



DEPARTMENT ORDER

**Elmet Technologies LLC
Androscoggin County
Lewiston, Maine
A-565-71-T-A**

**Departmental
Findings of Fact and Order
Air Emission License
Amendment # 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 (Department) finds the following facts:

I. REGISTRATION

A. Introduction

Elmet Technologies LLC (Elmet) was issued Air Emission License A-565-71-Q-R/M on July 15, 2015, for the operation of emission sources associated with their manufacturing facility. The license was subsequently amended on October 30, 2015 (A-565-71-R-M), and on January 21, 2022 (A-565-71-S-M).

Elmet has requested an amendment to their license in order to remove Bryan Boiler #1 and replace it with a new unit designated Avenger Boiler #1. The visible emissions standards for all boilers will also be updated to reflect the current standards as found in 06-096 C.M.R. ch. 101.

The equipment addressed in this license amendment is located at 1560 Lisbon Street, Lewiston, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license amendment:

Boilers

Equipment	Max. Capacity (MMBtu/hr)	Fuel Type, % sulfur	Date of Manuf.	Date of Install.	Stack #
Bryan Boiler #1 *	4.0	natural gas/ propane, neg.	1984	1984	1
Avenger Boiler #1	1.0	natural gas/ propane, neg.	2022	2022	1

* This equipment is removed as of this amendment.

C. Application Classification

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

The modification of a minor source is considered a major or minor modification based on whether or not expected emission increases exceed the “Significant Emission” levels as defined in the Department’s *Definitions Regulation*, 06-096 Code of Maine Rules (C.M.R.) ch. 100. The emission increases are determined by subtracting the current licensed annual emissions preceding the modification from the maximum future licensed annual emissions, as follows:

Pollutant	Current License (TPY)	* Corrected Current License (TPY)	Future License (TPY)	Net Change (TPY)	Significant Emission Levels
PM	7.5	8.4	7.8	-0.6	100
PM ₁₀	7.5	8.4	7.8	-0.6	100
SO ₂	0.1	0.1	0.1	0.0	100
NO _x	10.5	12.2	10.9	-1.3	100
CO	7.7	7.7	6.6	-1.1	100
VOC	1.5	1.5	1.5	0.0	100

* These are the corrected current annual emissions from the previous minor revision issued on January 21, 2022 (A-565-71-S-M) where the emissions from Bryan Boiler #1 were inadvertently omitted.

This modification is determined to be a minor modification and has been processed as such.

D. Facility Classification

The facility is licensed as follows:

- As a natural minor source of air emissions, because no license restrictions are necessary to keep facility emissions below major source thresholds for criteria pollutants; and
- As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for HAP.

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.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in *Definitions Regulation*, 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. Avenger Boiler #1

Elmet will operate Avenger Boiler #1 as a replacement for Bryan Boiler #1. The boiler is rated at 1.0 MMBtu/hr and fires natural gas or propane and will be installed in 2022 and exhaust through Stack 1.

1. BACT Findings

Elmet submitted a BACT analysis for control of emissions from Avenger Boiler #1.

Emission Limits

The BACT emission limits for Avenger Boiler #1 were based on the following:

PM/PM ₁₀	–	0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
SO ₂	–	0.6 lb/MMscf based on AP-42 Table 1.4-2 dated 7/98
NO _x	–	100 lb/MMscf based on AP-42 Table 1.4-1 dated 7/98
CO	–	84 lb/MMscf based on AP-42 Table 1.4-1 dated 7/98
VOC	–	5.5 lb/MMscf based on AP-42 Table 1.4-2 dated 7/98
Visible Emissions	–	06-096 C.M.R. ch. 101

The BACT emission limits for Avenger Boiler #1 are the following:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Avenger Boiler #1	0.05	0.05	0.01	0.10	0.08	0.01

2. Visible Emissions

Visible emissions from Avenger Boiler #1 shall not exceed 10% opacity on a six-minute block average basis.

3. New Source Performance Standards (NSPS): 40 C.F.R. Part 60, Subpart Dc

Due to its size, Avenger Boiler #1 is not subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989. [40 C.F.R. § 60.40c]

4. National Emission Standards for Hazardous Air Pollutants (NESHAP):
 40 C.F.R. Part 63, Subpart JJJJJ

Avenger Boiler #1 is not subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63, Subpart JJJJJ because the unit fires exclusively gaseous fuels. Additionally, the unit is considered a hot water heater because the total heat input to the unit is below 1.6 MMBtu/hr. [40 C.F.R. § 63.11195]

C. 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. Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, unquantifiable fugitive particulate matter emissions are not included. Maximum potential emissions were calculated based on the following assumptions:

- Specific annual emissions for various production processes;
- Operating the boilers and fuel burning production equipment for 8,760 hr/yr.

Please note, 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	SO ₂	NO _x	CO	VOC
Boilers (Burnham Boiler, Bryan Boiler #2, and Avenger Boiler #1)	4.90	4.90	0.06	6.27	3.54	0.23
Fuel Burning Process Equipment	1.85	1.85	0.02	3.59	3.02	0.20
Molybdenum Oxide Grinder	1.00	1.00	--	--	--	--
Doping Tumblers	--	--	--	1.00	--	--
Wastewater Evaporators	--	--	--	--	--	1.00
Total TPY	7.8	7.8	0.1	10.9	6.6	1.5
Note 1: Non-combustion particulate emissions from the Tungsten Primary Reduction Furnace and the Molybdenum Primary Reduction Furnaces are included with the Molybdenum Oxide Grinder emissions. Note 2: Combustion emissions from the Tungsten Primary Reduction Furnace, Molybdenum Primary Reduction Furnaces, Molybdenum Sheet Annealing Furnace, and Caustic Cleaning Tanks are included in the Fuel Burning Process Equipment.						

Pollutant	Tons/year
Single HAP	9.9
Total HAP	24.9

III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source is determined by the Department on a case-by case basis. In accordance with 06-096 C.M.R. ch. 115, an ambient air quality impact analysis is not required for a minor source if the total licensed annual emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

Pollutant	Tons/Year
PM ₁₀	25
SO ₂	50
NO _x	50
CO	250

The total licensed annual emissions for the facility are below the emission levels contained in the table above and there are no extenuating circumstances; therefore, an ambient air quality impact analysis is not required as part of this license amendment.

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, and
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License Amendment A-565-71-T-A subject to the conditions found in Air Emission License A-565-71-Q-R/M, in amendments A-565-71-R-M and A-565-71-S-M, and the following conditions.

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 Specific Conditions (16)(C) and (D) of Air Emissions License A-565-71-Q-R/M.

(16) Avenger Boiler #1, Johnson-Burnham Boiler, and Bryan Boiler #2:

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

Emissions from each boiler while firing natural gas or propane shall not exceed the following limits:

Boiler	PM (lb/hr)	PM₁₀ (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Avenger Boiler #1	0.05	0.05	0.01	0.10	0.08	0.01
Burnham Boiler	0.20	0.20	0.01	0.38	0.32	0.02
Bryan Boiler #2	0.25	0.25	0.01	0.49	0.41	0.03

Emissions from the Johnson-Burnham Boiler and Bryan Boiler #2, when firing distillate fuel, shall not exceed the following limits:

Boiler	PM (lb/hr)	PM₁₀ (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Burnham Boiler	0.47	0.47	1.96	0.59	0.14	0.02
Bryan Boiler #2	0.60	0.60	2.52	0.75	0.18	0.01

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D. Visible emissions from each boiler, when firing distillate fuel, shall not exceed 20% opacity on a six (6) minute block average basis. Visible emissions from each boiler, when firing propane or natural gas, shall not exceed an opacity of 10 percent on a six (6) minute block average basis. [06-096 C.M.R. 101]

DONE AND DATED IN AUGUSTA, MAINE THIS 16th DAY OF MAY, 2022.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:  for
MELANIE LOYZIM, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-565-71-Q-R/M.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 4/4/22

Date of application acceptance: 4/5/22

Date filed with the Board of Environmental Protection:

This Order prepared by Chris Ham, Bureau of Air Quality.

