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

DEPARTMENT ORDER

Maine Woods Pellet Company, LLC, Athens Capital Holdings, LLC & Athens Energy LLC Somerset County Athens, Maine A-989-77-3-A	**Departmental Findings of Fact and Order New Source Review NSR #3**

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 Amendment 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 cogeneration facility and additional pellet processing equipment in support of the facility's pellet processing operation (A-989-71-E-A dated May 13, 2015).

The cogeneration facility includes a wood-fired furnace (Furnace #1) which is subject to visible emissions limits under both *Visible Emissions Regulation*, 06-096 Code of Maine rules (C.M.R.) ch. 101 and *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units*, 40 C.F.R. Part 60, Subpart Db. Both regulations allow facilities to propose alternative limits or work practice standards for periods of startup and shutdown. Condition (22)(H) of New Source Review (NSR) license A-989-71-E-A required MWP to apply to amend their license within 180 days of startup of Furnace #1 and Pre-Dryer #1 to define startup and shutdown for Furnace #1 as well as any alternatives to the visible emissions standard during these times. This NSR amendment addresses these changes.

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

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 for MWP 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 per 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 C.M.R. ch. 100.

The proposed revision will not change the facility's emission limits. Therefore, this NSR license amendment is determined to be a minor modification under *Minor and Major Source Air Emission License Regulations* 06-096 C.M.R. ch. 115. These changes will also be incorporated into MWP's pending initial 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. Startup and Shutdown Provisions

MWP is required to operate Furnace #1 such that the visible emissions do not exceed 20% opacity on a six-minute block average basis, except for one six-minute block average per hour of not more than 27% opacity except for periods of startup, shutdown, or malfunction per 40 C.F.R. §§ 60.43b(f) and (g). *Visible Emission Regulation*, 06-096 C.M.R. ch. 101, Section 3 allows equipment with a heat input greater than 100 MMBtu/hr to establish alternative emission limits during periods of startup.

Furnace #1 utilizes an electrostatic precipitator (ESP) for control of particulate matter emissions. When bringing Furnace #1 online or offline, MWP utilizes standard operating procedures that were created in accordance with manufacturer's recommendations to maintain the safety of the furnace operators and the furnace itself. MWP also operates the ESP in accordance with good engineering practices to maintain the safety of the operators and the ESP. In order to minimize the risk of fire or explosion, the ESP is not engaged unless the oxygen content of the exhaust gas is below 11%.

MWP utilizes an ESP predictive model to demonstrate compliance with the visible emissions limit in lieu of a continuous opacity monitoring system (COMS). Information from the ESP predictive model system is unavailable to demonstrate compliance with the visible emissions limits until/unless the ESP is engaged. Therefore, MWP has proposed demonstrating compliance during periods of startup and shutdown by complying with good air pollution control practices.

1. Definitions of Startup and Shutdown

For the purposes of this license, startup is defined as a period of time commencing when the ventilation fan is turned on and ending when the ESP is engaged. The total duration of each startup period shall not exceed four (4) hours.

For the purposes of this license, shutdown is defined as a period of time commencing when the biomass walking floor is turned off and ending when the ventilation fan is turned off. The total duration of each shutdown period shall not exceed seven (7) hours.

2. Good Air Pollution Control Practices

   BACT for visible emissions from Furnace #1 and Pre-Dryer #1 during periods of startup and shutdown as defined in this license shall be operation in accordance with good air pollution control practices.

   The following shall constitute good air pollution control practices:

   a. Adherence to the manufacturer's suggested standard operating procedures for startup and shutdown;
   b. Before startup, inspection of the ESP and ESP dust collection system equipment to ensure that the equipment is free of foreign matter and to ensure their proper function;
   c. During startup, engagement of the ESP as soon as it is deemed safe to do so in accordance with manufacturer's recommendations; and
   d. During shutdown, operation of the ESP for as long as it is deemed safe to do so in accordance with manufacturer's recommendations.

3. Monitoring During Startup/Shutdown

   MWP shall maintain records of startups and shutdowns that shall include dates, times, and duration, records of the pre-startup inspections of the ESP, and time the ESP was engaged (during startup) or disengaged (shutdown).

   During all startups/shutdowns, MWP shall continuously monitor the following items. MWP shall record the monitored value at least once per hour. The records of hourly readings shall be included in the startup/shutdown record.

   a. Thermal oil temperature;
   b. ESP exit gas oxygen content; and
   c. Secondary voltage on each field of the ESP.

C. Incorporation Into the Part 70 Air Emission License

The requirements in this 06-096 C.M.R. ch. 115 New Source Review license amendment shall apply to the facility upon issuance. MWP has applied for their initial Part 70 air emission license, and the requirements of this NSR license amendment shall be incorporated into their Part 70 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-989-77-3-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 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

Conditions (22)(J)(4) and (5) of New Source Review Air Emission License A-989-71-E-A are deleted and replaced by the monitoring and recordkeeping provisions included in the following new Condition.

(1) **Furnace #1 Startup/Shutdown Provisions**

A. In order to demonstrate compliance with visible emission limits for Furnace #1 during periods of startup and shutdown (as defined in this license), MWP shall comply with the following good air pollution control practices:

1. Adherence to the manufacturer's suggested standard operating procedures for startup and shutdown;
2. Before startup, inspection of the ESP and ESP dust collection system equipment to ensure that the equipment is free of foreign matter and to ensure their proper function;
3. During startup, engagement of the ESP as soon as it is deemed safe to do so in accordance with manufacturer's recommendations; and
4. During shutdown, operation of the ESP for as long as it is deemed safe to do so in accordance with manufacturer's recommendations.

[06-096 CMR 115, BACT]

B. MWP shall maintain records of all startups, shutdowns, and malfunctions for Furnace #1 and its associated control equipment that shall include dates, times, and duration, records of the pre-startup inspections of the ESP, and time the ESP was engaged (during startup) or disengaged (shutdown). [06-096 C.M.R. ch. 115, BACT]

C. During all startups/shutdowns, MWP shall continuously monitor the following items. MWP shall record the monitored value at least once per hour. The records of hourly readings shall be included in the startup/shutdown record.

1. Thermal oil temperature;
2. ESP exit gas oxygen content; and
3. Secondary voltage on each field of the ESP.

[06-096 C.M.R. ch. 115, BACT]

DONE AND DATED IN AUGUSTA, MAINE THIS 21 DAY OF December , 2017.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Core for
PAUL MERCER, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 11/9/17
Date of application acceptance: 11/9/17

Date filed with the Board of Environmental Protection:

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

Filed
DEC 21 2017
State of Maine
Board of Environmental Protection