper Machine #1.

Please note the following:

- PM_{10} and CO are not used in calculating the annual fee but are included for completeness.
- TPY emissions do not include emission units (e.g., woodyard, paper machines) which have no license emissions limits.
- VOC lb/hr limits, lb/MMBtu limits, and VOC TPY emissions listed in this license are based on VOC emissions reported as carbon by EPA Method 25A.

This information provides the basis for fee calculation only and should not be construed to represent a comprehensive list of license restrictions or permissions. That information is provided in the Order section of this license.

Total Licensed Annual Emissions for the Facility
Tons/year
(used to calculate the annual license fee)

	PM	**PM_{10}(1)**	**SO_2**	**NO_x**	**CO**	**VOC**
Package Boiler	0.5	0.5	0.6	4.5	1.2	0.1
Power Boiler #1	963.6	963.6	3,258.7	1,309.6	9,942.6	60.0
Power Boiler #2	170.8	170.8	1,537.4	1,138.8	2,277.6	39.9
Recovery Boiler	906.7	906.7	8,650.5	3,285.0	13,634.9	65.7
Smelt Dissolving Tanks #1 & #2	113.9	--	113.9	--	--	--
Lime Kiln	254.0	306.6	100.0	254.0	254.0	43.8
No.2 Power Boiler Scrubber Diesel	0.1	0.1	0.1	1.8	1.1	0.1
Emergency Diesel #1, #2, and #3 and Lime Kiln Diesel	0.3	0.3	0.1	11.6	2.5	0.9
Paper Machine (2) #1	8.5	20.5	0	0	0	65.6
Paper Machine #1 Natural Gas Dryers	0.7	2.8	0.4	27.6	29.3	2.0
Total TPY	**2,419.1**	**2,371.9**	**13,661.7**	**6,032.9**	**26,143.2**	**278.1**

Note (1): The PM_{10} numbers are based on filterable particulate matter only and do not include condensables, except for the Lime Kiln, Paper Machine #1, and Paper Machine #1 Natural Gas Dryers.

Note (2): Totals were updated to include PM and VOC emissions from Paper Machine #1 which were licensed and quantified as part of this project.

III. AMBIENT AIR QUALITY ANALYSIS

Sappi previously submitted an ambient air quality analysis demonstrating that emissions from the facility, in conjunction with all other sources, do not violate ambient air quality standards. A summary of that analysis is included in air emission license A-19-77-2-A dated June 2, 2008. This project does not result in an emissions increase requiring modeling. Therefore, an additional ambient air quality analysis is not required for this NSR license.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants New Source Review License A-19-77-14-A 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 or part thereof shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

SPECIFIC CONDITIONS

(1) Sappi is licensed to replace, upgrade, and/or re-rate the dryer cans on Paper Machine #1 as described in the application and the findings of fact of this NSR license and associated equipment affected by this upgrade.

(2) The requirements in this 06-096 C.M.R. ch. 115 New Source Review license shall apply to the facility upon startup of Paper Machine #1 following the completion of the process to re-rate and/or replace the existing steam-heated dryer cans to increase the production capacity of Paper Machine #1.

(3) **Future Project Emissions Reporting**

A. Sappi shall monitor, calculate, and maintain a record of the annual emissions, in tons per year on a calendar year basis, of NO_x and VOC for all emission units that are part of the Paper Machine #1 dryer can upgrade (modified or affected) including emissions from Paper Machine #1, Paper Machine #1 Natural Gas Dryers, Power Boiler #1 and Power Boiler #2. Sappi shall monitor, calculate, and maintain a record of the annual emissions for a period of 10 years following the resumption of regular operations after the change.
[40 C.F.R. § 52.21(r)(6)]

B. If the annual emissions, in tons per year, from the project exceed the baseline actual emissions, excluding any emission increase unrelated to the project and due to demand growth, for any of these pollutants by an amount equal to or greater than the significant emissions increase level for any pollutant, Sappi shall submit a report to the Department and EPA within 60 days after the end of the calendar year which contains the following:

1. The facility name, address, and phone number;
2. The annual emissions for the project; and
3. Any other information that the facility wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).

[40 C.F.R. § 52.21(r)(6)(v)]

(4) Sappi shall maintain records of production and additives and coating used in the paper or substrate formation associated with Paper Machine #1. Annual production, PM, PM_{10}, and VOC emissions based on site specific and industry emission factors are to be reported in the annual emissions reporting required by 06-096 C.M.R. ch. 137, *Emission Statements*.

(5) Sappi shall be limited to annual VOC emissions of 65.6 tons per year, on a calendar year basis, from Paper Machine #1.

(6) Sappi shall submit an application to incorporate this NSR license into the facility's Part 70 air emission license no later than 12 months from commencement of the requested operation. [06-096 C.M.R. ch. 140 § 1(C)(8)]

DONE AND DATED IN AUGUSTA, MAINE THIS 4th DAY OF February 2022.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: ______________________ for

MELANIE LOYZIM, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: October 29, 2021
Date of application acceptance: November 3, 2021

Date filed with the Board of Environmental Protection:

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

FILED

FEB 04, 2022

State of Maine
Board of Environmental Protection