



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

Gould Academy
Oxford County
Bethel, Maine
A-721-71-H-A

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

Gould Academy was issued Air Emission License A-721-71-E-R on March 21, 2024, for the operation of emission sources associated with their educational facility. The equipment addressed in this license amendment is located at 39 Church Street, Bethel, Maine.

Gould Academy has requested an amendment to their license in order to do the following:

1. Replace Boilers #1 and #2 with Boiler #8
2. Install Boiler #9 at Holden Hall
3. Modify Boiler #3's burner to fire distillate fuel and propane and reduce the burner heat input capacity.

B. Emission Equipment

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

Boilers

Equipment	Max. Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type	Date of Manuf.	Date of Install.	Stack #
Boiler #3	6.3*	45.0 gal/hr 68.9 gal/hr	Distillate fuel Propane	1998	1998	1
Boiler #8**	5.25	37.5 gal/hr 57.4 gal/hr	Distillate fuel Propane	2024	2024	1
Boiler #9**	1.75	12.5 gal/hr 19.1 gal/hr	Distillate fuel Propane	2024	2024	4
Boiler #1***	6.3	45.0 gal/hr	Distillate fuel	1962	1962	1
Boiler #2***	6.3	45.0 gal/hr	Distillate fuel	1962	1962	1

* Reduced from 10.5 MMBtu/hr

** New to license

*** Removed from license

C. Definitions

Distillate Fuel means the following:

- Fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials (ASTM) in ASTM D396;
- Diesel fuel oil numbers 1 or 2, as defined in ASTM D975;
- Kerosene, as defined in ASTM D3699;
- Biodiesel, as defined in ASTM D6751; or
- Biodiesel blends, as defined in ASTM D7467.

Records or Logs mean either hardcopy or electronic records.

D. 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 Emissions” 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	12.1	8.6	-3.5	100
PM ₁₀	12.1	8.6	-3.5	100
PM _{2.5}	12.1	8.6	-3.5	100
SO ₂	0.1	0.0	-0.1	100
NO _x	24.3	18.2	-6.1	100
CO	8.3	9.5	1.2	100
VOC	0.7	1.1	0.4	100

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

E. Facility Classification

The facility is licensed as follows:

- As a natural minor source of criteria pollutants, 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. Boilers #3, #8, and #9

Gould Academy operates their boilers for heat and hot water needs. Boiler #3 was manufactured and installed in 1998. Gould Academy is modifying Boiler #3's burner to a reduced heat input of 6.3 MMBtu/hr that fires distillate fuel and propane. Gould Academy is installing Boilers #8 and #9 in 2024. Boiler #8 is rated at 5.25 MMBtu/hr and fires distillate fuel and propane. Boiler #9 is rated at 1.75 MMBtu/hr and fires distillate fuel and propane. Boilers #8 and #9 were each manufactured in 2024. Boilers #3 and #8 exhaust through a common stack, Stack #1. Boiler #9 exhausts through its own stack, Stack #4.

State statute directs that, with limited exceptions, no person shall import, distribute, or offer for sale any distillate fuel with a sulfur content greater than 0.0015% by weight (15 ppm) pursuant to 38 M.R.S. § 603-A(2)(A)(3). Therefore, the distillate fuel purchased or otherwise obtained for use in Boilers #3, #8, and #9 shall not exceed 0.0015% by weight (15 ppm).

1. BACT Findings

Following is a BACT analysis for control of emissions from Boilers #3, #8, and #9.

a. Particulate Matter (PM, PM₁₀, PM_{2.5})

Gould Academy has proposed to burn only low-ash content fuels (propane and distillate fuel) in the boilers. Additional add-on pollution controls are not economically feasible.

BACT for PM/PM₁₀/PM_{2.5} emissions from Boilers #3, #8, and #9 is good combustion practices and the emission limits listed in the tables below.

b. Sulfur Dioxide (SO₂)

Gould Academy has proposed to fire only propane and distillate fuel with a sulfur content not to exceed 0.0015% by weight. The use of these fuels results in minimal

emissions of SO₂, and additional add-on pollution controls are not economically feasible.

BACT for SO₂ emissions from Boilers #3, #8, and #9 is good combustion practices and the use of propane and ultra-low-sulfur distillate fuel and the emission limits listed in the tables below.

c. Nitrogen Oxides (NO_x)

Gould Academy considered several control strategies for the control of NO_x including Selective Catalytic Reduction (SCR), Selective Non-Catalytic Reduction (SNCR), water/steam injection, flue gas recirculation (FGR), low-NO_x burners, and use of oxygen trim systems.

Both SCR and SNCR are technically feasible control technologies for minimizing NO_x. Both methods include injection of a NO_x reducing agent, typically ammonia or urea, into the boiler combustion gases, where the reagent reacts with NO_x to form nitrogen and water. Each technology is effective within a specific temperature range, 500 – 1,200 °F for SCR and 1,400 – 1,600 °F for SNCR. However, both SCR and SNCR have the negative environmental impact of emissions of unreacted ammonia. In addition, due to the initial capital cost and the annual operating costs, these systems are typically only considered cost effective for units larger than Boilers #3, #8, and #9.

Water/steam injection and FGR can attain similar NO_x reduction efficiencies through lowering burner flame temperature and thereby reducing thermal NO_x formation. However, both control strategies reduce the boiler's fuel efficiency.

Low NO_x burners and oxygen trim systems reduce emissions by controlling air and fuel. Low-NO_x burners control mixing of fuel and air in a pattern that keeps flame temperature lower and dissipates the heat quickly. The reduced flame temperature lowers the thermal NO_x emissions; the resulting lower oxygen levels in the flame also reduces fuel NO_x emissions. An oxygen trim system monitors the O₂ content in the exhaust gas and automatically adjusts the fuel valve or air damper to optimize the air-to-fuel ratio. Given that the expected maximum NO_x emissions from operating Boilers #3, #8, and #9 at 8,760 hr/yr each is 3.9 tpy, 3.3 tpy, and 0.1 tpy, respectively, additional add-on pollution controls are not economically feasible.

BACT for NO_x emissions from Boilers #3, #8, and #9 is good combustion practices and the emission limits listed in the tables below.

d. Carbon Monoxide (CO) and Volatile Organic Compounds (VOC)

Gould Academy considered several control strategies for the control of CO and VOC including oxidation catalysts and thermal oxidizers.

Oxidation catalysts and thermal oxidizers both have high capital, maintenance, and operational costs considering the size of the boiler in question. These controls were determined to be economically infeasible.

BACT for CO and VOC emissions from Boilers #3, #8, and #9 is good combustion practices and the emission limits listed in the tables below.

e. Good Combustion Practices

In order to maintain good combustion practices, Boilers #3, #8, and #9 will each have burners equipped with combustion management systems. A combustion management system continuously measures the fuel and air flows. The sensor diagram for the combustion management system is shown in Figure 1 below. To compensate for changes in fuel and air flows to maintain optimum burner efficiency, the management system will trim the air damper position to try to optimize the amount of excess air. In addition, the combustion management systems will move the fuel valve, to try to achieve the firing rate required to maintain the optimal heat input.

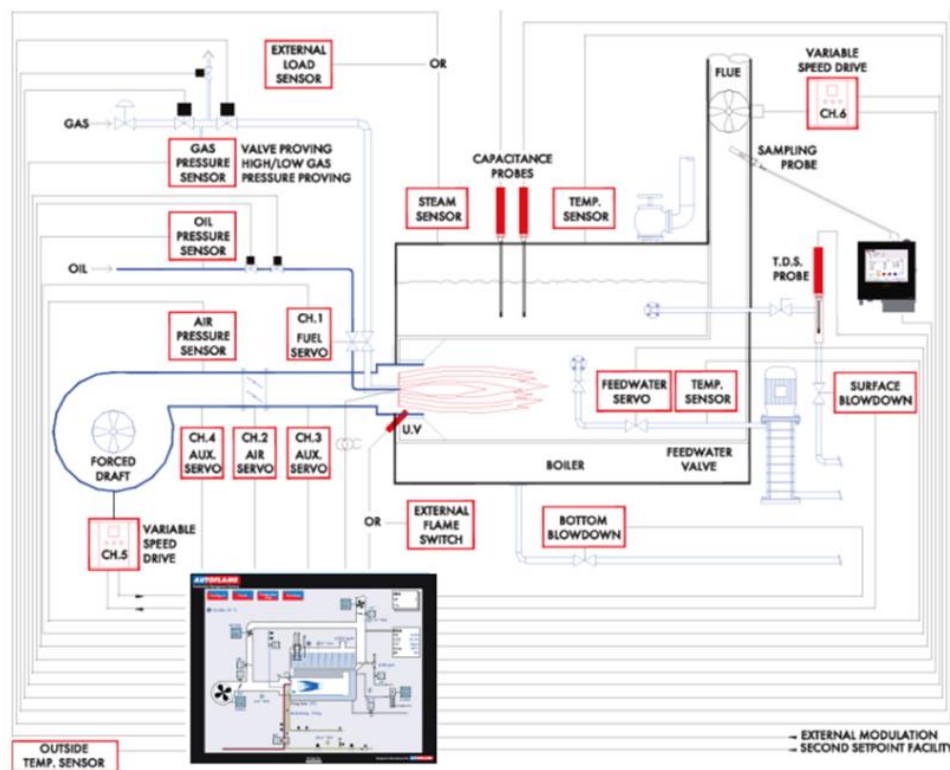


Figure 1. Combustion Management System Sensor Diagram

f. Emission Limits

The BACT emission limits for Boilers #3, #8, and #9 were based on the following:

Distillate Fuel

- PM – 0.08 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
- SO₂ – based on firing distillate fuel with a maximum sulfur content of 0.0015% by weight
- NO_x – 20 lb/1,000 gal based on AP-42 Table 1.3-1 dated 5/10
- CO – 5 lb/1,000 gal based on AP-42 Table 1.3-1 dated 5/10
- VOC – 0.34 lb/1,000 gal based on AP-42 Table 1.3-1 dated 5/10

Natural Gas

- PM – 0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
- SO₂ – 0.018 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08
- NO_x – 13 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08
- CO – 7.5 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08
- VOC – 1 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08

The BACT emission limits for Boilers #3, #8, and #9 are the following:

Unit	Pollutant	lb/MMBtu
Boiler #3 <i>Distillate fuel</i>	PM	0.08
Boiler #3 <i>Propane</i>	PM	0.05
Boiler #8 <i>Distillate fuel</i>	PM	0.08
Boiler #8 <i>Propane</i>	PM	0.05

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #3 <i>Distillate fuel</i>	0.50	0.50	0.50	0.01	0.90	0.23	0.02
Boiler #3 <i>Propane</i>	0.32	0.32	0.32	0.001	0.90	0.52	0.07
Boiler #8 <i>Distillate fuel</i>	0.42	0.42	0.42	0.01	0.75	0.19	0.01
Boiler #8 <i>Propane</i>	0.26	0.26	0.26	0.001	0.75	0.43	0.06
Boiler #9 <i>Distillate fuel</i>	0.14	0.14	0.14	0.003	0.25	0.06	0.004

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #9 <i>Propane</i>	0.09	0.09	0.09	--	0.25	0.14	0.02

2. Visible Emissions

Visible emissions from Stack #1 (Boilers #3 and #8) and Stack #4 (Boiler #9) shall not exceed 20% opacity on a six-minute block average basis when distillate fuel is being fired from the respective stack. [06-096 C.M.R. ch. 101, §§ 4(A)(2) and 4(D)(1)]

Visible emissions from Stack #1 (Boilers #3 and #8) and Stack #4 (Boiler #9) shall not exceed 10% opacity on a six-minute block average basis when only propane is being fired from the respective stack. [06-096 C.M.R. ch. 101, §§ 4(A)(3) and 4(D)(1)]

3. Recordkeeping

Documentation shall include the type of fuel used and sulfur content of the fuel, if applicable.

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

Due to their size, Boilers #3, #8, and #9 are not subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* 40 C.F.R. Part 60, Subpart Dc (Subpart Dc) for units greater than 10 MMBtu/hr manufactured after June 9, 1989. [40 C.F.R. § 60.40c] Boiler #3 was previously subject to Subpart Dc because the maximum design capacity was 10.5 MMBtu/hr. However, Boiler #3's burner is being replaced with one that has a maximum design capacity of 6.3 MMBtu/hr, which is below the applicability threshold; therefore, Boiler #3 is no longer subject to Subpart Dc.

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

Boilers #3, #8, and #9 are 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. Boiler #3 is considered an existing oil boiler rated less than 10 MMBtu/hr. Boilers #8 and #9 are considered new oil boilers rated less than 10 MMBtu/hr. [40 C.F.R. §§ 63.11193 and 63.11195]

Applicable federal 40 C.F.R. Part 63, Subpart JJJJJ requirements include the following. Additional rule information can be found on the following website: <https://www.epa.gov/stationary-sources-air-pollution/compliance-industrial-commercial-and-institutional-area-source>.

a. Compliance Dates, Notifications, and Work Practice Requirements

(1) Initial Notification of Compliance

An Initial Notification submittal to EPA is due within 120 days after the source becomes subject to the standard. [40 C.F.R. § 63.11225(a)(2)]

(2) Boiler Tune-Up Program

(i) A boiler tune-up program shall be implemented. [40 C.F.R. § 63.11223]

Boilers #8 and #9, which are new boilers, are not required to complete an initial performance tune-up. [40 C.F.R. § 63.11210(f)] Per EPA, if the regular tune-up is their only requirement, new boilers also do not have to submit a Notice of Compliance Status (NOCS).

(ii) Tune-ups shall be conducted at a frequency specified by the rule and based on the size, age, and operations of the boiler. See chart below:

Boiler Category	Tune-Up Frequency
Boilers #3 and #8	Every 2 years
Boiler #9, with a heat input capacity less than 5MMBtu/hr	Every 5 years

[40 C.F.R. § 63.11223(a) and Table 2]

(iii) The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:

1. As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted, not to exceed 36 months from the previous inspection for Boilers #3 and #8. Delay of the burner inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for Boiler #9. [40 C.F.R. § 63.11223(b)(1)]
2. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 C.F.R. § 63.11223(b)(2)]
3. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted, not to exceed 36 months from the previous inspection Boilers #3 and #8. Delay of the inspection until the next scheduled shutdown is permitted for up to

72 months from the previous inspection for Boiler #9.
[40 C.F.R. § 63.11223(b)(3)]

4. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]
5. Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 C.F.R. § 63.11223(b)(5)]
6. If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up.
[40 C.F.R. § 63.11223(b)(7)]

(iv) Tune-Up Report: A tune-up report shall be maintained onsite and, submitted to the Department and/or EPA upon request. The report shall contain the following information:

1. The concentration of CO in the effluent stream (ppmv) and oxygen (volume percent) measured at high fire or typical operating load both **before** and **after** the boiler tune-up;
2. A description of any corrective actions taken as part of the tune-up of the boiler; and
3. The types and amounts of fuels used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
[40 C.F.R. § 63.11223(b)(6)]

(3) Compliance Report

For every compliance period, two years for Boilers #3 and #8 and five years for Boiler #9, Gould Academy shall prepare a compliance report by March 1st of the following year to document the information below for the respective compliance period. The report shall be maintained by the source and submitted to the Department and/or to the EPA upon request. The report must include the items contained in §§ 63.11225(b)(1) and (2), including the following:
[40 C.F.R. § 63.11225(b)]

- (i) Company name and address;
- (ii) A statement of whether the source has complied with all the relevant requirements of this Subpart;

- (iii) A statement certifying truth, accuracy, and completeness of the notification and signed by a responsible official and containing the official's name, title, phone number, email address, and signature;
- (iv) The following certifications, as applicable:
 - 1. "This facility complies with the requirements in 40 C.F.R. § 63.11223 to conduct tune-ups of each boiler in accordance with the frequency specified in this Subpart."
 - 2. "No secondary materials that are solid waste were combusted in any affected unit."
 - 3. "This facility complies with the requirement in §§ 63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available."

b. Recordkeeping

- (1) Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart JJJJJJ including the following [40 C.F.R. § 63.11225(c)]:
 - (i) Copies of notifications and reports with supporting compliance documentation;
 - (ii) Identification of each boiler, the date of tune-up, procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned;
 - (iii) Records of the occurrence and duration of each malfunction of each applicable boiler; and
 - (iv) Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler.
- (2) Records shall be in a form suitable and readily available for expeditious review. Each record must be kept for 5 years following the date of each recorded action. Each record must be kept on-site or be accessible from a central location by computer or other means that instantly provides access at the site for at least 2 years after the date of each recorded action. The records may be maintained off-site for the remaining 3 years. [40 C.F.R. § 63.11225(d)] Note: Standard Condition (8) of this license requires all records be retained for six years; therefore, the five-year record retention requirement of Subpart JJJJJJ shall be streamlined to the more stringent six-year requirement.

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 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 Boilers #3, #4, #5, #6, #7, #8, and #9 for 8,760 hr/yr each; and
- Operating Generators #1 and #2 for 100 hrs/yr each for non-emergency operation.

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 ₁₀	PM _{2.5}	SO ₂	NO _x	CO	VOC
Boiler #3	2.2	2.2	2.2	--	3.9	2.3	0.3
Boiler #4	0.9	0.9	0.9	--	1.7	0.4	--
Boiler #5	0.9	0.9	0.9	--	1.7	0.4	--
Boiler #6	1.1	1.1	1.1	--	3.1	1.8	0.2
Boiler #7	1.1	1.1	1.1	--	3.1	1.8	0.2
Boiler #8	1.8	1.8	1.8	--	3.3	1.9	0.3
Boiler #9	0.6	0.6	0.6	--	1.1	0.6	0.1
Generator #1	--	--	--	--	0.1	0.1	--
Generator #2	--	--	--	--	0.2	0.2	--
Total TPY	8.6	8.6	8.6	--	18.2	9.5	1.1

Pollutant	Tons/year
Single HAP	7.9
Total HAP	19.9

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
PM _{2.5}	15
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 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 Gould Academy 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-721-71-H-A subject to the conditions found in Air Emission License A-721-71-G-R and the following condition.

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 (17) of Air Emission License A-721-71-G-R:

(17) **Boilers (#3, #4, #5, #6, #7, #8, and #9)**

A. Fuel

1. Boilers #3, #4, #5, #8, and #9 are licensed to fire distillate fuel.
2. Boilers #3, #4, #5, #6, #7, #8, and #9 are licensed to fire propane.
3. The facility shall not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm).
4. Compliance shall be demonstrated by fuel records showing the percent sulfur of the fuel delivered, if applicable. Fuel sulfur content compliance shall be demonstrated by fuel delivery receipts from the supplier, a statement from the supplier that the fuel delivered meets Maine's fuel sulfur content standards, certificate of analysis, or testing of fuel in the tank on-site.

[06-096 C.M.R. ch. 115, BPT and BACT (Boilers #3, #8, and #9)]

B. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #3 <i>Distillate fuel</i>	PM	0.08	06-096 C.M.R. ch. 115, BACT
Boiler #3 <i>Propane</i>	PM	0.05	06-096 C.M.R. ch. 115, BACT
Boiler #6	PM	0.05	06-096 C.M.R. ch. 115, BPT
Boiler #7	PM	0.05	06-096 C.M.R. ch. 115, BPT
Boiler #8 <i>Distillate fuel</i>	PM	0.08	06-096 C.M.R. ch. 115, BACT
Boiler #8 <i>Propane</i>	PM	0.05	06-096 C.M.R. ch. 115, BACT

C. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BPT and BACT (Boilers #3, #8, and #9)]:

Emission Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #3 <i>Distillate fuel</i>	0.50	0.50	0.50	0.01	0.90	0.23	0.02

Emission Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #3 <i>Propane</i>	0.32	0.32	0.32	0.001	0.90	0.52	0.07
Boiler #4	0.22	0.22	0.22	0.004	0.39	0.10	0.01
Boiler #5	0.22	0.22	0.22	0.004	0.39	0.10	0.01
Boiler #6	0.25	0.25	0.25	0.001	0.72	0.41	0.06
Boiler #7	0.25	0.25	0.25	0.001	0.72	0.41	0.06
Boiler #8 <i>Distillate fuel</i>	0.42	0.42	0.42	0.01	0.75	0.19	0.01
Boiler #8 <i>Propane</i>	0.26	0.26	0.26	0.001	0.75	0.43	0.06
Boiler #9 <i>Distillate fuel</i>	0.14	0.14	0.14	0.003	0.25	0.06	0.004
Boiler #9 <i>Propane</i>	0.09	0.09	0.09	--	0.25	0.14	0.02

D. Visible Emissions

1. Visible emissions from Stack #1 (Boilers #3 and #8) and Stack #4 (Boiler #9) shall not exceed 20% opacity on a six-minute block average basis when distillate fuel is being fired from the respective stack. [06-096 C.M.R. ch. 101, §§ 4(A)(2) and 4(D)(1)]
2. Visible emissions from Stack #1 (Boilers #3 and #8) and Stack #4 (Boiler #9) shall not exceed 10% opacity on a six-minute block average basis when only propane is being fired from the respective stack. [06-096 C.M.R. ch. 101, §§ 4(A)(3) and 4(D)(1)]
3. Visible emissions from Stack and #2 (Boilers #4 and #5) shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(2) and (D)(1)]
4. Visible emissions from Stack #3 (Boilers #6 and #7 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(3) and (D)(1)]

E. Gould Academy shall comply with all requirements of 40 C.F.R. Part 63, Subpart JJJJJ applicable to Boilers #3, #4, #5, #8, and 9 including, but not limited to, the following: [incorporated under 06-096 C.M.R. ch. 115, BPT]

1. The facility shall implement a boiler tune-up program. [40 C.F.R. § 63.11223]

Boilers #8 and #9, which are new boilers, are not required to complete an initial performance tune-up. [40 C.F.R. § 63.11210(f)] Per EPA, if the regular tune-up is

their only requirement, new boilers also do not have to submit a Notice of Compliance Status (NOCS).

- a. Each tune-up shall be conducted at a frequency specified by the rule and based on the size, age, and operations of the boiler. See chart below:

Boiler Category	Tune-Up Frequency
Boilers #3 and #8	Every 2 years
Boilers #4, #5, and #9, with a heat input capacity less than 5 MMBtu/hr	Every 5 years

[40 C.F.R. § 63.11223(a) and Table 2]

- b. The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:
- (1) As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted, not to exceed 36 months from the previous inspection for Boilers #3 and #8. Delay of the burner inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for Boilers #4, #5, and #9. [40 C.F.R. § 63.11223(b)(1)]
 - (2) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 C.F.R. § 63.11223(b)(2)]
 - (3) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted, not to exceed 36 months from the previous inspection for Boilers #3 and #8. Delay of the inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for Boilers #4, #5, and #9. [40 C.F.R. § 63.11223(b)(3)]
 - (4) Optimize total emissions of CO, consistent with manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]
 - (5) Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 C.F.R. § 63.11223(b)(5)]
 - (6) If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up. [40 C.F.R. § 63.11223(b)(7)]

- c. Tune-Up Report: A tune-up report shall be maintained onsite and submitted to the Department and EPA upon request. The report shall contain the following information:
- (1) The concentration of CO in the effluent stream (ppmv) and oxygen (volume percent) measured at high fire or typical operating load both **before** and **after** the boiler tune-up;
 - (2) A description of any corrective actions taken as part of the tune-up of the boiler; and
 - (3) The types and amounts of fuels used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. [40 C.F.R. § 63.11223(b)(6)]

2. Compliance Report

For every compliance period, two years for Boilers #3 and #8 and five years for Boilers #4, #5, and #9, Gould Academy shall prepare a compliance report shall be prepared by March 1st of the following year to document the information below for the respective compliance period. The report shall be maintained by the source and submitted to the Department and/or to the EPA upon request. The report must include the items contained in §§ 63.11225(b)(1) and (2), including the following: [40 C.F.R. § 63.11225(b)]

- a. Company name and address;
- b. A statement of whether the source has complied with all the relevant requirements of this Subpart;
- c. A statement certifying truth, accuracy, and completeness of the notification and signed by a responsible official and containing the official's name, title, phone number, email address, and signature;
- d. The following certifications, as applicable:
 - (1) "This facility complies with the requirements in 40 C.F.R. § 63.11223 to conduct tune-ups of each boiler in accordance with the frequency specified in this Subpart."
 - (2) "No secondary materials that are solid waste were combusted in any affected unit."
 - (3) "This facility complies with the requirement in §§ 63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available."

3. Recordkeeping

- a. Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart JJJJJ including the following [40 C.F.R. § 63.11225(c)]:
 - (1) Copies of notifications and reports with supporting compliance documentation;
 - (2) Identification of each boiler, the date of tune-up, procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned;
 - (3) Records of the occurrence and duration of each malfunction of each applicable boiler; and
 - (4) Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler.
- b. Records shall be in a form suitable and readily available for expeditious review. Each record must be kept for 5 years following the date of each recorded action. Each record must be kept on-site or be accessible from a central location by computer or other means that instantly provides access at the site for at least 2 years after the date of each recorded action. The records may be maintained off-site for the remaining 3 years. [40 C.F.R. § 63.11225(d)] Note: Standard Condition (8) of this license requires all records be retained for six years; therefore, the five-year record retention requirement of Subpart JJJJJ shall be streamlined to the more stringent six-year requirement.

DONE AND DATED IN AUGUSTA, MAINE THIS 31st DAY OF DECEMBER, 2024.

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-721-71-G-R (issued 3/21/2024).

[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: November 14, 2024

Date of application acceptance: November 15, 2024

This Order prepared by Kendra Nash, Bureau of Air Quality.