



DEPARTMENT ORDER

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

**Departmental  
Findings of Fact and Order  
Air Emission License  
Amendment # 2**

**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).

Elmet has requested a minor revision to their license in order to remove the annual fuel limit for the use of natural gas/propane and distillate fuel. The short-term emission limits will also be added in this air emission license for fuel burning process equipment which has not previously been addressed.

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**

<b>Equipment</b>	<b>Max. Capacity (MMBtu/hr)</b>	<b>Fuel Type, % sulfur</b>	<b>Date of Manuf.</b>	<b>Stack #</b>
Bryan Boiler #1	4.0	natural gas/propane, neg.	1984	1
Burnham Boiler	3.9	natural gas/propane, neg. distillate fuel, 0.0015%	2015	2
Bryan Boiler #2	5.0	natural gas/propane, neg. distillate fuel, 0.0015%	2005	3

**Process Equipment**

Equipment	Max. Input Capacity (MMBtu/hr)	Fuel Type, % sulfur	Stack #
Tungsten Primary Reduction Furnaces	1.0	natural gas/propane, neg.	7
Molybdenum Sheet Annealing Furnace	1.95	natural gas/propane, neg.	26
Caustic Cleaning Tanks	1.0	natural gas/propane, neg.	70, 71
Wastewater Evaporators	4.5	natural gas/propane, neg.	58, 59, 60, 61

**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)	Future License (TPY)	Net Change (TPY)	Significant Emission Levels
PM	3.5	7.5	4.0	100
PM <sub>10</sub>	3.5	7.5	4.0	100
SO <sub>2</sub>	7.5	0.1	-7.4	100
NO <sub>x</sub>	28.3	10.5	-17.8	100
CO	13.9	7.7	-6.2	100
VOC	2.6	1.5	1.1	50

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 existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

### B. Fuel Burning Process Equipment

Fuel burning process equipment that was addressed in air emission license A-565-71-Q-R/M did not list hourly air emission limits for each piece of equipment. As the natural gas burners used in each process were not directly addressed, BPT for the natural gas burners used in the below listed process equipment shall be considered good combustion practices and the listed hourly air emission limits.

#### 1. BPT Findings

The BPT emission limits for fuel burning process equipment were based on the following:

##### Natural Gas/Propane

PM/PM <sub>10</sub>	–	0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
SO <sub>2</sub>	–	0.6 lb/MMscf based on AP-42 Table 1.4-2 dated 7/98
NO <sub>x</sub>	–	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 BPT emission limits for the fuel burning process equipment are the following:

Unit	Pollutant	lb/MMBtu
Wastewater Evaporators	PM	0.05

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Tungsten Primary Reduction Furnaces	0.05	0.05	--	0.10	0.08	0.01
Molybdenum Sheet Annealing Furnace	0.10	0.10	--	0.19	0.16	0.01
Caustic Cleaning Tanks	0.05	0.05	--	0.10	0.08	0.01
Wastewater Evaporators	0.23	0.23	--	0.44	0.37	0.02

2. Visible Emissions

Visible emissions from the Tungsten Primary Reduction Furnaces, the Molybdenum Sheet Annealing Furnace, the Caustic Cleaning Tanks, and the Wastewater Evaporators are updated in this license amendment to the current standard as found in 06-096 C.M.R. ch. 101. Visible emissions for the above listed equipment shall not exceed an opacity of 20 percent on a six (6) minute block average basis. [06-096 C.M.R. ch. 101, § 3(B)(4)]

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

Due to their size, the Caustic Cleaning Tanks, and the Wastewater Evaporators are 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. Because the Tungsten Primary Reduction Furnace, and the Molybdenum Sheet Annealing Furnace do not heat water, they are also not subject to 40 C.F.R. Part 60, Subpart Dc. [40 C.F.R. § 60.40c]

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

The Tungsten Primary Reduction Furnaces, the Molybdenum Sheet Annealing Furnace, the Caustic Cleaning Tanks, and the Wastewater Evaporators are 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 they fire exclusively gaseous fuel and are not considered boilers. [40 C.F.R. § 63.11237]

C. Fuel Limit Elimination

With all licensed equipment firing continuously, and using the worst case emission factor for each pollutant and piece of equipment, emissions have been recalculated from previous annual emissions estimations to be less than any threshold that would require Elmet to be subject to additional recordkeeping and reporting requirements. As such, the fuel limit for both natural gas / propane and distillate fuel will be removed as of this air emission license amendment.

D. Emission Statements

With the recalculation of licensed emissions, Elmet's annual emissions will drop below the reporting applicability threshold for 06-096 C.M.R. ch. 137, *Emission Statements*, and as such, the associated emission reporting requirements will be removed with the issuance of this license amendment.

Elmet is still required to maintain such records and report actual emissions for calendar year 2021 in accordance with 06-096 C.M.R. ch. 137 as the facility was subject to these requirements during the year.

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. Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, unquantifiable fugitive particulate matter emissions are not included. This table has been updated to conform with current air licensing practices. As such, hydrogen, ammonia, and hydrochloric acid have been removed from the table. Further documentation is in the licensing file. 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 <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Boilers	4.68	4.68	0.06	5.85	4.61	0.30
Fuel Burning Process Equipment	1.85	1.85	0.02	3.59	3.02	0.20
Molybdenum Oxide Grinder	1.0	1.0	-	-	-	-
Doping Tumblers	-	-	-	1.0	-	-
Wastewater Evaporators	-	-	-	-	-	1.0
<b>Total TPY</b>	<b>7.5</b>	<b>7.5</b>	<b>0.1</b>	<b>10.5</b>	<b>7.7</b>	<b>1.5</b>
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 <sub>10</sub>	25
SO <sub>2</sub>	50
NO <sub>x</sub>	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-S-M subject to the conditions found in Air Emission License A-565-71-Q-R/M, in amendment A-565-71-R-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**

**Specific Condition (16)(A)(1) of Air Emission License A-565-71-Q-R/M is removed.**

**The following shall replace Specific Condition (17) of Air Emission License A-565-71-Q-R/M.**

#### **(17) Process Equipment**

A. Molybdenum Primary Reduction Furnaces and Molybdenum Oxide Grinder [06-096 C.M.R. 115, BPT]

1. Elmet shall vent the Molybdenum Primary Reduction Furnaces and the Molybdenum Oxide Grinder to a baghouse.
2. Elmet shall inspect the baghouse on at least a weekly basis for the following: visible emissions from the stack connected to the baghouse, the pressure drop across the baghouse, and accumulation of particulate matter in the collection drum. The results of these inspections shall be recorded in a log.
3. At least every six months, Elmet shall inspect the condition of the bags, the condition of the cleaning mechanism, and the pressure drop lines for possible plugging. The results of the semi-annual inspections shall be recorded in a log.

4. Elmet shall perform maintenance on the baghouse at a frequency that is determined by Elmet maintenance personnel to be appropriate based in part on the results of the inspections. Elmet shall maintain a written record of maintenance work that is performed.
5. Visible emissions shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. 101(3)(B)(4)]

B. Fuel Burning Process Equipment

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

Unit	Pollutant	lb/MMBtu
Wastewater Evaporators	PM	0.05

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Tungsten Primary Reduction Furnace	0.05	0.05	--	0.10	0.08	0.01
Molybdenum Sheet Annealing Furnace	0.10	0.10	--	0.19	0.16	0.01
Caustic Cleaning Tanks	0.05	0.05	--	0.10	0.08	0.01
Wastewater Evaporators	0.23	0.23	--	0.44	0.37	0.02

2. Visible Emissions

Visible emissions for the above listed equipment shall not exceed an opacity of 20 percent on a six (6) minute block average basis.  
[06-096 C.M.R. ch. 101, § 3(B)(4)]

**The following shall replace Specific Condition (20) of Air Emission License A-565-71-Q-R/M.**

**(20) Annual Emission Statements**

- A. In accordance with *Emission Statements*, 06-096 C.M.R. ch. 137, Elmet shall report to the Department, in a format prescribed by the Department, the information necessary to accurately update the State's emission inventory for the 2021 reporting year. The emission statement shall be submitted as specified by the reporting due date in 06-096 C.M.R. ch. 137. [06-096 C.M.R. ch. 137]



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- B. After reporting year 2021, Elmet shall not be subject to the reporting and recordkeeping requirements of 06-096 C.M.R. ch. 137 until such time as the facility amends their license to increase potential annual emissions above any reporting applicability threshold established in 06-096 C.M.R. ch. 137.  
[06-096 C.M.R. ch. 115, BPT]

DONE AND DATED IN AUGUSTA, MAINE THIS 21<sup>st</sup> DAY OF JANUARY, 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: 11/22/21

Date of application acceptance: 11/30/21

Date filed with the Board of Environmental Protection:

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

