



DEPARTMENT ORDER

**Linde Advanced Material  
Technologies Inc.  
York County  
Biddeford, Maine  
A-643-71-P-M**

**Departmental  
Findings of Fact and Order  
Air Emission License  
Amendment #1**

**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

Linde Advanced Material Technologies Inc. (Linde) was issued Air Emission License A-643-71-O-R/A on June 30, 2025, for the operation of emission sources associated with their surface coatings applications facility.

The equipment addressed in this license amendment is located at 24 Landry Street, Biddeford, Maine.

Linde has requested a minor revision to their license in order to clarify the heat input capacity of Desert Aire Humidifier #3. The Department is also taking this opportunity to correct the limits on Desert Aire Humidifiers #1 and #2. The Total Licensed Annual Emissions table was correct, but the lb/hr tables contained a typo with the emission rates for PM, PM<sub>10</sub>, and PM<sub>2.5</sub> for these two units.

B. Emission Equipment

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

**Fuel Burning Equipment**

<b>Equipment</b>	<b>Max. Capacity (MMBtu/hr)</b>	<b>Fuel Type</b>	<b>Date of Install.</b>
Desert Aire Humidifier #1	1.05	Natural Gas	2002
Desert Aire Humidifier #2	1.05	Natural Gas	2002
Desert Aire Humidifier #3 <sup>A</sup>	0.80	Natural Gas	2024

<sup>A</sup> Revised max. capacity and is now an insignificant activity and included for completeness only.

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.

This amendment will not increase licensed emissions of any pollutant. Therefore, this amendment is determined to be a minor revision and has been processed as such.

D. Facility Classification

With the annual VOC and HAP limits associated with the facility's process equipment, the facility is licensed as follows:

- As a synthetic minor source of air emissions for criteria pollutants, because Linde is subject to license restrictions that keep facility emissions below major source thresholds for VOC; 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. Desert Aire Humidifier #3

During a recent inspection of Desert Aire Humidifier #3, a vendor discovered the unit had only two instead of three burners and both of those burners were actually operating at 0.25 MMBtu/hr instead of the 0.35 MMBtu/hr initially described. At 0.5 MMBtu/hr, this would have made the unit below licensing threshold levels as identified in 06-096 C.M.R. ch. 115, Appendix B. The vendor replaced the two burners with slightly larger burners with a heat capacity each of 0.4 MMBtu/hr each or 0.8 MMBtu/hr total, which still categorizes

it as an insignificant activity below licensing threshold levels. Desert Aire Humidifier #3 is considered removed from this Air Emission License and will not be addressed further.

C. Desert Aire Humidifiers #1 and #2

Desert Aire Humidifiers #1 and #2 were found to have a typo in the PM, PM<sub>10</sub>, and PM<sub>2.5</sub> lbs/hr table, which will be corrected below and in the Order of this license.

1. BPT Findings

The BPT emission limits for the natural gas-fired units were based on the following:

Natural Gas

- PM/PM<sub>10</sub>/PM<sub>2.5</sub> – 0.05 lb/MMBtu, 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, § 4(A)(3)

The BPT emission limits for the natural gas-fired units are the following:

Emission Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	PM <sub>2.5</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Desert Aire Humidifier #1	0.05	0.05	0.05	0.10	0.09	0.01
Desert Aire Humidifier #2	0.05	0.05	0.05	0.10	0.09	0.01

Emissions of SO<sub>2</sub> from all of the natural gas-fired units are considered negligible.

D. 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:

- Operating the natural gas-fired units for 8,760 hours/year each;
- A limit of 2.7 tpy of VOC for all coating units, lines, or operations combined;
- A facility-wide limit of 7.9 tpy for any single HAP; and
- A facility-wide limit of 14.0 tpy for all HAP combined.

This information does not 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>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Natural Gas-Fired Units	10.4	10.4	10.4	-	20.1	16.9	1.1
Coating Operations	-	-	-	-	-	-	2.7
<b>Total TPY</b>	<b>10.4</b>	<b>10.4</b>	<b>10.4</b>	<b>-</b>	<b>20.1</b>	<b>16.9</b>	<b>3.8</b>

Pollutant	Tons/year
Single HAP	7.9
Total HAP	14.0

### 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
PM <sub>2.5</sub>	15
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.

This determination is based on information provided by the applicant regarding licensed 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 Linde 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-643-71-P-M subject to the conditions found in Air Emission License A-643-71-O-R/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 Condition (22) of Air Emission License A-643-71-O-R/A:

(22) **Natural Gas-Fired Units**

A. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Air Make-up Unit #3	PM	0.05	06-096 C.M.R. ch. 115, BPT
Air Make-up Unit #4	PM	0.05	06-096 C.M.R. ch. 115, BPT

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

Emission Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	PM <sub>2.5</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Pit Furnace #0	0.10	0.10	0.10	0.19	0.16	0.01
Pit Furnace #1	0.10	0.10	0.10	0.19	0.16	0.01
Pit Furnace #2	0.07	0.07	0.07	0.14	0.11	0.01
Pit Furnace #3	0.10	0.10	0.10	0.19	0.16	0.01
Pit Furnace #4	0.10	0.10	0.10	0.19	0.16	0.01
Pit Furnace #5	0.10	0.10	0.10	0.19	0.16	0.01
Pit Furnace #6	0.10	0.10	0.10	0.19	0.16	0.01
Box Furnace #1	0.10	0.10	0.10	0.19	0.16	0.01
Box Furnace #2	0.10	0.10	0.10	0.19	0.16	0.01
Box Furnace #3	0.10	0.10	0.10	0.19	0.16	0.01

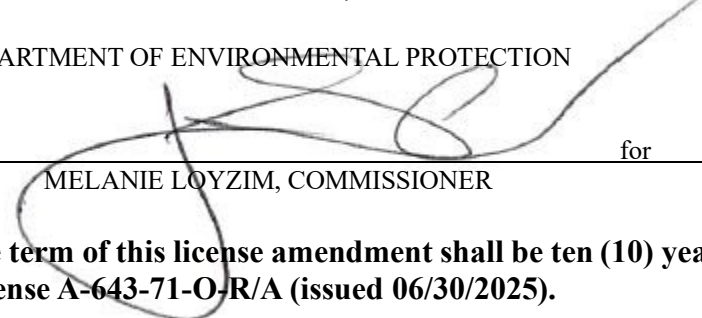
Emission Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	PM <sub>2.5</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Box Furnace #4	0.10	0.10	0.10	0.19	0.16	0.01
Box Furnace #6	0.13	0.13	0.13	0.25	0.21	0.01
Box Furnace #8	0.10	0.10	0.10	0.19	0.16	0.01
Grieve Oven #1	0.05	0.05	0.05	0.10	0.08	0.01
Grieve Oven #3	0.05	0.05	0.05	0.10	0.08	0.01
Grieve Oven #5	0.05	0.05	0.05	0.10	0.08	0.01
Grieve Oven #6	0.05	0.05	0.05	0.10	0.08	0.01
Grieve Oven #9	0.05	0.05	0.05	0.10	0.08	0.01
Large Grieve Dryer	0.06	0.06	0.06	0.12	0.10	0.01
Air Make-up Unit #3	0.33	0.33	0.33	0.64	0.54	0.04
Air Make-up Unit #4	0.33	0.33	0.33	0.64	0.54	0.04
Desert Aire Humidifier #1	0.05	0.05	0.05	0.10	0.09	0.01
Desert Aire Humidifier #2	0.05	0.05	0.05	0.10	0.09	0.01

Note: Emissions of SO<sub>2</sub> from each unit firing natural gas in the table are negligible and thus not quantified in the table.

- C. Visible emissions from the natural gas-fired units shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(3)]

DONE AND DATED IN AUGUSTA, MAINE THIS 8<sup>th</sup> DAY OF APRIL, 2026.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:  for  
MELANIE LOYZIM, COMMISSIONER

**The term of this license amendment shall be ten (10) years from the issuance of Air Emission License A-643-71-O-R/A (issued 06/30/2025).**

[Note: If a renewal application, determined as complete by the Department, is submitted prior to expiration of this license, then pursuant to Title 5 M.R.S. § 10002, all terms and conditions of the license shall remain in effect until the Department takes final action on the license renewal application.]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: March 11, 2026

Date of application acceptance: March 11, 2026

This Order prepared by Zac Hicks, Bureau of Air Quality.