



DEPARTMENT ORDER

**GO Lab Madison, LLC
Somerset County
Madison, Maine
A-1151-71-C-A**

**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

GO Lab Madison, LLC (GO Lab) was issued Air Emission License A-1151-71-A-N on May 7, 2020, for the operation of emission sources associated with their wood fiber insulation manufacturing facility. The license was subsequently amended on November 18, 2021 (A-1151-71-B-A).

GO Lab has requested an amendment to their license in order to revise the capacity of the Batt Line Heater, add 13 natural gas Space Heaters, add one Water Heater, and to establish a facility wide natural gas fuel limit.

The equipment addressed in this license amendment is located at 1 Main Street, Madison, Maine.

B. Emission Equipment

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

Fuel Burning Equipment

Equipment	Max. Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type, % sulfur	Date of Manuf.	Date of Install.
Batt Line Heater	13.7	13,460 scf/hr	natural gas, neg.	2022	2022
AMU-1	6.0	5,882 scf/hr	natural gas, neg.	2022	2022
RTU-1	3.0	2,941 scf/hr	natural gas, neg.	2022	2022
RTU-2	2.8	2,736 scf/hr	natural gas, neg.	2022	2022
RTU-3	3.0	2,941 scf/hr	natural gas, neg.	2022	2022

Equipment	Max. Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type, % sulfur	Date of Manuf.	Date of Install.
RTU-4	3.0	2,941 scf/hr	natural gas, neg.	2022	2022
RTU-5	3.0	2,941 scf/hr	natural gas, neg.	2022	2022
RTU-6	3.0	2,941 scf/hr	natural gas, neg.	2022	2022
RTU-7	2.8	2,736 scf/hr	natural gas, neg.	2022	2022
RTU-8	3.0	2,941 scf/hr	natural gas, neg.	2022	2022
RTU-9	2.8	2,736 scf/hr	natural gas, neg.	2022	2022
RTU-10	3.0	2,941 scf/hr	natural gas, neg.	2022	2022
RTU-11	3.0	2,941 scf/hr	natural gas, neg.	2022	2022
RTU-12	2.8	2,736 scf/hr	natural gas, neg.	2022	2022
Water Heater	1.0	990 scf/hr	natural gas, neg.	2022	2022

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	19.5	20.0	0.5	100
PM ₁₀	14.8	15.4	0.6	100
SO ₂	0.3	0.3	0.0	100
NO _x	39.2	46.5	7.3	100
CO	52.4	62.9	10.5	100
VOC	49.9	49.9	0.0	100

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

D. Facility Classification

With the annual facility wide fuel and VOC limits, the facility is licensed as follows:

- As a synthetic minor source of air emissions for NO_x and VOC, because Go Labs is subject to license restrictions that 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.

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. Batt Line Heater

Go Labs has revised the specifications of the Batt Line Heaters from the estimated 5.0 MMBtu/hr natural gas burner that was described in Air Emission License A-1151-71-A-N, which will now be comprised of eleven smaller natural gas fired burners which total 13.7 MMBtu/hr.

The BACT analysis provided for the above Batt Line heater in A-1151-71-A-N is still valid, as the only specification that has changed is the firing rate of the burners.

1. The revised BACT emission limits for the Batt Line Heater are based on the following:

Natural Gas

- PM – 0.01 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
- PM₁₀ – 7.6 lb/MMscf based on AP-42 Table 1.4-2, dated 7/98 (equivalent to 0.007 lb/MMBtu)
- SO₂ – 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 – 11 lb/MMscf based on TOC emission factor in AP-42 Table 1.4-2, dated 7/98
- Visible Emissions – 06-096 C.M.R. ch. 115, BACT

2. The revised BACT emission limits for the Batt Line Heater are the following:

Unit	Pollutant	lb/MMBtu
Batt Line Heater	PM	0.01

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Batt Line Heater	0.14	0.10	0.01	1.33	1.12	0.15

3. Visible emissions from the Batt Line Heater shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

C. Space Heaters and Water Heater

Collectively, space heaters AMU-1, RTU-1, RTU-2, RTU-3, RTU-4, RTU-5, RTU-6, RTU-7, RTU-8, RTU-9, RTU-10, RTU-11, and RTU-12 will be referred to as the Space Heaters in this license.

Go Labs will operate the natural gas fired Space Heaters to heat the facility. The sum of the Space Heaters maximum firing rate is 41.2 MMBtu/hr and each fires natural gas. The Space Heaters will be installed in 2022 and will exhaust to the interior of the facility.

The Water Heater is a natural gas fired unit rated at 1.0 MMBtu/hr which will be installed in 2022.

1. BACT Findings

Go Labs submitted a BACT analysis for control of emissions from the Space Heaters and the Water Heater.

a. Emission Limits

The BACT emission limits for the Space Heaters and the Water Heater were based on the following:

Natural Gas

- PM/PM₁₀ – 0.01 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
- SO₂ – 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 – 11 lb/MMscf based on TOC emission factor in AP-42 Table 1.4-2, dated 7/98
- Visible Emissions – 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for the Space Heaters and the Water Heater are the following:

Unit	Pollutant	lb/MMBtu
AMU-1	PM	0.01
RTU-1	PM	0.01
RTU-3	PM	0.01
RTU-4	PM	0.01
RTU-5	PM	0.01
RTU-6	PM	0.01
RTU-8	PM	0.01
RTU-10	PM	0.01
RTU-11	PM	0.01

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
AMU-1	0.06	0.06	0.01	0.58	0.49	0.06
RTU-1	0.03	0.03	0.01	0.29	0.24	0.03
RTU-2	0.03	0.03	0.01	0.27	0.23	0.03
RTU-3	0.03	0.03	0.01	0.29	0.24	0.03
RTU-4	0.03	0.03	0.01	0.29	0.24	0.03
RTU-5	0.03	0.03	0.01	0.29	0.24	0.03
RTU-6	0.03	0.03	0.01	0.29	0.24	0.03
RTU-7	0.03	0.03	0.01	0.27	0.23	0.03
RTU-8	0.03	0.03	0.01	0.29	0.24	0.03
RTU-9	0.03	0.03	0.01	0.27	0.23	0.03
RTU-10	0.03	0.03	0.01	0.29	0.24	0.03
RTU-11	0.03	0.03	0.01	0.29	0.24	0.03
RTU-12	0.03	0.03	0.01	0.27	0.23	0.03
Water Heater	0.01	0.01	0.01	0.10	0.08	0.01

2. Visible Emissions

Visible emissions from the Space Heaters and the Water Heater shall each 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 their size and that the Space Heaters and the Water Heater are not considered boilers, they 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. [40 C.F.R. § 60.40c]

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

The Water Heater 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. The unit is considered a hot water heater and is therefore exempt. [40 C.F.R. §§ 63.11193 and 63.11237]

The Space Heaters do not heat water and not considered boilers; therefore, they 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. [40 C.F.R. §§ 63.11193 and 63.11237]

D. Annual Fuel Limit

In order to remain below modeling thresholds, Go Labs has proposed an annual natural gas fuel limit of 1,000,000 MMBtu/year. Go Labs shall record the total facility natural gas usage on a monthly and 12-month rolling total basis This value is based on a heat content factor of 1030 Btu/scf of natural gas.

E. Performance Test Protocol

For any performance testing required by this license, Go Labs shall submit to the Department for approval a performance test protocol, as outlined in the Department's Performance Testing Guidance, at least 30 days prior to the scheduled date of the performance test. [06-096 C.M.R. ch. 115, BPT]

The Department's Performance Testing Guidance is available online at:
<https://www.maine.gov/dep/air/emissions/testing.html>

F. Emission Statements

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

1. The amount of natural gas fired in Boiler #1, Flash Tube Heaters #1 and #2, the Batt Line Heater, the Space Heaters, and the Water Heater, (each) on both a monthly and calendar year basis;
2. Flash Tube Dryer #1 and #2 throughput on both a monthly and calendar year basis;
3. Calculations of the VOC emissions from the facility on a calendar year total basis; and
4. Hours each licensed emission unit was active or operating on both a monthly and calendar year basis.

In reporting year 2023 and every third year thereafter, Go Labs 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. Go Labs 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. 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 and establishing the facility's potential to emit (PTE). Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, unquantifiable fugitive particulate matter emissions are not included except when required by state or federal regulations. Maximum potential emissions were calculated based on the following assumptions:

- A facility-wide limit of 1,000,000 MMBtu/yr of natural gas based on a heat content of 1030 BTU/scf;
- A process rate not to exceed 120,000 wet tons/year (at 50% moisture); and
- A facility-wide VOC limit of 49.9 tpy.

This information does not represent a comprehensive list of license restrictions or permissions. That 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
Fuel Burning Equipment	5.0	4.1	0.3	46.5	62.9	--
Flash Tube Dryers #1 and #2	15.0	11.3	--	--	--	--
Total TPY	20.0	15.4	0.3	46.5	62.9	49.9

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.

This determination is based on information provided by the applicant regarding the expected construction and operation of the proposed emission units. If the Department determines that any parameter (e.g., stack size, configuration, flow rate, emission rates, nearby structures, etc.) deviates from what was included in the application, the Department may require Go Labs to submit additional information and may require an ambient air quality impact analysis at that time.

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-1151-71-C-A subject to the conditions found in Air Emission License A-1151-71-A-N, in amendment A-1151-71-B-A, 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 Condition (19) and (23) of Air Emission License A-1151-71-A-N.

(19) Batt Line Heater

- A. The Batt Line Heater is licensed to fire natural gas. [06-096 C.M.R. ch. 115, BACT]
- B. Go Labs shall maintain records showing the quantity of natural gas used by the Batt Line Heater both on a monthly and a 12-month rolling total basis. [06-096 C.M.R. ch. 115, BACT]
- C. The BACT emission limits for the Batt Line Heater firing natural gas are the following: [06-096 C.M.R. ch. 115, BACT]

Unit	Pollutant	lb/MMBtu
Batt Line Heater	PM	0.01

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

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Batt Line Heater	0.14	0.10	0.01	1.33	1.12	0.15

- E. Visible emissions from the Batt Line Heater shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

(23) **Annual Emission Statements**

- A. In accordance with *Emission Statements*, 06-096 C.M.R. ch. 137, Go Labs 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. Go Labs shall keep the following records in order to comply with 06-096 C.M.R. ch. 137:
1. The amount of natural gas fired in Boiler #1, Flash Tube Heaters #1 and #2, the Batt line Heater, the Space Heaters, and the Water Heater (each) on both a monthly and calendar year basis;
 2. Flash Tube Dryer #1 and #2 throughput on both a monthly and calendar year basis;
 3. Calculations of the VOC emissions from the facility on a calendar year total basis; and
 4. Hours each emission unit was active or operating on both a monthly and calendar year basis.
- [06-096 C.M.R. ch. 137]
- C. In reporting year 2023 and every third year thereafter, Go Labs shall report to the Department emissions of hazardous air pollutants as required by 06-096 C.M.R. ch. 137, § (3)(C). Go Labs 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)]

The following are new conditions of Air Emission License A-1151-71-A-N.

(24) **Space Heaters and Water Heater**

- A. The Space Heaters and the Water Heater are licensed to fire natural gas. [06-096 C.M.R. ch. 115, BACT]
- B. Go Labs shall maintain records showing the quantity of natural gas used by the Space Heaters and the Water Heater both on a monthly and a 12-month rolling total basis.
[06-096 C.M.R. ch. 115, BACT]

C. The BACT emission limits for the Space Heaters are the following:
 [06-096 C.M.R. ch. 115, BACT]

Unit	Pollutant	lb/MMBtu
AMU-1	PM	0.01
RTU-1	PM	0.01
RTU-3	PM	0.01
RTU-4	PM	0.01
RTU-5	PM	0.01
RTU-6	PM	0.01
RTU-8	PM	0.01
RTU-10	PM	0.01
RTU-11	PM	0.01

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

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
AMU-1	0.06	0.06	0.01	0.58	0.49	0.06
RTU-1	0.03	0.03	0.01	0.29	0.24	0.03
RTU-2	0.03	0.03	0.01	0.27	0.23	0.03
RTU-3	0.03	0.03	0.01	0.29	0.24	0.03
RTU-4	0.03	0.03	0.01	0.29	0.24	0.03
RTU-5	0.03	0.03	0.01	0.29	0.24	0.03
RTU-6	0.03	0.03	0.01	0.29	0.24	0.03
RTU-7	0.03	0.03	0.01	0.27	0.23	0.03
RTU-8	0.03	0.03	0.01	0.29	0.24	0.03
RTU-9	0.03	0.03	0.01	0.27	0.23	0.03
RTU-10	0.03	0.03	0.01	0.29	0.24	0.03
RTU-11	0.03	0.03	0.01	0.29	0.24	0.03
RTU-12	0.03	0.03	0.01	0.27	0.23	0.03
Water Heater	0.01	0.01	0.01	0.10	0.08	0.01

E. Visible emissions from each of the Space Heaters and the Water Heater shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

(25) **Annual Fuel Limit**

A. Go Labs shall not exceed the usage of 1,000,000 MMBtu/year of natural gas based on a heat content of 1030 Btu/scf.

B. Go Labs shall record on a monthly and 12-month rolling total basis, the total facility natural gas usage.

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

- (26) If the Department determines that any parameter value pertaining to construction and operation of the proposed emissions units, including but not limited to stack size, configuration, flow rate, emission rates, nearby structures, etc., deviates from what was submitted in the application or ambient air quality impact analysis for this air emission license, Go Labs may be required to submit additional information. Upon written request from the Department, Go Labs shall provide information necessary to demonstrate AAQS will not be exceeded, potentially including submission of an ambient air quality impact analysis or an application to amend this air emission license to resolve any deficiencies and ensure compliance with AAQS. Submission of this information is due within 60 days of the Department's written request unless otherwise stated in the Department's letter. [06-096 C.M.R. ch. 115, § 2(O)]

DONE AND DATED IN AUGUSTA, MAINE THIS 3rd DAY OF November, 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-1151-71-A-N.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 10/4/22
Date of application acceptance: 10/4/22

Date filed with the Board of Environmental Protection:

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

FILED

NOVEMBER 3, 2022

State of Maine
Board of Environmental Protection