



DEPARTMENT ORDER

**Twin Rivers Paper Company LLC
Aroostook County
Madawaska, Maine
A-263-70-F-A**

**Departmental
Findings of Fact and Order
Part 70 Air Emission License
Amendment #1**

FINDINGS OF FACT

After review of the Part 70 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 (Department) finds the following facts:

I. REGISTRATION

A. Introduction

FACILITY	Twin Rivers Paper Company LLC (Twin Rivers)
LICENSE TYPE	Part 70 Significant License Modification
NAICS CODES	322121 (Paper (except Newsprint) Mills)
NATURE OF BUSINESS	Paper Mill
FACILITY LOCATION	82 Bridge Avenue, Madawaska, Maine

Twin Rivers Paper Company LLC (Twin Rivers) is an integrated specialty paper company that manufactures packaging, label, and publishing products from pulp piped from the company's Edmundston, New Brunswick pulp mill. Twin Rivers currently operates under Part 70 License A-263-70-E-R/A, issued August 14, 2018, and licenses to construct issued under the New Source Review (NSR) program as found in *Minor and Major Source Air Emission License Regulations*, 06-096 Code of Maine Rules (C.M.R.) ch. 115.

Twin Rivers has requested an amendment to the facility's Part 70 license to incorporate the terms and conditions of NSR license A-263-77-2-A, issued January 23, 2019. This NSR license was issued for the addition of a size press on Paper Machine (PM) #8. The Department is also using this amendment as an opportunity to clarify the recordkeeping and reporting required by *Emission Statements*, 06-096 C.M.R. ch. 137, to correct 40 C.F.R. Part 63, Subpart ZZZZ requirements for Diesel Fire Pumps #1 and #2 and Diesel Generator, and to clarify the fuel sulfur content requirements for the #6 fuel oil and/or distillate fuel fired in Boiler #6, Diesel Fire Pumps #1 and #2, and the Diesel Generator.

B. Emission Equipment

The following emission units are addressed by this Part 70 License Amendment:

Process Equipment

<u>Equipment</u>	<u>Production Rate*</u>	<u>Date of Installation</u>
Paper Machine #4	50,000 tons/year	1927
Paper Machine #5	76,000 tons/year	1928
Paper Machine #7	70,000 tons/year	1960
Paper Machine #8	388 ton/day (141,620 tons/year)	Oct. 2019 (projected)**

*Production rate information are listed only for informational purposes; they are not intended as license restrictions.

**This date is for the size press addition; Paper Machine #8 was installed at the facility in 1970.

Fuel Burning Equipment

<u>Equipment</u>	<u>Max. Heat Input Capacity (MMBtu/hr)</u>	<u>Max. Firing Rate</u>	<u>Fuel Type, % sulfur</u>	<u>Mfr. Date</u>	<u>Install. Date</u>	<u>Stack #</u>
Boiler #6	240	1,600 gal/hr	#6 Fuel oil, 0.5% Specification waste oil Distillate fuel, 0.0015% (startup)	1949	1949	2

Generator and Fire Pumps

<u>Equipment</u>	<u>Max. Heat Input Capacity (MMBtu/hr)</u>	<u>Max. Firing Rate (gal/hr)</u>	<u>Output (HP)</u>	<u>Fuel Type, % sulfur</u>	<u>Mfr. Date</u>	<u>Install. Date</u>
Diesel Fire Pump #1 Entity No. P1300	2.2	16.1	350	Distillate Fuel, 0.0015%	1971	1972
Diesel Fire Pump #2 Entity No. P1326	1.8	13.1	290		1971	1972
Diesel Generator Entity No. ME61	0.6	4.4	86		1989	1990

C. 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.

Twin Rivers has requested incorporation into the Part 70 Air License the relevant terms and conditions of New Source Review (NSR) license A-263-77-2-A, issued January 23, 2019, pursuant to *Major and Minor Source Air Emission License Regulations*, 06-096 C.M.R. ch. 115.

The NSR license mentioned above modified the Best Available Control Technology (BACT) analysis for a piece of existing equipment. Therefore, this license application has been processed as a Part 70 Significant License Modification under *Part 70 Air Emission License Regulations*, 06-096 Code of Maine Rules (C.M.R.) ch. 140.

D. Facility Description

Twin Rivers owns and operates a paper mill in Madawaska, Maine. Most pulp is received from Twin Rivers' pulping facility in Edmundston, New Brunswick, Canada, across the river from Madawaska. The pulp is conveyed by pipeline to Twin Rivers' facility in Madawaska. Twin Rivers uses different mixtures of pulps and coatings to produce lightweight coated and uncoated packaging, label, and publishing products on four Paper Machines. Twin Rivers also receives most of its steam from the Edmundston facility, but also has a limited use backup boiler, Boiler #6, at its Madawaska facility. In addition to papermaking, other industrial processes at the mill include starch loading and storage; a coating preparation area; a finishing, converting, and shipping area; a process wastewater treatment operation; and a solid waste landfill.

II. AMENDMENT DESCRIPTION

A. A-263-77-2-A Description

The Department issued NSR License A-263-77-2-A to Twin Rivers on January 23, 2019. The license was issued for the installation of a film metering size press on PM #8 which will be used to apply starch and expand the paper machine's capabilities to enable the production of additional packaging and lightweight opaque publishing products. The license was issued pursuant to federal NSR Prevention of Significant Deterioration (PSD) requirements and the Department's air licensing requirements for minor modifications at major stationary sources.

B. 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 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.

BACT for the Paper Machine #8 Size Press was documented in NSR License A-263-77-2-A (1/23/2019). The BACT requirements are included in this license.

C. PM #8 Modification

Twin Rivers is planning to install a film metering size press on PM #8 in October 2019. This size press will be used to apply a starch-based preparation to paper made on PM #8 and will expand the paper machine's capabilities to enable the production of a variety of packaging and light weight opaque publishing products. This will provide the facility with production flexibility by enabling PM #8 to produce additional products beyond what the unit can currently produce, which will allow the facility to produce products on PM #8 that are currently produced less efficiently on the other paper machines. Although they are not being modified, PMs #4, #5, and #7 are considered affected units because the installation of a size press on PM #8 will enable them to manufacture new grades and/or more of the coated grades that cannot be made on PM #8. After installation of the size press, PM #8 is expected to have an approximate maximum starch usage of 41 gal/min and an approximate maximum paper production rate of 388 tons/day.

From this point forward, the name PM #8 shall refer to PM #8 as a whole, including the size press authorized in NSR License A-263-77-2-A (1/23/2019). Similarly, the term Paper Machine Source Group shall refer to PMs #4, #5, #7, #8, and all associated size presses and online coaters.

1. New Source Performance Standards (NSPS)

There are no NSPS requirements applicable to PM #8.

2. National Emissions Standards for Hazardous Air Pollutants (NESHAP)

PM #8 is not subject to *NESHAP: Paper and Other Web Coating*, 40 C.F.R. Part 63, Subpart JJJJ. This regulation is only applicable to major sources of HAP. As established in Air Emission License A-263-70-E-R/A (August 27, 2018), Twin Rivers is an area source of HAP and is therefore not subject to this regulation.

3. Control Equipment

There is no control equipment required for PM #8.

4. BACT Summary and Project VOC Limit

In NSR License A-263-77-2-A (1/23/2019), BACT for PM #8 was determined to be the use of good operating practices, which includes the use of low-VOC or non-VOC materials and additives, and operating the unit per the manufacturer's recommendations. BACT for visible emissions for the unit was determined to be the limit included in *Visible Emissions Regulation*, 06-096 C.M.R. ch. 101, § 2.B.3.d., which states that visible emissions from PM #8 shall not exceed 20% opacity on a six-minute block average basis. Additionally, a VOC emission limit of 78.0 tons/year, based on a 12-month rolling total, was established for the Paper Machine Source Group.

5. Periodic Monitoring

To demonstrate compliance with the Paper Machine Source Group VOC limit of 78.0 tons/year on a 12-month rolling total basis, Twin Rivers shall maintain and make available upon request a record of all VOC-containing coatings and additives used on this equipment. These records shall be maintained on a monthly and 12-month rolling total basis and shall provide all necessary data to determine compliance, including the following:

- a. Amount of VOC (in lb VOC/gallon, less water) in applied coatings and additives;
- b. Volume (in gallons) of all coatings and additives applied each month; and
- c. Total VOC emitted from coatings and additives on a monthly and 12-month rolling total basis.

D. Fuel Sulfur Content Requirement Clarification

Air Emission License A-263-70-E-R/A (August 14, 2018) included fuel sulfur content language which required the facility, as of July 1, 2018, to fire #6 fuel oil with a maximum sulfur content not to exceed 0.5% by weight and to not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm) while still including language allowing the facility to continue to fire fuels with sulfur contents above those limits prior to July 1, 2018; a date which had already passed as of the issuance date of the license.

As part of this amendment the fuel sulfur content requirement language is being clarified to state that #6 fuel oil and distillate fuel purchased or otherwise obtained for use at the facility shall not exceed sulfur contents of 0.5% and 0.0015% by weight, respectively. This change will simplify the fuel sulfur content language by removing the now unnecessary date for the fuel sulfur content change while still providing the facility with the flexibility to mix in the new, lower sulfur content fuel with the older, higher sulfur content fuel so that the higher sulfur content fuel can be depleted.

E. Diesel Fire Pumps #1 and #2 and Diesel Generator

In the Specific Condition addressing Diesel Fire Pumps #1 and #2 and the Diesel Generator in A-263-70-E-R/A (August 14, 2018), language was included in the section addressing requirements from the federal regulation *NESHAP for Stationary Reciprocating Internal Combustion Engines*, 40 C.F.R. Part 63, Subpart ZZZZ which stated that emergency demand response and periods of voltage or frequency deviation from standards were engine uses included in the non-emergency operating hour limit of 100 hours/year included in the regulation. This language was included erroneously and is being removed as part of this amendment to clarify that these uses are not to be included in the non-emergency operating hour limit included in 40 C.F.R. Part 63, Subpart ZZZZ.

F. Emissions Statement

The following language is included to clarify the requirements of 06-096 C.M.R. ch. 137:

Twin Rivers is subject to emissions inventory requirements contained in *Emission Statements*, 06-096 C.M.R. ch. 137. Twin Rivers shall maintain the following records in order to comply with this rule:

1. The amount of #6 fuel oil fired in Boiler #6 on a monthly basis;
2. The amount of distillate fuel fired in Boiler #6, Diesel Fire Pumps #1 and #2 and Diesel Generator (each) on a monthly basis;
3. The amount of propane fired in the Propane-Fired Dryers on a monthly basis;
4. The sulfur content of the #6 fuel oil fired in Boiler #6 and the distillate fuel fired in Boiler #6, Diesel Fire Pumps #1 and #2, and Diesel Generator;

5. Calculations of the VOC and/or HAP emissions from the Paper Machine Source Group (including all associated size presses and online coaters) and the C-2 Off Machine Coater on a calendar year total basis; and
6. Hours of operation for each emission unit on a monthly basis.

In reporting year 2020 and every third year thereafter, Twin Rivers shall report to the Department emissions of hazardous air pollutants as required by 06-096 C.M.R. ch. 137, § 3.C. The Department will use these reports to calculate and invoice for the applicable annual air quality surcharge for the subsequent three billing periods. Twin Rivers shall pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3). [38 M.R.S. § 353-A(1-A)]

G. Facility Annual Emissions

Twin Rivers shall be restricted to the following annual emissions, based on a 12-month rolling total. The tons per year limits were calculated based on a fuel limit of 2,800,000 gallons of #6 fuel oil per year for Boiler #6, a fuel limit of 3,000,000 gallons of propane per year for Propane-fired Dryers #1-6 and #11-13 (combined), 100 hours/year of operation each for Diesel Fire Pumps #1 and #2 and the Diesel Generator, and a conservative estimate of 130.0 tons/year of VOC from all paper coatings and additives used at the facility (this includes the 78.0 tons/year limit for VOC emissions from the Paper Machine Source Group):

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

	PM	PM₁₀	SO₂	NO_x	CO	VOC
Boiler #6	42.0	42.0	154.5	84.0	7.0	1.1
Propane-fired Dryers #1-6 and #11-13 (combined)	6.8	6.8	0.1	19.5	11.3	1.5
Diesel Fire Pump #1	0.1	0.1	0.1	0.5	0.1	0.1
Diesel Fire Pump #2	0.1	0.1	0.1	0.4	0.1	0.1
Diesel Generator	0.1	0.1	0.1	0.1	0.1	0.1
Paper Making	---	---	---	---	---	130.0
Total TPY	49.1	49.1	154.9	104.5	18.6	132.9

III. AMBIENT AIR QUALITY ANALYSIS

Twin Rivers 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-263-71-B-R, issued on June 9, 1998). An additional ambient air quality analysis is not required for this Part 70 license amendment.

ORDER

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

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

The Department hereby grants the Part 70 License Amendment A-263-70-F-A pursuant to 06-096 C.M.R. 140 and the preconstruction permitting requirements of *Major and Minor Source Air Emission License Regulations*, 06-096 C.M.R. ch. 115 and subject to the Conditions found in Air Emission License A-263-70-E-R/A and the following Conditions.

Federally enforceable conditions in this Part 70 license must be changed pursuant to the applicable requirements in 06-096 C.M.R. ch. 115 for making such changes and pursuant to the applicable requirements in 06-096 C.M.R. ch. 140.

For each specific condition which is state enforceable only, state-only enforceability is designated with the following statement: **Enforceable by State-only**.

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 Section A.3. of Condition (15) of Air Emission License A-263-70-E-R/A (August 14, 2018):

(15) Boiler #6 – 240 MMBtu/hr

A. Fuels

3. Fuel Sulfur Content

a. #6 Fuel Oil

Twin Rivers shall not purchase or otherwise obtain #6 fuel oil with a sulfur content that exceeds 0.5% by weight for use in Boiler #6. [06-096 C.M.R. ch. 140, BPT]

b. Distillate Fuel

Twin Rivers shall not purchase or otherwise obtain distillate fuel with a sulfur content that exceeds 0.0015% by weight (15 ppm) for use in Boiler #6. [06-096 C.M.R. ch. 140, BPT]

c. Sulfur content compliance shall be demonstrated by purchase records from the supplier which indicate the type and percent sulfur of the fuel delivered. [06-096 C.M.R. ch. 140, BPT]

The following Condition shall replace Sections A. and D.4.a. of Condition (16) of Air Emission License A-263-70-E-R/A (8/14/2018):

(16) Diesel Fire Pumps #1 and #2 and Diesel Generator

A. Allowable Fuels and Fuel Sulfur Content

1. Twin Rivers shall not purchase or otherwise obtain distillate fuel with a sulfur content that exceeds 0.0015% by weight (15 ppm) for use in Diesel Fire Pumps #1 and #2 and Diesel Generator. [06-096 C.M.R. ch. 140, BPT]
2. Fuel sulfur content compliance shall be demonstrated by fuel delivery receipts from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [A-263-70-C-R (1/20/10), BPT]

D. Diesel Fire Pumps #1 and #2 and the Diesel Generator shall all meet the applicable requirements of 40 C.F.R. Part 63, Subpart ZZZZ, including the following:

4. Maintenance, Testing, and Non-Emergency Operating Situations

- a. The engines shall each be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity). These limits are based on a calendar year. Compliance shall be demonstrated by records (written or electronic logs) of all engine operating hours. [40 C.F.R. § 63.6640(f) & 06-096 C.M.R. ch. 140, BPT]

The following Condition shall replace Condition (17) of Air Emission License A-263-70-E-R/A (8/14/2018):

(17) Paper Machine Source Group, C-2 Off Machine Coater, and Propane-Fired Dryers

A. Paper Machine Source Group and C-2 Off Machine Coater

1. VOC Limits

- a. The online Coater on PM #7 and C-2 Off Machine Coater operated at Twin Rivers shall run with only aqueous-based coatings. The VOC content of the coatings shall remain below 2.9 lb VOC/gallon. [A-263-71-B-R (6/9/98), BPT]
- b. VOC emissions from the Paper Machine Source Group shall not exceed a combined total of 78.0 tons per year of VOC on a 12-month rolling total basis. [A-263-77-2-A (1/23/2019), BACT]
- c. To demonstrate compliance with the above VOC limits, Twin Rivers shall maintain and make available upon request a record of all VOC-containing coatings and additives used on the Paper Machine Source Group units and the C-2 Off Machine Coater. These records shall be maintained on a monthly and 12-month rolling total basis and shall provide all necessary data to determine compliance, including the following [A-263-70-A-I (6/28/02), BPT and A-263-77-2-A (1/23/2019), BACT]:
 - (1) Amount of VOC (in lb VOC/gallon, less water) in applied coatings and additives;
 - (2) Volume (in gallons) of all coatings and additives applied each month;
 - (3) Total VOC emitted from coatings and additives on a monthly and 12-month rolling total basis; and

(4) Documentation demonstrating that all coatings used on the PM #7 online coater and on C-2 Off Machine Coater are below 2.9 lb VOC/gallon, excluding water and negligibly reactive VOC compounds.

2. Visible emissions from each unit shall not exceed 20% opacity on a six-minute block average basis. Compliance with this limit shall be demonstrated by conducting EPA Method 9 visible emissions tests on an as-requested basis. [06-096 C.M.R. ch. 101, § 2.B.3.d.]

B. Propane-Fired Dryers

1. Fuel

- a. Total fuel use for all nine Propane-fired Dryers combined shall not exceed 3,000,000 gal/yr of propane, based on a 12-month rolling total basis. [06-096 C.M.R. ch. 140, BPT]
- b. Compliance shall be demonstrated by fuel records from the supplier showing the quantity and type of the fuel delivered. Records of annual fuel use shall be kept on a monthly and 12-month rolling total basis. [06-096 C.M.R. ch. 140, BPT]

2. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Propane-fired Dryers #1-6 and #11-13 [each]	PM	0.05	06-096 C.M.R. ch. 140, BPT

3. Emissions shall not exceed the following [06-096 C.M.R. ch. 140, BPT]:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Propane-fired Dryers #1-4 [each]	0.25	0.25	0.01	0.72	0.41	0.06
Propane-fired Dryers #5-6 [each]	0.35	0.35	0.01	1.01	0.58	0.08
Propane-fired Dryer #11	0.15	0.15	0.01	0.44	0.25	0.03
Propane-fired Dryers #12-13 [each]	0.31	0.31	0.01	0.89	0.51	0.07

4. Visible emissions from Propane-fired Dryers #1-6 and #11-13 shall each not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 140, BPT]

The following Condition shall replace Condition (25) of Air Emission License A-263-70-E-R/A (8/14/2018):

(25) **Annual Emission Statement**

- A. In accordance with *Emission Statements*, 06-096 C.M.R. ch. 137, Twin Rivers shall annually report to the Department, in a format prescribed by the Department, the information necessary to accurately update the State's emission inventory. The emission statement shall be submitted as specified by the date in 06-096 C.M.R. ch. 137.
- B. Twin Rivers shall keep the following records in order to comply with 06-096 C.M.R. ch. 137:
1. The amount of #6 fuel oil fired in Boiler #6 on a monthly basis;
 2. The amount of distillate fuel fired in Boiler #6, Diesel Fire Pumps #1 and #2 and Diesel Generator (each) on a monthly basis;
 3. The amount of propane fired in the Propane-Fired Dryers on a monthly basis;
 4. The sulfur content of the #6 fuel oil fired in Boiler #6 and the distillate fuel fired in Boiler #6, Diesel Fire Pumps #1 and #2, and Diesel Generator;
 5. Calculations of the VOC and/or HAP emissions from the Paper Machine Source Group (including all associated size presses and online coaters) and the C-2 Off Machine Coater on a calendar year total basis; and
 6. Hours of operation for each emission unit on a monthly basis.

[06-096 C.M.R. ch. 137]

- C. In reporting year 2020 and every third year thereafter, Twin Rivers shall report to the Department emissions of hazardous air pollutants as required by 06-096 C.M.R. ch. 137, § 3.C. [06-096 C.M.R. ch. 137, § 3.C.]

Twin Rivers Paper Company LLC
Aroostook County
Madawaska, Maine
A-263-70-F-A

13

Departmental
Findings of Fact and Order
Part 70 Air Emission License
Amendment #1

D. Twin Rivers shall pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3). [38 M.R.S. § 353-A(1-A)]

DONE AND DATED IN AUGUSTA, MAINE THIS 8 DAY OF April, 2019.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Conner for
GERALD D. REID, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-263-70-E-R/A.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: August 24, 2018
Date of application acceptance: September 4, 2018

Date filed with the Board of Environmental Protection:

This Order prepared by Jonathan E. Rice, Bureau of Air Quality.

