



DEPARTMENT ORDER

**The Initiative for Digital Engineering  
and Life Sciences  
Cumberland County  
Portland, Maine  
A-77-71-N-A/T**

**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

The Initiative for Digital Engineering and Life Sciences (IDEALS) has requested the transfer of Air Emission License A-77-71-M-R from B&G Foods North America, Inc. (d/b/a Burnham and Morrill Company) to IDEALS through a letter to the Department dated March 25, 2022. Air Emission License A-77-71-M-R was issued to B&G Foods North America, Inc. on September 19, 2014. IDEALS is a Maine non-profit corporation that will be developing a campus for the Roux Institute at Northeastern University at the former Burnham and Morrill facility.

IDEALS has also requested an amendment to the license in order to remove Boiler #1 and the parts washers, and to relinquish the authorization to combust #6 fuel oil in Boilers #3 and #4.

The equipment addressed in this license amendment is located at One Bean Pot Circle, Portland, 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>Date of Install.</b>	<b>Stack #</b>
<i>Boiler #1*</i>	<i>39.0</i>	<i>#6 fuel oil, 0.5% Natural gas, negligible</i>	<i>1956</i>	<i>1956</i>	<i>1</i>
<i>Boiler #3</i>	<i>31.4</i>	<i>Natural gas, negligible</i>	<i>1997</i>	<i>2002</i>	<i>2</i>

Equipment	Max. Capacity (MMBtu/hr)	Fuel Type, % sulfur	Date of Manuf.	Date of Install.	Stack #
Boiler #4	31.4	Natural gas, negligible	1997	2002	2

\*Removed from license.

### 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	30.7	14.4	-16.3	100
PM <sub>10</sub>	30.7	14.4	-16.3	100
SO <sub>2</sub>	39.8	0.4	-39.4	100
NO <sub>x</sub>	70.8	22.3	-48.5	100
CO	28.4	17.4	-11.0	100
VOC	2.1	1.8	-0.3	50*

\*IDEALS is located in an area of the state included in the Ozone Transport Region. Therefore, the significant emission level for VOC is 50 tpy.

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

## II. **Transfer Requirements**

### A. Title, Right, or Interest

In their application, IDEALS submitted copies of property deeds transferring ownership of the facility to IDEALS. The parties have provided sufficient evidence of title, right, or interest in the facility to allow the transfer of the facility’s licenses.

### B. Technical Capacity and Intent

IDEALS has retained an outside environmental consulting firm to manage the facility’s environmental permits and compliance. The information submitted in the application

provides sufficient evidence that IDEALS, in conjunction with their consultants, has the technical capacity and intent to comply with their air emission license.

C. Full Name and Address

The full name and address of the new owner is:

The Initiative for Digital Engineering and Life Sciences  
100 Commercial St  
Portland, ME 04101

D. Certification

IDEALS certifies that there will be no increase in air emissions beyond that provided for in the existing licenses, either in quantity or type.

**III. 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. Boilers #3 and #4

IDEALS operates Boilers #3 and #4 for facility heat. The boilers are each rated at 31.4 MMBtu/hr. In 2010, the burner in Boiler #3 was replaced through Air Emission License Amendment A-77-71-L-A (issued July 12, 2010). As part of the licensing process Boiler #3 underwent an updated BACT analysis resulting in new emission limits for NO<sub>x</sub> and CO, and a requirement to operate flue gas recirculation when firing natural gas. IDEALS has requested that #6 fuel oil be removed as an allowed fuel for Boilers #3 and #4. These units will now burn only natural gas.

1. BPT Findings

The BPT emission limits for the boilers were based on the following:

Boiler #3

- 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> – 1.1 lb/hr based manufacturer’s data
- CO – 1.1 lb/hr based on manufacturer’s data
- 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

Boiler #4

- 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 Boilers #3 and #4 are the following:

Unit	Pollutant	lb/MMBtu
Boiler #3	PM	0.05
Boiler #4	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)
Boiler #3 Natural gas	1.5	1.5	0.1	1.1	1.1	0.2
Boiler #4 Natural gas	1.5	1.5	0.1	2.9	2.4	0.2

2. Visible Emissions

Visible emissions from Boilers #3 and #4 shall not exceed 10% opacity on a six-minute block average basis.

3. Periodic Monitoring

Periodic monitoring for Boilers #3 and #4 shall include recordkeeping to document fuel use both on a monthly and 12-month rolling total basis.

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

Due to the size and year of manufacture, Boilers #3 and #4 are 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] Boilers #3 and #4 both have heat input capacities greater than 8.7 MW (30 MMBtu/hr), however since the units will burn only natural gas, Subpart Dc does not require any additional emission limits or compliance testing and monitoring.

IDEALS shall comply with all requirements of 40 C.F.R. Part 60, Subpart Dc applicable to Boilers #3 and #4 including, but not limited to, the following:

IDEALS shall maintain records of the amount of natural gas combusted in Boilers #3 and #4 during each calendar month. [40 C.F.R. § 60.48c(g)(2)]

C. Emission Statements

IDEALS was previously subject to emissions inventory requirements contained in *Emission Statements*, 06-096 C.M.R. ch. 137. With the removal of emission units and changes to licensed fuel use as described in this license amendment, the facility's annual emissions will be below the minimum required reporting levels established in ch. 137, and therefore annual emission inventory reporting will no longer be required beginning with the reporting of emissions from 2023. IDEALS shall report emissions occurring in 2022.

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. Maximum potential emissions were calculated based on the following assumptions:

- Operating the generators for 100 hrs/yr;
- Operating the boilers and hot water heater for 8,760 hr/yr.

Please note, this information 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)

	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>VOC</b>
Boiler #3	6.9	6.9	0.1	4.8	4.8	0.7
Boiler #4	6.9	6.9	0.1	13.4	11.2	0.7
Hot Water Heater #1	0.4	0.4	--	0.8	0.7	0.1
Generator #1	0.1	0.1	0.1	0.8	0.2	0.1
Generator #2	0.1	0.1	0.1	2.5	0.5	0.2
<b>Total TPY</b>	<b>14.4</b>	<b>14.4</b>	<b>0.4</b>	<b>22.3</b>	<b>17.4</b>	<b>1.8</b>

<b>Pollutant</b>	<b>Tons/year</b>
Single HAP	9.9
Total HAP	24.9

**IV. 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:

<b>Pollutant</b>	<b>Tons/Year</b>
PM <sub>10</sub>	25
SO <sub>2</sub>	50
NO <sub>x</sub>	50
CO	250

With this amendment the total licensed annual emissions for the facility will be 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.

The facility previously submitted an ambient air quality impact analysis outlined in air emission license A-77-72-B-R (dated March 18, 1992) demonstrating that emissions from the

facility, in conjunction with all other sources, do not violate Ambient Air Quality Standards (AAQS).

### **ORDER**

Based on the above, the Department concludes that the applicant for the air emission license transfer has the capacity to satisfy all applicable statutory criteria and hereby APPROVES the transfer of Air Emission License A-77-71-M-R, from B&G Foods North America, Inc. to IDEALS, subject to all conditions attached to it.

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-77-71-N-A/T subject to the conditions found in Air Emission License A-77-71-M-R 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) of Air Emission License A-77-71-M-R (9/19/2014) is hereby removed.**

**Specific Condition (17) of Air Emission License A-77-71-M-R (9/19/2014) shall be replaced by the following:**

**(17) Boilers #3 and #4**

- A. Boilers #3 and #4 shall fire only natural gas. [06-096 C.M.R. ch. 115, BPT]
- B. IDEALS shall operate flue gas recirculation in Boiler #3. [06-096 C.M.R. ch. 115, BPT]

C. Emissions shall not exceed the following:

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

D. 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)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #3	1.5	1.5	0.1	1.1	1.1	0.2
Boiler #4	1.5	1.5	0.1	2.9	2.4	0.2

E. Visible emissions from Boilers #3 and #4 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 3(A)(3)]

F. IDEALS shall comply with all requirements of 40 C.F.R. Part 60, Subpart Dc applicable to Boilers #3 and #4 including, but not limited to, the following:

IDEALS shall maintain records of the amount of natural gas combusted in Boilers #3 and #4 during each calendar month. [40 C.F.R. § 60.48c(g)(2)]



**Specific Condition (20) of Air Emission License A-77-71-M-R (9/19/2014) is hereby removed.**

**Specific Condition (22) of Air Emission License A-77-71-M-R (9/19/2014) is hereby removed.**

**Specific Condition (24) of Air Emission License A-77-71-M-R (9/19/2014) is hereby removed.**

DONE AND DATED IN AUGUSTA, MAINE THIS 19<sup>th</sup> 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-77-71-M-R.**

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: March 28, 2022

Date of application acceptance: April 1, 2022

Date filed with the Board of Environmental Protection:

This Order prepared by Benjamin Goundie, Bureau of Air Quality.

