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

DEPARTMENT ORDER

The President and Trustees of Colby College **Kennebec County** **Waterville, Maine** **A-107-71-X-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

The President and Trustees of Colby College (Colby) was issued Air Emission License A-107-71-W-R/M on April 15, 2016, for the operation of emission sources associated with their educational institution.

Colby has requested an amendment to their license in order to add a new 275-kW natural gas-fired emergency generator (SICE #8) and to address the conversion of SICE #4, #5, and #6 from firing LPG to firing natural gas. The Department is also using this amendment as an opportunity to clarify the recordkeeping required by *Emission Statements*, 06-096 Code of Maine Rules (C.M.R.) ch. 137.

The equipment addressed in this license amendment is located at 5000 Mayflower Hill Drive, Waterville, Maine.

B. Emission Equipment

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

Stationary Engines

Equipment	Max. Input Capacity (MMBtu/hr)	Rated Output Capacity (kW/BHP)	Fuel Type	Firing Rate (scf/hr)	Date of Manuf.	Date of Install.
SICE #4	0.75	60/84	Natural gas	735.3	2005	2005
SICE #5	0.70	50/70	Natural gas	686.3	2004	2005
SICE #6	1.46	105/195	Natural gas	1,431.4	2012	2014
SICE #8	3.22	275/415	Natural gas	3,156.9	2019	2019

Colby may operate small stationary engines smaller than 0.5 MMBtu/hr. These engines are considered insignificant activities and are not required to be included in this license. However, they are still subject to applicable State and Federal regulations. More information regarding requirements for small stationary engines is available on the Department's website at the link below.
http://www.maine.gov/dep/air/publications/docs/SmallRICEGuidance.pdf

Additionally, Colby may operate portable engines used for maintenance or emergency-only purposes. These engines are considered insignificant activities and are not required to be included in this license. However, they may still be subject to applicable State and Federal regulations.

C. Definitions

Portable Engine means an internal combustion engine which is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. This definition does NOT include engines which remain or will remain at a location (excluding storage locations) for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. A location is any single site at a building, structure, facility, or installation. Any engine that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period.

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 Emission" levels as defined in the Department's *Definitions Regulation*, 06-096 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	11.6	11.6	+0.0	100
PM_{10}	11.6	11.6	+0.0	100
SO_2	4.6	4.6	+0.0	100
NO_x	68.6	68.7	+0.1	100
CO	37.0	37.2	+0.2	100
VOC	5.6	5.7	+0.1	50

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

E. Facility Classification

With the annual heat input limit on Boilers 10A, 10B, and 10C and the operating hours restriction on the emergency generators, the facility is licensed as follows:

- As a synthetic minor source of air emissions, because Colby 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. SICE #4, #5, and #6 Fuel Conversion

Colby has requested to amend their license to convert SICE #4-6 from firing LPG as a fuel to firing natural gas as a fuel. This change will not affect the units' license requirements, nor will it affect the licensed lb/hr and annual emission limits for the units; therefore, the Department approves the conversion of SICE #4-6 from firing LPG to firing natural gas.

C. SICE #8

Colby intends to operate SICE #8 as an emergency generator. SICE #8 is a generator set consisting of an engine and an electrical generator. SICE #8 has an engine rated at 3.22 MMBtu/hr (275 kW) which fires natural gas. SICE #8 was manufactured in 2019 and will be installed at Colby's new Athletic Center in late 2019.

1. BACT Findings

a. Particulate Matter (PM and PM_{10})

PM emissions from natural gas-fired engines are generally controlled through proper operation and maintenance of the unit. Additionally, this engine will be subject to 40 C.F.R. Part 60, Subpart JJJJ, which means it will be required to meet EPA emission standards for emergency stationary engines as discussed below. Given the operating hours restrictions for emergency engines in 40 C.F.R. Part 60, Subpart JJJJ, the use of add-on control for SICE #8 is not economically feasible. BACT for PM and PM_{10} emissions from SICE #8 shall be proper operation and maintenance of the unit, installation of an EPA certified emergency stationary engine as required in 40 C.F.R. § 60.4233(e), and emission limits of 0.16 lb/hr each for PM and PM_{10} and 0.05 lb/MMBtu for PM from SICE #8.

b. Sulfur Dioxide (SO_2)

For emergency engines that operate for only short periods of time, the use of wet scrubbers or other additional SO_2 add-on control methods would not be economically feasible considering the minimal emissions due to limited use of the engine. The most practical method for limiting SO_2 emissions from such an engine is the use of low sulfur fuel, such as natural gas. BACT for SO_2 emissions from SICE #8 shall be use of natural gas, installation of an EPA certified emergency stationary engine as required in 40 C.F.R. § 60.4233(e), and an emission limit of 0.01 lb/hr for SICE #8.

c. Nitrogen Oxides (NO_x)

Potentially available control options for reducing emissions of NO_x from natural gas-fired generators include combustion controls, selective catalytic reduction (SCR) and non-selective catalytic reduction (NSCR). Combustion controls are typically implemented through design features such as electronic engine controls, injection systems, combustion chamber geometry, and turbocharging systems.

SCR and NSCR are both post-combustion NO_x reduction technologies. SCR uses ammonia to react with NO_x in the gas stream in the presence of a catalyst to form nitrogen and water. NSCR uses a catalyst to convert CO, NO_x, and hydrocarbons into carbon dioxide, nitrogen, and water without the use of an additional reagent, and requires strict air-to-fuel control to maintain high reduction effectiveness without increasing hydrocarbon emissions. For a unit of this usage (emergency back-up engine), neither SCR nor NSCR would be economically feasible considering the minimal emissions due to limited use of the engine.

BACT for NO_x emissions from SICE #8 shall be the use of good combustion controls, proper operation and maintenance of the unit, installation of an EPA certified emergency stationary engine as required in 40 C.F.R. § 60.4233(e), and an emission limit of 2.73 lb/hr.

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

CO and VOC emissions are a result of incomplete combustion, caused by conditions such as insufficient residence time or limited oxygen availability. CO and VOC emissions from natural gas-fired generators are generally controlled through proper operation and maintenance of the unit. Oxidation catalysts have been used on large generators to reduce CO and VOC emission levels in the exhaust but, like SCR and NSCR, use of an oxidation catalyst on an emergency engine with limited yearly use would not provide a significant environmental benefit and would not be economically feasible. BACT for CO and VOC emissions from SICE #8 shall be proper operation and maintenance of the unit, installation of an EPA certified emergency stationary engine as required in 40 C.F.R. § 60.4233(e), and emission limits of 3.66 lb/hr for CO and 0.91 lb/hr for VOC.

e. Visible Emissions

Visible emissions from SICE #8 shall not exceed 10% opacity on a six-minute block average basis. During periods of startup, Colby may elect to comply with the following work practice standards in lieu of the numerical visible emissions limit:

(1) Colby shall maintain a log (written or electronic) of the date, time, and duration of all generator startups;
(2) The generator shall be operated in accordance with the manufacturer's emission-related operating instructions;
(3) Colby shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations shall apply; and

(4) The generator, including any associated air pollution control equipment, shall be operated at all times in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the unit.

The Department has determined that the proposed BACT visible emissions limit is more stringent than the applicable limit currently in 06-096 C.M.R. ch. 101. Therefore, the visible emissions limit for SICE #8 shall be streamlined to the more stringent BACT limit, and only this more stringent limit shall be included in the air emission license.

2. Emission Limits

The BACT emission limits for SICE #8 are based on the following:

PM/PM_{10}	- 0.05 lb/MMBtu from 06-096 C.M.R. ch. 115, BACT
SO_2	- 0.000588 lb/MMBtu from AP-42, Table 3.2-2, dated 7/00
NO_x	- 0.847 lb/MMBtu from AP-42, Table 3.2-2, dated 7/00
CO	- 4.0 g/hp-hr from 40 C.F.R. Part 60, Subpart JJJJ
VOC	- 1.0 g/hp-hr from 40 C.F.R. Part 60, Subpart JJJJ
Opacity	- 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for SICE #8 are the following:

Unit	Pollutant	lb/MMBtu
SICE #8	PM	0.05

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
SICE #8	0.16	0.16	0.01	2.73	3.66	0.91

Visible emissions from SICE #8 shall not exceed 10% opacity on a six-minute block average basis. During periods of startup, Colby may elect to comply with the following work practice standards in lieu of the numerical visible emissions limit:

a. Colby shall maintain a log (written or electronic) of the date, time, and duration of all generator startups;
b. The generator shall be operated in accordance with the manufacturer's emission-related operating instructions;

c. Colby shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations shall apply; and

d. The generator, including any associated air pollution control equipment, shall be operated at all times in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the unit.

3. 40 C.F.R. Part 60, Subpart JJJJ

Standards of Performance for Spark Ignition Internal Combustion Engines, 40 C.F.R. Part 60, Subpart JJJJ is applicable to the emergency engine listed above since the unit was ordered after June 12, 2006, and manufactured after January 1, 2009. [40 C.F.R. § 60.4230] By meeting the requirements of 40 C.F.R. Part 60, Subpart JJJJ, the unit also meets the requirements found in the *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 C.F.R. Part 63, Subpart ZZZZ. [40 C.F.R. § 63.6590(c)]

A summary of the currently applicable federal 40 C.F.R. Part 60, Subpart JJJJ requirements is listed below.

a. Emergency Engine Designation and Operating Criteria

Under 40 C.F.R. Part 60, Subpart JJJJ, a stationary reciprocating internal combustion engine (ICE) is considered an emergency stationary ICE (emergency engine) as long as the engine is operated in accordance with the following criteria. Operation of an engine outside of the criteria specified below may cause the engine to no longer be considered an emergency engine under 40 C.F.R. Part 60, Subpart JJJJ, resulting in the engine being subject to requirements applicable to non-emergency engines.

(1) Emergency Situation Operation (On-Site)

There is no operating time limit on the use of an emergency engine to provide electrical power or mechanical work during an emergency situation. Examples of use of an emergency engine during emergency situations include the following:

- Use of an engine to produce power for critical networks or equipment (including power supplied to portions of a facility) because of failure or interruption of electric power from the local utility (or the normal power source, if the facility runs on its own power production);
- Use of an engine to mitigate an on-site disaster or equipment failure;
- Use of an engine to pump water in the case of fire, flood, natural disaster, or severe weather conditions; and
- Similar instances.

(2) Non-Emergency Situation Operation

An emergency engine may be operated up to a maximum of 100 hours per calendar year for maintenance checks, readiness testing, and other non-emergency situations as described below.

(i) An emergency engine may be operated for a maximum of 100 hours per calendar year for maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government; the manufacturer; the vendor; the regional transmission organization or equivalent balancing authority and transmission operator; or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE more than 100 hours per calendar year.

(ii) An emergency engine may be operated for up to 50 hours per calendar year for other non-emergency situations. **However, these operating hours are counted as part of the 100 hours per calendar year operating limit described in paragraph (2) and (2) (i) above.**

The 50 hours per calendar year operating limit for other non-emergency situations cannot be used for peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

[40 C.F.R. §§ 60.4243(d) and 60.4248]

b. 40 C.F.R. Part 60, Subpart JJJJ Requirements

(1) Manufacturer Certification Requirement

The engine shall be certified by the manufacturer as meeting the emission standards for new nonroad spark ignition engines found in 40 C.F.R. Part 60, Subpart JJJJ, Table 1. [40 C.F.R. § 60.4233(e)]

(2) Non-Resettable Hour Meter Requirement

A non-resettable hour meter shall be installed and operated on the engine. [40 C.F.R. § 60.4237]

(3) Operation and Maintenance Requirement

The engine shall be operated and maintained according to the manufacturer's written instructions or procedures developed by Colby that are approved by the engine manufacturer. Colby may only change those settings that are permitted by the manufacturer. [40 C.F.R. § 60.4243]

(4) Annual Time Limit for Maintenance and Testing

As an emergency engine, the unit shall be limited to 100 hours/year for maintenance and testing. The emergency engine may operate up to 50 hours per year in non-emergency situations, but those 50 hours are included in the 100 hours total allowed for maintenance and testing. The 50 hours for non-emergency use cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 C.F.R. § 60.4243(d)]

(5) Recordkeeping

Colby shall keep records that include maintenance conducted on the engine and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the number of hours the unit operated for emergency purposes, the number of hours the unit operated for non-emergency purposes, and the reason the engine was in operation during each time. [40 C.F.R. § 60.4245(b)]

D. Emissions Statement

The following language is being included to clarify the recordkeeping requirements of 06-096 C.M.R. ch. 137:

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

1. The amount of natural gas fired in Boilers 10A, 10B, and 10C and SICE #4-6 and #8 (each) on a monthly basis;
2. The amount of LPG fired in Boilers 10A, 10B, and 10C on a monthly basis;
3. The amount of wood fired (at 45% moisture) in Boilers BIO1 and BIO2 on a monthly basis;
4. The sulfur content of the distillate fuel fired in SICE #1-3 and #7; and
5. Hours each emission unit was operating on a monthly basis.

In reporting year 2020 and every third year thereafter, Colby 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. Colby 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)]

E. Annual Emissions

Colby shall be restricted to the following annual emissions, based on a 12-month rolling total. The tons per year limits were calculated based on the following:

- A combined heat input limit of 246,840 MMBtu/year for Boilers 10A, 10B, and 10C;
- Operating Boilers BIO1 and BIO2 for 8,760 hours/year (each); and
- Operating SICE #1-8 for 100 hours/year (each).

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
Boilers 10A, 10B, and 10C	6.2	6.2	0.1	12.3	10.2	2.5
Boilers BIO1 and BIO2	5.3	5.3	4.4	54.8	26.3	3.0
SICE #1-8	0.1	0.1	0.1	1.6	0.7	0.2
Total TPY	**11.6**	**11.6**	**4.6**	**68.7**	**37.2**	**5.7**

Pollutant	Tons/year
Single HAP	9.9
Total HAP	24.9

III. AMBIENT AIR QUALITY ANALYSIS

Colby previously submitted an ambient air quality impact analysis for PM_{10}, SO_2, NO_2, and CO for air emission license A-107-71-Q-R/A (dated November 5, 2010) and for NO_2 for air emission license amendment A-107-71-S-M (dated October 25, 2013) demonstrating that emissions from the facility, in conjunction with all other sources, do not violate Ambient Air Quality Standards (AAQS). An additional air quality impact analysis is not required for 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-107-71-X-A subject to the conditions found in Air Emission License A-107-71-W-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

The following shall replace Conditions (18) and (19) of Air Emission License A-107-71-W-R/M (April 15, 2016):

(18) **SICE #1-5**

A. SICE #1-5 shall each be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 C.M.R. ch. 115, BPT]

B. Colby shall keep records that include maintenance conducted on the engines and the hours of operation of each engine recorded through the non-resettable hour meter. Documentation shall include the number of hours each unit operated for emergency purposes, the number of hours each unit operated for non-emergency purposes, and the reason each engine was in operation during each time. [06-096 C.M.R. ch. 115, BPT]

C. The fuel sulfur content for SICE #1-3 shall be limited to 0.0015% sulfur by weight. Compliance shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of the tank containing the fuel to be fired. [06-096 C.M.R. ch. 115, BPT]

D. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
SICE #2	PM	0.12	06-096 C.M.R. ch. 103, § 2.B.(1)(a)

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

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
SICE #1 Distillate fuel	0.30	0.30	0.01	11.03	2.38	0.88
SICE #2 Distillate fuel	0.59	0.59	0.01	15.68	4.17	0.44
SICE #3 Distillate fuel	0.07	0.07	0.01	2.47	0.53	0.20
SICE #4 Natural gas	0.04	0.04	0.01	0.64	0.42	0.09
SICE #5 Natural gas	0.04	0.04	0.01	0.59	0.39	0.08

F. Visible Emissions

1. Visible emissions from SICE #1-3 shall each not exceed 20% opacity on a six-minute block average basis, except for no more than two six-minute block averages in a three-hour period. [06-096 C.M.R. ch. 115, BPT]
2. Visible emissions from SICE #4-5 shall each not exceed 10% opacity on a six-minute block average basis, except for no more than one six-minute block average in a three-hour period. [06-096 C.M.R. ch. 115, BPT]

G. SICE #1-5 are only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. SICE #1-5 are not to be used for prime power when reliable offsite power is available; nor to operate or to be contractually obligated to be available in a demand response program, during a period of deviation from standard voltage or frequency or supplying power during a non-emergency situation as part of a financial arrangement with another entity. [06-096 C.M.R. ch. 115, BPT]

(19) **SICE #6-8**

A. SICE #6-8 shall each be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 C.M.R. ch. 115, BPT]

B. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
SICE #8	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 (SICE #6-7) and 06-096 C.M.R. ch. 115, BACT (SICE #8)]:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
SICE #6	0.01	0.01	0.01	0.86	1.72	0.43
SICE #7	0.06	0.06	0.01	0.66[1]	0.70	0.66[2]
SICE #8	0.16	0.16	0.01	2.73	3.66	0.91

1. This is the calculated worst-case emissions for NO_x, assuming that all of the pollutants covered in the NMHC + NO_x emission factor is NO_x.
2. This is the calculated worst-case emissions for VOC, assuming that all of the pollutants covered in the NMHC + NO_x emission factor is VOC.

D. Visible Emissions

1. Visible emissions from SICE #6 shall not exceed 10% opacity on a six-minute block average basis, except for no more than two six-minute block averages in a continuous three-hour period. [06-096 C.M.R. ch. 115, BPT]

2. Visible emissions from SICE #7 shall not exceed 20% opacity on a six-minute block average basis, except for no more than two six-minute block averages in a continuous three-hour period. [06-096 C.M.R. ch. 101, § 2.A.(4)]

3. Visible emissions from SICE #8 shall not exceed 10% opacity on a six-minute block average basis. During periods of startup, Colby may elect to comply with the following work practice standards in lieu of this numerical emission standard [06-096 C.M.R. ch. 115, BACT]:

   a. Colby shall maintain a log (written or electronic) of the date, time, and duration of all generator startups;

   b. The generator shall be operated in accordance with the manufacturer's emission-related operating instructions;

   c. Colby shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations shall apply; and

   d. The generator, including any associated air pollution control equipment, shall be operated at all times in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the unit.

E. SICE #7 shall meet the applicable requirements of 40 C.F.R. Part 60, Subpart IIII, including the following [incorporated under 06-096 C.M.R. ch. 115, BPT]:

1. Manufacturer Certification

   The engine shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in §60.4202. [40 C.F.R. § 60.4205(b)]

2. Ultra-Low Sulfur Fuel

   The fuel fired in the engine shall not exceed 15 ppm sulfur (0.0015% sulfur). Compliance with the fuel sulfur content limit shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of the tank containing the fuel to be fired. [40 C.F.R. § 60.4207(b) and 06-096 C.M.R. ch. 115, BPT]

3. Non-Resettable Hour Meter

   A non-resettable hour meter shall be installed and operated on the engine. [40 C.F.R. § 60.4209(a)]

4. Annual Time Limit for Maintenance and Testing

   a. As an emergency engine, the unit shall be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity). These limits are based on a calendar year. Compliance shall be demonstrated by records (electronic or written log) of all engine operating hours. [40 C.F.R. § 60.4211(f) and 06-096 C.M.R. ch. 115, BPT]

   b. Colby shall keep records that include maintenance conducted on the engine and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the number of hours the unit operated for emergency purposes, the number of hours the unit operated for non-emergency purposes, and the reason the engine was in operation during each time. [40 C.F.R. § 60.4214(b)]

5. Operation and Maintenance

   The engine shall be operated and maintained according to the manufacturer's emission-related written instructions. Colby may only change those emission-related settings that are permitted by the manufacturer. [40 C.F.R. § 60.4211(a)]

F. SICE #6 and #8 shall meet the applicable requirements of 40 C.F.R. Part 60, Subpart JJJJ, including the following [incorporated under 06-096 C.M.R. ch. 115, BPT]:

1. Manufacturer Certification

   The engines shall be certified by the manufacturer as meeting the emission standards for new nonroad spark ignition engines found in 40 C.F.R. Part 60, Subpart JJJJ, Table 1. [40 C.F.R. § 60.4233(e)]

2. Non-Resettable Hour Meter

   A non-resettable hour meter shall be installed and operated on each engine. [40 C.F.R. § 60.4237 and 06-096 C.M.R. ch. 115, BPT]

3. Annual Time Limit for Maintenance and Testing

   a. As emergency engines, the units shall each be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity). The limits are based on a calendar year. Compliance shall be demonstrated by records (electronic or written log) of all engine operating hours. [40 C.F.R. § 60.4243(d) and 06-096 C.M.R. ch. 115, BPT]

   b. Colby shall keep records that include maintenance conducted on the engines and the hours of operation of each engine recorded through the non-resettable hour meter. Documentation shall include the number of hours each unit operated for emergency purposes, the number of hours each unit operated for non-emergency purposes, and the reason each engine was in operation during each time. [40 C.F.R. § 60.4245(b)]

4. Operation and Maintenance

   Each engine shall be operated and maintained according to the manufacturer's written instructions or procedures developed by Colby that are approved by the engine manufacturer. Colby may only change those settings that are permitted by the manufacturer. [40 C.F.R. § 60.4243]

The following shall replace Condition (24) of Air Emission License A-107-71-W-R/M (April 15, 2016):

(24) **Annual Emission Statement**

A. In accordance with *Emission Statements*, 06-096 C.M.R. ch. 137, Colby 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. Colby 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 Boilers 10A, 10B, and 10C and SICE #4-6 and #8 (each) on a monthly basis;
2. The amount of LPG fired in Boilers 10A, 10B, and 10C on a monthly basis;
3. The amount of wood fired (at 45% moisture) in Boilers BIO1 and BIO2 on a monthly basis;
4. The sulfur content of the distillate fuel fired in SICE #1-3 and #7; and
5. Hours each emission unit was operating on a monthly basis.

[06-096 C.M.R. ch. 137]

C. In reporting year 2020 and every third year thereafter, Colby shall report to the Department emissions of hazardous air pollutants as required by 06-096 C.M.R. ch. 137, § (3)(C). Colby 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)]

DONE AND DATED IN AUGUSTA, MAINE THIS 29th DAY OF October , 2019.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: for
GERALD D. REID, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License ~~A-107-71~~-W-R/M.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: October 2, 2019
Date of application acceptance: October 3, 2019

Date filed with the Board of Environmental Protection:

This Order prepared by Jonathan E. Rice, Bureau of Air Quality.