



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

DEPARTMENT ORDER

Kate's Homemade Butter, Inc.
York County
Arundel, Maine
A-1156-71-A-N

Departmental
Findings of Fact and Order
Air Emission License

FINDINGS OF FACT

After review of the air emission license 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

Kate's Homemade Butter, Inc. (Kate's) has applied for an Air Emission License for the operation of emission sources associated with their agricultural dairy facility.

The equipment addressed in this license is located at 24 Dairy Lane, Arundel, Maine.

B. Title, Right, or Interest

In their application, Kate's submitted copies of a lease demonstrating interest in the facility. Kate's has provided sufficient evidence of title, right, or interest in the facility for purposes of this air emission license.

C. Emission Equipment

The following equipment is addressed in this air emission license:

Boilers

Equipment	Max. Capacity (MMBtu/hr)	Maximum Firing Rate (gal/hr)	Fuel Type, % sulfur	Date of Manuf.	Date of Install.	Stack #
Steam Boiler #1	2.48	27	propane, neg.	2013	2013	Steam 1
Steam Boiler #2	2.48	27	propane, neg.	2013	2013	

Stationary Engines

Equipment	Max. Input Capacity (MMBtu/hr)	Rated Output Capacity (kW)	Fuel Type, % sulfur	Firing Rate (gal/hr)	Date of Manuf.	Date of Install.
Generator #1	7.47	600	distillate fuel, 0.0015%	54.5	2001	2018

Kate's 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, Kate's 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.

D. 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.

E. 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.

Kate's is classified as an existing source that is applying for its first air emission license after-the-fact. The Department has determined the facility is a minor source, and the application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (C.M.R.) ch. 115.

F. Facility Classification

With the annual operating hours restriction on the emergency generator, the facility is licensed as follows:

- As a synthetic minor source of air emissions, because Kate's 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.

B. Steam Boilers #1 and #2

Kate's operates Steam Boilers #1 and #2 for heat. The boilers are rated at 2.48 MMBtu/hr each and fire propane. The boilers were installed in 2013 and exhaust through a common stack.

1. BACT Findings

Following is a BACT analysis for control of emissions from Steam Boilers #1 and #2.

a. Particulate Matter (PM, PM₁₀)

Kate's has proposed to burn only low-ash content fuel (propane) in the boilers and to optimize combustion by performing annual tune-ups. Additional add-on pollution controls are not economically feasible.

BACT for PM/PM₁₀ emissions from Steam Boilers #1 and #2 is annual tune-ups and the emission limits listed in the tables below.

b. Sulfur Dioxide (SO₂)

Kate's has proposed to fire only propane. The use of this fuel results in minimal emissions of SO₂, and additional add-on pollution controls are not economically feasible.

BACT for SO₂ emissions from Steam Boilers #1 and #2 is the use of propane and the emission limits listed in the tables below.

c. Nitrogen Oxides (NO_x)

Kate's 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), and performing annual tune-ups.

Both SCR and SNCR are technically feasible control technologies for minimizing NO_x. However, they have a 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 Steam Boilers #1 and #2.

Water/steam injection and FGR have similar NO_x reduction efficiencies. However, water/steam injection results in reduced boiler efficiency of approximately 5 percent.

BACT for NO_x emissions from Steam Boilers #1 and #2 is performing annual tune-ups and the emission limits listed in the tables below.

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

Kate's considered several control strategies for the control of CO and VOC including oxidation catalysts, thermal oxidizers, and performing annual tune-ups.

Oxidation catalysts and thermal oxidizers both have high capital, maintenance, and operational costs considering the size of the boilers in question. These controls were determined to not be economically feasible.

BACT for CO and VOC emissions from Steam Boilers #1 and #2 is performing annual tune-ups and the emission limits listed in the tables below.

2. Emission Limits

The BACT emission limits for Steam Boilers #1 and #2 were based on the following:

Propane

- PM/PM₁₀ – 0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
- SO₂ – 0.018 lb/10³ gal based on AP-42 Table 1.5-1 dated 7/08
- NO_x – 13 lb/10³ gal based on AP-42 Table 1.5-1 dated 7/08
- CO – 7.5 lb/10³ gal based on AP-42 Table 1.5-1 dated 7/08
- VOC – 1 lb/10³ gal based on AP-42 Table 1.5-1 dated 7/08
- Visible Emissions – 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Steam Boilers #1 and #2 are the following:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Steam Boiler #1	0.12	0.12	--	0.36	0.21	0.03
Steam Boiler #2	0.12	0.12	--	0.36	0.21	0.03

3. Visible Emissions

Visible emissions from the stack associated with Steam Boilers #1 and #2 shall not exceed 10% opacity on a six-minute block average basis.

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

Due to their size, Steam Boilers #1 and #2 are not subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* 40 C.F.R. Part 60, Subpart Dc. [40 C.F.R. § 60.40c]

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

Steam Boilers #1 and #2 are not subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63, Subpart JJJJJ due to firing exclusively propane. [40 C.F.R. § 63.11195]

C. Generator #1

Kate's operates one emergency generator, Generator #1. The emergency generator is a generator set consisting of an engine and an electrical generator. Generator #1 has an engine rated at 7.47 MMBtu/hr which fires distillate fuel. Generator #1 was manufactured in 2001.

1. BACT Findings

a. Particulate Matter (PM and PM₁₀)

PM emissions from distillate fuel-fired engines are generally controlled through proper operation and maintenance of the engines. Given the limited operating hours (100 hrs/year non-emergency operation), additional control for PM is not economically feasible.

BACT for PM/PM₁₀ emissions from Generator #1 shall be proper operation and maintenance of the unit and emission limits listed in the table below.

b. Sulfur Dioxide (SO₂)

For an emergency engine that fires distillate fuel and operates infrequently for only short periods of time, the use of a wet scrubber or other additional SO₂ add-on control methods are not economically feasible considering the minimal emissions due to the limited use of the engine. The most practical method for limiting SO₂ emissions of such engines is the use of low sulfur fuel, such as distillate fuel with a sulfur content no greater than 0.0015% by weight.

BACT for SO₂ emissions from Generator #1 shall be the use of distillate fuel with a sulfur content no greater than 0.0015% by weight and SO₂ emission limits listed in the table below.

c. Nitrogen Oxides (NO_x)

Potentially available control options for reducing NO_x emissions from distillate fuel-fired engines include combustion controls, selective catalytic reduction (SCR), and selective non-catalytic reduction (SNCR). Combustion controls are implemented through design features such as electronic engine controls, injection systems, combustion chamber geometry, and turbocharging systems.

SCR and SNCR are both post-combustion NO_x reduction technologies. SCR injects ammonia to react with NO_x in the gas stream in the presence of a catalyst to form nitrogen and water. SNCR injects ammonia without the use of a catalyst to convert CO, NO_x, and hydrocarbons into carbon dioxide, nitrogen, and water, and requires strict air-to-fuel control to maintain high reduction effectiveness without increasing

hydrocarbon emissions. For units of this size (7.47 MMBtu/hr) and usage (emergency back-up engine), neither SCR nor SNCR are economically feasible considering the small size of the unit and the minimal emissions due to the limited use of the engine.

BACT for NO_x emissions from Generator #1 shall be the use of good combustion controls, proper operation and maintenance of the unit, and the NO_x emission limit listed in the table below.

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 distillate fuel-fired engines are generally controlled through proper operation and maintenance. Oxidation catalysts have been used on larger engines to reduce CO and VOC emission levels in the exhaust; however, like SCR and NSCR, use of an oxidation catalyst on an 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 Generator #1 shall be proper operation and maintenance of the unit and emission limits listed in the table below.

2. The BACT emission limits for Generator #1 are based on the following:

- PM/PM₁₀ - 0.12 lb/MMBtu from 06-096 C.M.R. ch. 103
- SO₂ - combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
- NO_x - 3.2 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96
- CO - 0.85 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96
- VOC - 0.09 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96
- Visible Emissions - 06-096 C.M.R. ch. 101

The BACT emission limits for Generator #1 are the following:

Unit	Pollutant	lb/MMBtu
Generator #1	PM	0.12

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	0.90	0.90	0.01	23.89	6.35	0.67

3. Visible emissions from Generator #1 shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time Kate's may comply with the following work practice standards in lieu of the numerical visible emissions standard.
 - a. Maintain a log (written or electronic) of the date, time, and duration of all generator startups.
 - b. Operate the generator in accordance with the manufacturer's emission-related operating instructions.
 - c. 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.
 - d. Operate the generator, including any associated air pollution control equipment, 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.
4. New Source Performance Standards (NSPS)

Due to the date of manufacture of Generator #1, the engine is not subject to the New Source Performance Standards (NSPS) *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE)*, 40 C.F.R. Part 60, Subpart III since the unit was manufactured prior to April 1, 2006. [40 C.F.R. § 60.4200]

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

National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 C.F.R. Part 63, Subpart ZZZZ is applicable to Generator #1. The unit is considered an existing, emergency, stationary, reciprocating internal combustion engine at an area HAP source and is not subject to New Source Performance Standards regulations. EPA's August 9, 2010 memo (*Guidance Regarding Definition of Residential, Commercial, and Institutional Emergency Stationary RICE in the NESHAP for Stationary RICE*) specifically does not exempt this unit from the federal requirements.
[40 C.F.R. § 63.6585]

A summary of the currently applicable federal 40 C.F.R. Part 63, Subpart ZZZZ requirements is listed below.

a. Emergency Engine Designation and Operating Criteria

Under 40 C.F.R. Part 63, Subpart ZZZZ, a stationary reciprocating internal combustion engine (RICE) is considered an **emergency** stationary RICE (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 63, Subpart ZZZZ, 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 RICE 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.

Generator #1 shall be limited to the usage outlined in 40 C.F.R. § 63.6640(f) and therefore may be classified as an existing emergency stationary RICE as defined in 40 C.F.R. Part 63, Subpart ZZZZ. Failure to comply with all of the requirements listed in 40 C.F.R. § 63.6640(f) may cause this engine to not be considered an emergency engine and therefore subject to all applicable requirements for non-emergency engines.

b. 40 C.F.R. Part 63, Subpart ZZZZ Requirements

(1) Operation and Maintenance Requirements

	Operating Limitations
Compression ignition (distillate fuel) units: Generator # 1	<ul style="list-style-type: none">- Change oil and filter every 500 hours of operation or annually, whichever comes first;- Inspect the air cleaner every 1000 hours of operation or annually, whichever comes first, and replace as necessary; and- Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

[40 C.F.R. § 63.6603(a) and Table 2(d)]

The engine shall be operated and maintained according to the manufacturer's emission-related written instructions, or Kate's shall develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

[40 C.F.R. § 63.6625(e)]

(2) Optional Oil Analysis Program

Kate's has the option of utilizing an oil analysis program which complies with the requirements of § 63.6625(i) in order to extend the specified oil change requirement. If this option is used, Kate's must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil

changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 C.F.R. § 63.6625(i)]

(3) Non-Resettable Hour Meter Requirement

A non-resettable hour meter shall be installed and operated on the engine. [40 C.F.R. § 63.6625(f)]

(4) Startup Idle and Startup Time Minimization Requirements

During periods of startup the facility must minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 C.F.R. § 63.6625(h)]

(5) Annual Time Limit for Maintenance and Testing

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). [40 C.F.R. § 63.6640(f)]

(6) Recordkeeping

Kate's 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. § 63.6655(f)]

D. Fugitive Emissions

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity on a five-minute block average basis.

E. General Process Emissions

Visible emissions from any general process source shall not exceed 20% opacity on a six-minute block average basis.

F. 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. 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 Generator #1 for 100 hrs/yr; and
- Operating Steam Boilers #1 and #2 for 8,760 hr/yr each.

Please note, this information provides the basis for fee calculation only and 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)

	PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Steam Boiler #1	0.54	0.54	--	1.56	0.90	0.12
Steam Boiler #2	0.54	0.54	--	1.56	0.90	0.12
Generator #1	0.04	0.04	--	1.19	0.32	0.03
Total TPY	1.2	1.2	--	4.4	2.2	0.3

Pollutant	Tons/year
Single HAP	9.9
Total HAP	24.9

III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source is determined by the Department on a case-by case basis. In accordance with 06-096 C.M.R. ch. 115, an ambient air quality impact analysis is not required for a minor source if the total licensed annual emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

Pollutant	Tons/Year
PM ₁₀	25
SO ₂	50
NO _x	50
CO	250

The total licensed annual emissions for the facility are below the emission levels contained in the table above and there are no extenuating circumstances; therefore, an ambient air quality impact analysis is not required as part of this license.

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 A-1156-71-A-N subject to the following conditions.

Severability. The invalidity or unenforceability of any provision of this License or part thereof shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S. § 347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 C.M.R. ch. 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 C.M.R. ch. 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 C.M.R. ch. 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S. § 353-A. [06-096 C.M.R. ch. 115]

- (6) The license does not convey any property rights of any sort, or any exclusive privilege.
[06-096 C.M.R. ch. 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 C.M.R. ch. 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.
[06-096 C.M.R. ch. 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license.
[06-096 C.M.R. ch. 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.
[06-096 C.M.R. ch. 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 C.F.R. Part 60 or other method approved or required by the Department, the licensee shall:
 - A. Perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 1. Within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions;
or
 2. Pursuant to any other requirement of this license to perform stack testing.
 - B. Install or make provisions to install test ports that meet the criteria of 40 C.F.R. Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - C. Submit a written report to the Department within thirty (30) days from date of test completion.
[06-096 C.M.R. ch. 115]

- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. Within thirty (30) days following receipt of the written test report by the Department, or another alternative timeframe approved by the Department, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 C.F.R. Part 60 or other method approved or required by the Department; and
 - B. The days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - C. The licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
[06-096 C.M.R. ch. 115]
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or license requirement. [06-096 C.M.R. ch. 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 C.M.R. ch. 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.
[06-096 C.M.R. ch. 115]

- (16) The licensee shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S. § 605). [06-096 C.M.R. ch. 115]

SPECIFIC CONDITIONS

(17) **Steam Boilers #1 and #2**

- A. Kate's shall perform an annual tune-up for both Steam Boilers #1 and #2. O₂ and CO concentrations shall be recorded for both the pre- and post tune-up conditions of the boilers. These records shall be maintained for a period of 6 years.
[06-096 C.M.R. ch. 115, BACT]
- B. Steam Boilers #1 and #2 shall fire propane exclusively.
[06-096 C.M.R. ch. 115, BACT]
- C. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BACT]:

Emission Unit	PM (lb/hr)	PM₁₀ (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Steam Boiler #1	0.12	0.12	--	0.36	0.21	0.03
Steam Boiler #2	0.12	0.12	--	0.36	0.21	0.03

- D. Visible emissions from the stack associated with Steam Boilers #1 and #2 shall not exceed 10% opacity on a six-minute block average basis.
[06-096 C.M.R. ch. 115, BACT]

(18) **Generator #1**

- A. Generator #1 shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 C.M.R. ch. 115, BACT]
- B. The fuel sulfur content for Generator #1 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, BACT]
- C. Emissions shall not exceed the following:

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

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

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	0.90	0.90	0.01	23.89	6.35	0.67

E. Visible Emissions

Visible emissions from Generator #1 shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time Kate's may comply with the following work practice standards in lieu of the numerical visible emissions standard. [06-096 C.M.R. ch. 101, § 3(A)(4)]

1. Maintain a log (written or electronic) of the date, time, and duration of all generator startups.
2. Operate the generator in accordance with the manufacturer's emission-related operating instructions.
3. 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.
4. Operate the generator, including any associated air pollution control equipment, 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.

F. Generator #1 shall meet the applicable requirements of 40 C.F.R. Part 63, Subpart ZZZZ, including the following:
[incorporated under 06-096 C.M.R. ch. 115, BPT]

1. Kate's shall meet the following operational limitations for the compression ignition emergency engine:
 - a. Change the oil and filter every 500 hours of operation or annually, whichever comes first;
 - b. Inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and

- c. Inspect the hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

Records shall be maintained documenting compliance with the operational limitations.

[40 C.F.R. § 63.6603(a) and Table 2(d); and 06-096 C.M.R. ch. 115]

2. Oil Analysis Program Option

Kate's has the option of utilizing an oil analysis program which complies with the requirements of § 63.6625(i) in order to extend the specified oil change requirement. If this option is used, Kate's must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for each engine. [40 C.F.R. § 63.6625(i)]

3. Non-Resettable Hour Meter

A non-resettable hour meter shall be installed and operated on the engine.
[40 C.F.R. § 63.6625(f)]

4. Maintenance, Testing, and Non-Emergency Operating Situations

- 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 to 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 logs) of all engine operating hours. [40 C.F.R. § 63.6640(f) and 06-096 C.M.R. ch. 115]

- b. Kate's 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. §§ 63.6655(e) and (f)]

5. Operation and Maintenance

The engine shall be operated and maintained according to the manufacturer's emission-related written instructions, or Kate's shall develop a maintenance plan which provides to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 C.F.R. § 63.6625(e)]

6. Startup Idle and Startup Time Minimization

During periods of startup, the facility must minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.

[40 C.F.R. § 63.6625(h)]

(19) **Fugitive Emissions**

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity on a five-minute block average basis.

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

(20) **General Process Sources**

Visible emissions from any general process source shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

DONE AND DATED IN AUGUSTA, MAINE THIS 5th DAY OF APRIL, 2021.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:  for
MELANIE LOYZIM, COMMISSIONER

The term of this license shall be ten (10) years from the signature date above.

[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: 11/25/20

Date of application acceptance: 11/25/20

Date filed with the Board of Environmental Protection:

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

