



DEPARTMENT ORDER

**Maine Woods Pellet Company, LLC,
Athens Capital Holdings, LLC &
Athens Energy LLC
Somerset County
Athens, Maine
A-989-77-5-A**

**Departmental
Findings of Fact and Order
New Source Review
NSR #5**

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	Maine Woods Pellet Company, LLC, Athens Capital Holdings, LLC & Athens Energy LLC
LICENSE TYPE	06-096 C.M.R. ch. 115, Minor Modification
NAICS CODES	321999
NATURE OF BUSINESS	Wood Pellet Manufacturer
FACILITY LOCATION	164 Harmony Rd, Athens, Maine

B. NSR License Description

Maine Woods Pellet Company, LLC (MWP), along with co-applicants Athens Capital Holdings, LLC and Athens Energy LLC, previously licensed the installation and operation of a wood pellet processing operation consisting of a biomass-fired cogeneration facility, wood drying equipment, and additional pellet processing equipment.

MWP has requested the following changes to their New Source Review (NSR) license:

1. Re-ducting flue gas from Furnace #1 to bypass Pre-Dryer #1 and its associated cyclone and multicyclones when Pre-Dryer #1 is not in use;
2. Clarify that the definition of "biomass" used as a fuel includes wood fiber collected from the wet scrubber blowdown water; and
3. Addition of a fifth pelletizer.

C. Emission Equipment

The following equipment is addressed in this NSR license:

Furnace

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate (ton/hr)	Fuel Type, % sulfur	Date of Manuf.	Stack #
Furnace #1	149	16.6	biomass, negligible	2015	3

Wood Drying Equipment

Equipment	Maximum Heat Input Capacity (MMBtu/hr)	Maximum Production Rate (ODT/hr)	Fuel Type	Install. Date	Stack #
Pre-Dryer #1	N/A	6.5	N/A	2015	3
Dryer #1	45	14.4	wood propane	2008	1

Process Equipment

Equipment	Production Rate	Pollution Control Equipment	Stack #
Pelletizers (5)	4 ton/hr (each)	N/A	N/A

D. Modification Description

1. Re-Ducting of Flue Gas from Furnace #1

MWP has proposed re-ducting flue gas from Furnace #1 to bypass Pre-Dryer #1 and its associated cyclone and multicyclones when Pre-Dryer #1 is not in use. The cyclone/multicyclones which follow Pre-Dryer #1 control emissions of particulate matter picked up by the flue gas inside Pre-Dryer #1 when it is brought into direct contact with the wood being dried. Emissions from Furnace #1 will continue to be controlled by an electrostatic precipitator (ESP). Any particulate matter that passes through the ESP is unlikely to be captured by the cyclone/multicyclones as they are designed to capture larger diameter particles. Therefore, this change will not result in any actual increase of any regulated pollutant.

2. Definition of Biomass

Dryer #1 is used to dry wood prior to pelletization. The exhaust from Dryer #1 flows through the Dryer Cyclone where the dried wood is separated from the air flow. The exhaust then passes through a Wet Scrubber before being vented to the atmosphere. The Wet Scrubber controls emissions of particulate matter from combustion and removes wood fibers from the drying wood that are caught in the exhaust stream.

MWP has requested that the definition of “biomass” which is used as fuel be clarified to include wood fiber collected from the Wet Scrubber. Following is the definition of “biomass” from NSR air emission license A-989-77-4-A (issued 9/13/2019).

Biomass means any biomass-based solid fuel that is not a solid waste. This includes, but is not limited to, wood residue; wood products (*e.g.*, trees, tree stumps, tree limbs, bark, lumber, sawdust, sander dust, chips, scraps, slabs, millings, and shavings); animal manure, including litter and other bedding materials; vegetative agricultural and silvicultural materials, such as logging residues (slash), nut and grain hulls and chaff (*e.g.*, almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds. This definition also includes wood chips and processed pellets made from wood or other forest residues. Inclusion in this definition does not constitute a determination that the material is not considered a solid waste. MWP should consult with the Department before adding any new biomass type to its fuel mix.

The Department agrees that the wood fiber collected from the Wet Scrubber meets this definition of biomass and may be fired in Furnace #1.

3. New Pelletizer

MWP currently operates four pelletizers and has proposed adding a fifth pelletizer. The pelletizers themselves are not considered emission units. However, raw material is fed to them by upstream emissions units such as Dryer #1. The facility’s capacity is currently limited by the raw material processing and drying in Dryer #1. The addition of a fifth pelletizer is part of the facility’s ongoing maintenance, repair, and replacement of downstream pellet processing equipment and does not add additional capacity to the plant. Thus, the addition of a fifth pelletizer will have no effect on emissions from any licensed emission unit.

E. 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 MWP 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.

As described in Section I(E), none of the changes addressed by this license will result in actual increases of any regulated pollutant. Therefore, 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. MWP 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. Re-Ducting of Flue Gas from Furnace #1

In NSR license A-989-71-E-A (issued 5/13/2015), BACT for emissions of PM/PM₁₀/PM_{2.5} from Furnace #1 was determined to include use of an ESP. BACT for emissions of PM/PM₁₀/PM_{2.5} from Pre-Dryer #1 was determined to include use of a

cyclone/multicyclone system. At the time, it was assumed that Pre-Dryer #1 would be operated the majority of the time Furnace #1 was in operation. Therefore, the license condition was written such that emissions from both Furnace #1 and Pre-Dryer #1 were required to be vented through the cyclone/multicyclones.

Since commencing operation, Pre-Dryer #1 has run very little. However, the license condition reads that all flue gas must be exhausted through it so that it can also exhaust through the cyclone/multicyclones. MWP wishes to re-duct the exhaust of Furnace #1 around Pre-Dryer #1 to increase the efficiency of the system.

The Department agrees that the original BACT finding for control of PM/PM₁₀/PM_{2.5} from Furnace #1 only included use of the ESP.

C. 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.

D. Annual Emissions

This amendment will not result in any changes to licensed emissions.

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 Amendment A-989-77-5-A pursuant to the preconstruction licensing requirements of 06-096 C.M.R. ch. 115 and subject to the standard and specific conditions below.

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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 (22)(D)(2) of Air Emission License A-989-71-E-A.

(22) Furnace #1 and Pre-Dryer #1

D. Control Equipment

2. Emissions of PM/PM₁₀/PM_{2.5} from Pre-Dryer #1 shall be controlled by the operation and maintenance of a cyclone and multicyclone.
[06-096 C.M.R. ch. 115, BACT]

DONE AND DATED IN AUGUSTA, MAINE THIS 11th DAY OF December, 2019.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: 

GERALD D. REID, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 10/7/2019

Date of application acceptance: 10/8/2019

Date filed with the Board of Environmental Protection:

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

