



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

Huhtamaki, Inc.
Kennebec County
Waterville, Maine
A-416-77-5-A

Departmental
Findings of Fact and Order
Air Emission License
NSR #5

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 (the Department) finds the following facts:

I. Registration

A. Introduction

Facility	Huhtamaki, Inc.
License Type	06-096 C.M.R. ch. 115, Minor Modification
NAICS Codes	322299
Nature of Business	Molded Pulp Products Manufacturing
Facility Location	242 College Avenue, Waterville, Maine

This license completes the processing of the application with the submission number 596937, as assigned by the Department and accepted 11/30/2023.

B. NSR License Description

Huhtamaki, Inc. (Huhtamaki) has requested a New Source Review (NSR) license to add a new emergency generator, EG-6, to replace the previously licensed emergency generator of the same name.

C. Emission Equipment

The following equipment is addressed in this NSR license:

Generator

Equipment	Max. Heat Input Capacity	Max. Firing Rate	Output	Fuel Type	Mfr. Date	Install. Date
EG-6	0.42 MMBtu/hr	164.1 scf/hr	30 kW	Propane	2023	2024
EG-6 ^A	0.18 MMBtu/hr	2.02 gal/hr	9 kW	Distillate Fuel	1995	1995 ^B

^A Removed from the license.

^B Estimated date of installation.

D. Definitions

Records or Logs mean either hardcopy or electronic records.

E. Application Classification

All rules, regulations, or statutes referenced in this air emission license refer to the amended version in effect as of the issued date of this license.

The application for Huhtamaki does not violate any applicable federal or state requirements and does not reduce monitoring, reporting, testing, or recordkeeping requirements.

The modification of a major source is considered a major or minor modification based on whether or not expected emissions increases exceed the "Significant Emission Increase" levels as given in *Definitions Regulation*, 06-096 Code of Maine Rules (C.M.R.) ch. 100. For a major stationary source, the expected emissions increase from each new, modified, or affected unit may be calculated as equal to the difference between the post-modification projected actual emissions and the baseline actual emissions for each NSR regulated pollutant.

1. Baseline Actual Emissions

Baseline actual emissions (BAE) for existing affected emission units are equal to the average annual emissions from any consecutive 24-month period within the ten years prior to submittal of a complete license application. The selected 24-month baseline period can differ on a pollutant-by-pollutant basis. However, there are no existing emission units which are considered "affected" by this project.

Baseline emissions for the previously licensed EG-6 are negligible and the only other equipment addressed by this license is a new emission unit. Baseline actual emissions for new equipment are considered to be zero for all pollutants; therefore, the selection of a baseline year is unnecessary.

2. Projected Actual Emissions

New emission units must use potential to emit (PTE) emissions for projected actual emissions (PAE). Those emissions are presented in the following table.

Projected Actual Emissions

Equipment	PM (tpy)	PM ₁₀ (tpy)	PM _{2.5} (tpy)	SO ₂ (tpy)	NO _x (tpy)	CO (tpy)	VOC (tpy)
EG-6	-	-	-	-	0.1	0.2	-
Total	-	-	-	-	0.1	0.2	-

3. Emissions Increases

Emissions increases are calculated by subtracting BAE from the PAE. The emission increase is then compared to the significant emissions increase levels.

Pollutant	Baseline Actual Emissions (ton/year)	Projected Actual Emissions (ton/year)	Emissions Increase (ton/year)	Significant Emissions Increase Levels (ton/year)
PM	0	-	-	25
PM ₁₀	0	-	-	15
PM _{2.5}	0	-	-	10
SO ₂	0	-	-	40
NO _x	0	0.1	0.1	40
CO	0	0.2	0.2	100
VOC	0	-	-	40

4. Classification

Since emissions increases do not exceed significant emissions increase levels, this NSR license is determined to be a minor modification under *Minor and Major Source Air Emission License Regulations*, 06-096 C.M.R. ch. 115.

This NSR license is not licensing a new major stationary source of an NSR pollutant that is not greenhouse gases (GHG) nor is it authorizing a major modification for an NSR pollutant to an existing major stationary source. Therefore, greenhouse gases are not considered subject to regulation in this license pursuant to 40 C.F.R. §§ 51.166(b)(48)(iii - iv).

Huhtamaki has submitted an application to incorporate the requirements of this NSR license into the facility's Part 70 air emission license.

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 as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in 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. EG-6

Huhtamaki applied to install an emergency generator, EG-6 in November 2023 and has since installed the unit. EG-6 utilizes a Cummins QSJ2.4 rich-burn engine rated at 0.42 MMBtu/hr firing propane. Pursuant to 06-096 C.M.R. ch. 115, Appendix B, § B.3, engines with a heat input less than 0.5 MMBtu/hr are considered insignificant activities. As such, they may be installed prior to the issuance of an air emission license. EG-6 was manufactured in 2023 and installed in 2024.

1. BACT Findings

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

Huhtamaki has proposed to fire only propane, a low-ash fuel, in EG-6. Additional add-on pollution controls are not economically feasible for an engine of this size and anticipated duration of annual usage.

The Department has determined BACT for PM/PM₁₀/PM_{2.5} emissions from EG-6 is the use of propane and the emission limits listed in the table below.

b. Sulfur Dioxide (SO₂)

Huhtamaki has proposed to fire only propane in EG-6. The use of this fuel results in minimal emissions of SO₂, and additional add-on pollution controls are not economically feasible.

The Department has determined BACT for SO₂ emissions from EG-6 is the use of propane and the emission limit listed in the table below.

c. Nitrogen Oxides (NO_x)

Huhtamaki considered the use of Selective Catalytic Reduction (SCR) and non-Selective Non-Catalytic Reduction (SNCR).

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 engine 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 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 EG-6.

BACT for NO_x emissions from EG-6 is the emission limit listed in the table below.

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

Huhtamaki considered the use of oxidation catalysts.

Oxidation catalysts have high capital, maintenance, and operational costs considering the size and duration of anticipated use of EG-6. Use of an oxidation catalyst would not be economically feasible.

Huhtamaki proposed A BACT limit for CO based on an emission factor of 100 lb/MMBtu, which in turn is based on the limit contained in *Standards of Performance for Spark Ignition Internal Combustion Engines*, 40 C.F.R. Part 60, Subpart JJJJ. However, after reviewing test results from the manufacturer, it was determined that an emission limit based on an emission factor of 10.0 lb/MMBtu was more representative of actual emissions.

The Department has determined BACT for CO is an emission limit of 4.20 lb/hr based on an emission factor of 10.0 lb/MMBtu.

The Department has determined BACT for VOC emission from EG-6 is the use of the emission limit listed in the table below.

e. Emission Limits

The BACT emission limits for EG-6 were based on the following:

PM/PM ₁₀ /PM _{2.5}	– 0.05 lb/MMBtu, 06-096 C.M.R. ch. 115, BACT
SO ₂	– 5.88 x 10 ⁻⁴ lb/MMBtu from AP-42 Table 3.2-3, dated 10/24
NO _x	– 2.27 lb/MMBtu from AP-42 Table 3.2-3, dated 10/24
CO	– 10.0 lb/MMBtu, 06-096 C.M.R. ch. 115, BACT
VOC	– 0.03 lb/MMBtu from AP-42 Table 3.2-3, dated 10/24
Visible Emissions	– 06-096 C.M.R. ch. 101

The BACT emission limits for EG-6 are the following:

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)
EG-6	0.02	0.02	0.02	-	0.95	4.20	0.01

Visible emissions from EG-6 shall not exceed 10% opacity on a six-minute block average basis.

2. Chapter 169

Stationary Generators, 06-096 C.M.R. ch. 169 (Chapter 169), is applicable to EG-6. It is an emergency generator powered by an engine with a rated output of less than 1,000 brake horsepower (747 kW). Chapter 169 identifies emission standards for generator engines subject to this chapter and stack height requirements for certain generator engine subject to this chapter.

a. Chapter 169 Emission Standards Requirements

For EG-6, Huhtamaki shall comply with the emission standards for emergency generators by complying with the applicable standards contained in 40 C.F.R. Part 60, Subpart JJJJ. [06-096 C.M.R. ch. 169, § 4(B)(1)]

b. Chapter 169 Stack Height Requirements

There are no stack height requirements in Chapter 169 applicable to EG-6 because it exhausts through its own stack and its rated output is less than 1,000 brake horsepower (747 kilowatts). [06-096 C.M.R. ch. 169, § 6]

3. New Source Performance Standards

Standards of Performance for Spark Ignition Internal Combustion Engines, 40 C.F.R. Part 60, Subpart JJJJ is applicable to EG-6 since the unit was ordered after June 12, 2006, and manufactured after January 1, 2009. [40 C.F.R. § 60.4230]

A summary of 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 of this subpart 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;
- 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]

(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 Huhtamaki that are approved by the engine manufacturer. Huhtamaki may only change those settings that are permitted by the manufacturer. [40 C.F.R. § 60.4243]

Huhtamaki shall have available for review by the Department a copy of the manufacturer's written instructions or procedures developed by Huhtamaki that are approved by the engine manufacturer for engine operation and maintenance. [06-096 C.M.R. ch. 115, BPT]

(4) Annual Time Limit for Maintenance and Testing

As an emergency engine, EG-6 shall be limited to 100 hours per calendar 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

Huhtamaki 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)]

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

Pursuant to 40 C.F.R. § 63.6590(c), stationary spark ignition engines subject to regulations under 40 C.F.R. Part 60, Subpart JJJJ must meet the requirements of Subpart ZZZZ by meeting the requirements of 40 C.F.R. Part 60, Subpart JJJJ. No further requirements apply for such engines under Subpart ZZZZ. [40 C.F.R. § 63.6590(c)]

C. Incorporation Into the Part 70 Air Emission License

Pursuant to *Part 70 Air Emission License Regulations*, 06-096 C.M.R. ch. 140, § 1(C)(8), for a modification at the facility that has undergone NSR requirements or been processed through 06-096 C.M.R. ch. 115, the source must apply for an amendment to their Part 70 license within one year of commencing the proposed operations, as provided in 40 C.F.R. Part 70.5. An application to incorporate the requirements of this NSR license into the Part 70 air emission license has been submitted to the Department.

D. Annual Emissions

The table below provides an estimate of facility-wide annual emissions for the purposes of calculating the facility's annual air license fee. 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:

- Boilers #2 and #3 firing #6 fuel oil continuously at their maximum rated capacities for 8,760 hours/year (equal to 3,421,656 gallons);
- Boiler #5 firing the oil remaining under the facility fuel cap (equal to 78,344 gallons) and firing natural gas up to its license limit of 503.2 MMscf; and
- Operating the emergency engines and fire pump for 100 hr/yr of non-emergency operation each.

This information does not represent a comprehensive list of license restrictions or permissions. That information is provided in the Order section of this license, previously issued NSR licenses, and the facility's Part 70 license and amendments to that 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
Boilers #2, #3, and #5	41.6	41.6	41.6	466.1	157.6	30.2	24.9
Emergency Engines and FP-1	-	-	-	-	0.6	0.6	-
EG-6	-	-	-	-	0.1	0.2	-
Total TPY	41.6	41.6	41.6	466.1	158.3	31.0	24.9

Pollutant	Tons/year
Single HAP	9.9
Total HAP	24.9

III. Ambient Air Quality Analysis

Huhtamaki previously submitted an ambient air quality impact analysis outlined in air emission license A-416-70-A-I (dated January 15, 2002) demonstrating that emissions from the facility, in conjunction with all other sources, do not violate ambient air quality standards (AAQS). An additional ambient air quality impact analysis is not required for this NSR 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,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants New Source Review License A-416-77-5-A pursuant to the preconstruction licensing requirements of 06-096 C.M.R. ch. 115 and subject to the specific conditions below.

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.

Specific Conditions

The previously licensed EG-6 has been permanently removed, and any conditions specific to the former EG-6 contained in NSR #4 (A-416-77-4-A, issued 12/8/2022) are considered obsolete and hereby removed.

The following Condition applies to the replacement EG-6 emergency generator.

(1) EG-6

- A. EG-6 is licensed to fire propane. [06-096 C.M.R. ch. 115, BACT]
- B. Huhtamaki shall keep records of all maintenance conducted on the engine associated with EG-6. [06-096 C.M.R. ch. 115, BACT]
- C. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BACT]:

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)
EG-6	0.02	0.02	0.02	-	0.95	4.20	0.01

D. Visible Emissions

Visible emissions from EG-6 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

E. EG-6 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, BACT]

1. Manufacturer Certification

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.

2. Non-Resettable Hour Meter

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

3. Annual Time Limit for Maintenance and Testing

a. As an emergency engine, EG-6 shall be limited to 100 hours per calendar year for maintenance checks and readiness testing. Up to 50 hours per calendar year of the 100 hours per calendar 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). 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, BACT]

b. Huhtamaki 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)]

4. Operation and Maintenance

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

Huhtamaki shall have available for review by the Department a copy of the manufacturer's emission-related written instructions for engine operation and maintenance. [06-096 C.M.R. ch. 115, BACT]

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A-416-77-5-A

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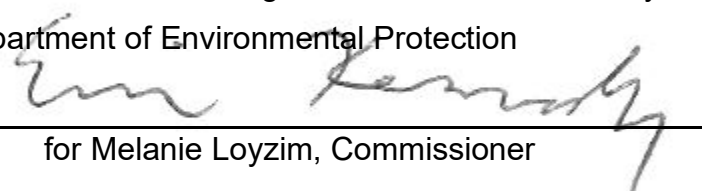
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(2) **Additional Information**

If the Department determines that any parameter value pertaining to construction and operation of the emissions units, including but not limited to stack size, configuration, flow rate, emission rates, nearby structures, etc., deviates from what was submitted in the application or ambient air quality impact analysis for this air emission license, Huhtamaki may be required to submit additional information. Upon written request from the Department, Huhtamaki shall provide information necessary to demonstrate ambient air quality standards (AAQS) will not be exceeded, potentially including submission of an ambient air quality impact analysis or an application to amend this air emission license to resolve any deficiencies and ensure compliance with AAQS. Submission of this information is due within 60 days of the Department's written request unless otherwise stated in the Department's letter. [06-096 C.M.R. ch. 115, § 2(O)]

Done and Dated in Augusta, Maine this 28th day of SEPTEMBER, 2026.

Department of Environmental Protection

BY: 

for Melanie Loyzim, Commissioner

Please note attached sheet for guidance on appeal procedures.

Date of initial receipt of application: November 29, 2023

Date of application acceptance: November 30, 2023

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