STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

Sappi North America, Inc. **Cumberland County** **Westbrook, Maine** **A-29-77-8-A**	**Departmental** **Findings of Fact and Order** **New Source Review** **NSR #8**

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	322220
NATURE OF BUSINESS	Coated Paper Manufacturing
FACILITY LOCATION	89 Cumberland Street, Westbrook, Maine

B. NSR License Description

Sappi North America, Inc. (Sappi) has requested a New Source Review (NSR) license to address both the temporary and permanent replacement engines for a failed emergency engine needed for back-up power to critical telecommunication equipment at the site.

C. Emission Equipment

The following new equipment is addressed in this NSR license:

Engines

Equipment	Max. Heat Input Capacity (MMBtu/hr)	Output (BHP)	Fuel Type	Mfr. Date	Install. Date
Temp Engine #5	0.65	89.6	distillate fuel	2014	12/2021
Engine #6	0.80	84.7	propane	TBD*	2024

* Engine #6 will be either a model year 2023 or 2024.

The following equipment is being removed from the site:

Generators/Engines

Equipment	Max. Heat Input Capacity (MMBtu/hr)	Fuel Type	Mfr. Date	Install. Date
Engine #5	2.09	propane	2004	2005

D. 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.

Records or *Logs* mean either hardcopy or electronic records.

E. Project Description

The previously licensed Engine #5 was an emergency engine associated with a generator used to provide back-up power to critical telecommunications equipment at the site. Engine #5 failed in December 2021. With the Department's approval, Sappi began operating Temporary Engine #5 as a temporary insignificant activity until the permanent replacement engine (Engine #6) could be installed.

Due to supply chain delays, Engine #6 is not expected to be installed until mid-2024, and continued supply chain problems may extend this estimate. Therefore, Sappi proposes to license both Engine #6 and Temporary Engine #5 until such time as Engine #6 can be installed.

F. 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 for Sappi does not violate any applicable federal or state requirements and does not reduce monitoring, reporting, testing, or recordkeeping requirements.

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) for existing affected emission units 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. The selected 24-month baseline period can differ on a pollutant-by-pollutant basis. Although BAE are available for Engine #5, the values are so small as to be negligible. Therefore, BAE has been assumed to be zero for all pollutants.

2. Projected Actual Emissions

   New emission units must use potential to emit (PTE) emissions for projected actual emissions (PAE). 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)
Temporary Engine #5	–	–	–	–	0.1	0.1	–
Engine #6	–	–	–	–	0.1	0.1	–
Total	**–**	**–**	**–**	**–**	**0.2**	**0.2**	**–**

Note, PAE have been conservatively estimated to include emissions from both Temporary Engine #5 and Engine #6. However, Temporary Engine #5 is expected to be shut down and removed from the site when Engine #6 comes online.

3. Emissions Increases

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

Pollutant	Baseline Actual Emissions (ton/year)	Projected Actual Emissions (ton/year)	Emissions Increase (ton/year)	Significant Emissions Increase Levels (ton/year)
PM	0	–	–	25
PM_{10}	0	–	–	15
$PM_{2.5}$	0	–	–	10
SO_2	0	–	–	40
NO_x	0	0.2	0.2	40
CO	0	0.2	0.2	100
VOC	0	–	–	40

4. Classification

Since emissions increases do not 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.

This NSR license is not licensing a new major stationary source of an NSR pollutant that is not greenhouse gases (GHG) nor is it authorizing a major modification for an NSR pollutant to an existing major stationary source. Therefore, greenhouse gases are not considered subject to regulation in this license pursuant to 40 C.F.R. §§ 51.166(b)(48)(iii - iv).

Sappi has submitted an application to incorporate the requirements of this NSR license into the facility's Part 70 air emission license.

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. Temporary Engine #5

Sappi proposes to operate Temporary Engine #5 until installation of Engine #6 is complete. Temporary Engine #5 is part of a generator set which provides emergency back-up power to telecommunications systems at the site. Temporary Engine #5 is rated at 0.65 MMBtu/hr firing distillate fuel. It was manufactured in 2014.

BACT Findings

Temporary Engine #5 is a small distillate fuel-fired emergency engine certified by the manufacturer as meeting interim Tier 4 emission standards pursuant to 40 C.F.R. Part 60, Subpart IIII. Due to its size, use as an emergency engine, and temporary nature, the Department does not consider additional add-on controls feasible.

The BACT emission limits for Temporary Engine #5 are based on the following:

$PM/PM_{10}/PM_{2.5}$	–	0.31 b/MMBtu from AP-42 Table 3.3-1 dated 10/96
SO_2	–	Combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO_x	–	4.41 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
CO	–	0.95 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
VOC	–	0.36 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
Visible Emissions	–	06-096 C.M.R. ch. 115, BACT

The BACT for Temporary Engine #5 are the emission limits listed below.

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Temporary Engine #5	0.20	0.20	0.20	–	2.87	0.62	0.23

Visible emissions from Temporary Engine #5 shall not exceed 20% opacity on a six-minute block average basis.

C. Engine #6

Sappi proposes to install and operate Engine #6 as part of a generator set which provides emergency back-up power to telecommunications systems at the site. Engine #6 is rated at 0.80 MMBtu/hr firing propane. It will be a new engine with a model year of 2023 or 2024.

BACT Findings

Engine #6 is a small propane-fired emergency engine certified by the manufacturer as meeting the emission standards for new nonroad spark ignition engines found in 40 C.F.R. Part 60, Subpart JJJJ, Table 1. Due to its size, use as an emergency engine, and firing of a clean fuel (propane), the Department does not consider additional add-on controls feasible.

The BACT emission limits for Engine #6 are based on the following:

$PM/PM_{10}/PM_{2.5}$	–	0.12 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
SO_2	–	Emissions of SO_2 for this emissions unit are considered negligible based on the use of propane as a fuel
NO_x	–	7.3 g/hp-hr based on manufacturer's data
CO	–	0.557 lb/MMBtu from AP-42 Table 3.2-2 dated 7/00
VOC	–	0.118 lb/MMBtu from AP-42 Table 3.2-2 dated 7/00
Visible Emissions	–	06-096 C.M.R. ch. 115, BACT

The BACT for Engine #6 are the emission limits listed below.

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Engine #6	0.10	0.10	0.10	–	1.36	0.45	0.09

Visible emissions from Engine #6 shall not exceed 10% opacity on a six-minute block average basis.

D. Incorporation Into the Part 70 Air Emission License

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. 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

The table below provides an estimate of facility-wide annual emissions for the purposes of calculating the facility's annual air license fee and establishing the facility's potential to emit (PTE). Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, unquantifiable fugitive particulate matter emissions are not included except when required by state or federal regulations. Maximum potential emissions were calculated based on the following assumptions:

- Operation of Boiler #21 at 100% for 8,760 hr/yr for all pollutants except SO_2;
- An annual emission limit of 3,763.0 tpy for SO_2 for Boiler #21 as established in A-29-71-AG-M;
- Unlimited operation of Boilers #22 and #23 and MAU #1;
- A 10% annual capacity factor for the Technology Center Boiler;
- Operating each generator engine for 100 hr/yr;
- Eventual replacement of Temporary Engine #5 with Engine #6;
- Maximum operation (100% load for 8,760 hr/yr) of the fuel burning equipment associated with the coaters; and
- Maximum licensed VOC emissions for the coaters and Ultracast Roll Cleaning process.

This information does not 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}	$PM_{2.5}$	SO_2	NO_x	CO	VOC
Boiler #21	173.9	328.5	328.5	3,763.0	1,787.6	2,163.9	178.8
Boiler #22	2.2	2.2	2.2	0.4	15.8	16.6	1.8
Boiler #23	0.9	0.9	0.9	0.2	6.6	7.0	0.7
Technology Center Boiler	0.1	0.1	0.1	–	0.4	0.3	–
MAU #1	0.6	0.6	0.6	–	1.2	1.0	0.1
Engine #1	–	–	–	–	0.4	–	0.1
Engine #2	–	–	–	–	0.4	0.1	–
Engine #3	–	–	–	–	0.2	–	–
Engine #4	–	–	–	–	0.1	–	–
Engine #6	–	–	–	–	0.1	0.1	–
#35 Coater Dryer	1.5	1.5	1.5	–	3.0	2.5	0.2
#2 Coater 4th Zone Dryer	0.9	0.9	0.9	–	2.6	2.1	0.2
#20 Coater 7th Zone Dryer	0.9	0.9	0.9	–	1.7	1.4	0.1
#20 Coater Floatation Dryers	1.8	1.8	1.8	–	3.4	2.9	0.2
Catalytic Incinerator	4.0	4.0	4.0	–	4.4	7.8	–
#2 & #20 Coaters (combined, non-combustion)	–	–	–	–	–	–	139.7
Ultracast Roll Cleaning	–	–	–	–	–	–	2.0
Total TPY	**186.8**	**341.4**	**341.4**	**3,763.6**	**1,827.9**	**2,205.7**	**323.9**

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 (see license A-29-77-7-A, issued on 12/7/2023). An additional ambient air quality analysis is not required for this Part 70 License.

This determination is based on information provided by the applicant regarding the expected construction and operation of the proposed emission units. If the Department determines that any parameter (e.g., stack size, configuration, flow rate, emission rates, nearby structures, etc.) deviates from what was included in the application, the Department may require Sappi to submit additional information and may require an ambient air quality impact analysis at that time.

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-29-77-8-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) Temporary Engine #5

A. Temporary Engine #5 shall fire only distillate fuel. The sulfur content of the distillate fuel fired in Temporary Engine #5 shall not exceed 0.0015% by weight (15 ppm). Compliance shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of the fuel in the tank on-site. [06-096 C.M.R. ch. 115, BACT]

B. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BACT]:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Temporary Engine #5	0.20	0.20	0.20	–	2.87	0.62	0.23

C. Visible emissions from Temporary Engine #5 shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

D. Temporary Engine #5 shall be removed from the site within 30 days once Engine #6 becomes operational. [06-096 C.M.R. ch. 115, BACT]

(2) **Engine #6**

A. Engine #6 shall fire only propane. [06-096 C.M.R. ch. 115, BACT]

B. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BACT]:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Engine #6	0.10	0.10	0.10	–	1.36	0.45	0.09

C. Visible emissions from Engine #6 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

DONE AND DATED IN AUGUSTA, MAINE THIS 21st DAY OF DECEMBER, 2023.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____ for _____
MELANIE LOYZIM, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 10/31/2023
Date of application acceptance: 11/3/2023

Date filed with the Board of Environmental Protection:

This Order prepared by Lynn Muzzey, Bureau of Air Quality.

FILED

DEC 21, 2023

State of Maine
Board of Environmental Protection