



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

General Alum New England Corp.
Waldo County
Searsport, Maine
A-171-71-U-R

Departmental
Findings of Fact and Order
Air Emission License
Renewal

Findings of Fact

After review of the air emission license renewal 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

General Alum New England Corp., also known as GAC Chemical Corporation (GAC), has applied to renew their Air Emission License for the operation of emission sources associated with their chemical manufacturing facility.

This license completes the processing of the application with the following submission number as assigned by the Department: 599649 (accepted 12/19/2024).

The equipment addressed in this license is located at 34 Kidder Point Road, Searsport, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Boilers

Equipment	Max. Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type	Date of Install.	Stack #
Boiler #1	25.9	179 gal/hr	Distillate Fuel	1988	1
Boiler #1	25.9	25,110 scf/hr	Natural Gas	1988	1
Boiler #2	8.6	59.7 gal/hr	Distillate Fuel	1989	1
Boiler #2	8.6	8,370 scf/hr	Natural Gas	1989	1

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Generator

Equipment	Max. Input Capacity	Rated Output Capacity	Fuel Type	Firing Rate	Date of Manuf.	Date of Install.
Generator #1	1.12 MMBtu/hr	115 kW	Distillate Fuel	8.2 gal/hr	Prior to 1977	1977

Process Equipment

Equipment	Production Rate	Pollution Control Equipment	Date Installed	Stack #
Alum Digester	9 ton/hr	None	1998	3
Ammonia Sulfate Reactor	4 ton/hr	Demister/Cyclone	1992	5
Ammonia Sulfate Dryer	4 ton/hr	Scrubber	1949/1992	6
Aqueous Ammonia Production System	10 ton/hr	Scrubber	1995	9
HSPP* System	28,800 gal/day	Condenser	2013	N/A

* Hollow Sphere Plastic Pigment

Liquid Organic Material Storage Tanks

Tank Name	Tank Type	Capacity (gallons)	Materials Stored	Date of Manuf.	Control Device
BA #1	Fixed, Above Ground, Welded Steel	30,000	Butyl Acrylate	2014	Closed System*
BA #2	Fixed, Above Ground, Welded Steel	30,000	Butyl Acrylate	2014	Closed System*
MMA #1	Fixed, Above Ground, Welded Steel	30,000	Methyl Methacrylate	2017	Closed System*
Styrene #1	Fixed, Above Ground, Welded Steel	30,000	Styrene	2017	Closed System*
2-Ethylhexyl Acrylate #1	Fixed, Above Ground, Welded Steel	25,000	2-Ethylhexyl Acrylate	2014	Closed System*
Gasoline	Fixed, Above Ground, UL 142	300	Gasoline	2022	N/A
Boiler Fuel	Fixed, Above Ground, Welded Steel	11,600	Distillate Fuel	1965	None
Truck Fuel	Fixed, Above Ground, Welded Steel	12,000	Distillate Fuel	1995	None

* Vapors displaced during the transfer operations are directed back to rail cars, the tanks are equipped with pressure relief valves that only allow venting from the tank in emergency situations.

In addition to the above listed tanks, there are several finished product tanks of HSPP that do not emit VOC or HAPs that are considered insignificant activities. They are mentioned for completeness only and not addressed further in this license.

GAC operates one parts washer with a 16-gallon capacity. The 100% VOC mineral spirits is Safety-Kleen Premium Solvent.

GAC has additional equipment classified as insignificant activities. This equipment includes, but is not limited to, Urea Production, Polyvinyl Alcohol Production, Optical Brighteners Production, and an Ammonium Sulfate System. These systems are discussed further in the Findings section of the license for completeness only.

C. Definitions

Closed Container means a container that is closed unless material is being actively added to or removed from it. The container is considered closed when sealed to the extent that the contents, including gaseous components, are kept within the container.

Distillate Fuel means the following:

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

Records or Logs mean either hardcopy or electronic records.

D. Application Classification

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

The application for GAC does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of currently licensed emission units only and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (C.M.R.) ch. 115.

E. Facility Classification

The facility is licensed as follows:

- As a natural minor source of criteria pollutants, because no license restrictions are necessary to keep facility emissions below major source thresholds for criteria pollutants; and
- As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for HAP.

II. **Best Practical Treatment (BPT)**

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 C.M.R. ch. 100. Separate control requirement categories exist for new and existing equipment.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Boilers #1 and #2

GAC operates Boilers #1 and #2 for process steam and facility heating needs. Boiler #1 is rated at 25.9 MMBtu/hr and was installed in 1988. Boiler #2 is rated at 8.6 MMBtu/hr and was installed in 1989. Both Boilers exhaust through a combined stack (Stack #1).

Both boilers were converted in 2013 to be dual-fuel boilers, capable of firing either distillate fuel or natural gas. Both boilers are equipped with Autoflame Exhaust Gas Analyzer (EGA) technology, which acts as an oxygen trim system. GAC uses blended distillate fuel during the winter. A blend of #2 heating oil and kerosene (K-1) is supplied by the fuel vendor to prevent fuel gelling during cold weather. K-1 is also categorized as "distillate fuel" under the definition above.

With limited exceptions, no person shall import, distribute, or offer for sale any distillate fuel with a sulfur content greater than 0.0015% by weight (15 ppm) pursuant to 38 M.R.S. § 603-A(2)(A)(3). Therefore, the distillate fuel purchased or otherwise obtained for use in Boilers #1 and #2 shall not exceed 0.0015% by weight (15 ppm).

1. BPT Findings

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

Distillate Fuel

- PM/PM₁₀/PM_{2.5} – 0.08 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
SO₂ – based on firing distillate fuel with a maximum sulfur content of 0.0015% by weight
NO_x – 0.3 lb/MMBtu, 06-096 C.M.R. ch. 115, BPT
CO – 5 lb/1,000 gal based on AP-42 Table 1.3-1 dated 5/10
VOC – 0.20 lb/1,000 gal based on AP-42 Table 1.3-3 dated 5/10 for boilers > 10 MMBtu/hr
– 0.34 lb/1,000 gal based on AP-42 Table 1.3-3 dated 5/10 for boilers < 10 MMBtu/hr

Visible Emissions– 06-096 C.M.R. ch. 101

Natural Gas

- PM/PM₁₀/PM_{2.5} – 0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
SO₂ – 0.6 lb/MMscf based on AP-42 Table 1.4-2 dated 4/26
NO_x – 100 lb/MMscf based on AP-42 Table 1.4-1 dated 4/26
CO – 84 lb/MMscf based on AP-42 Table 1.4-1 dated 4/26
VOC – 5.5 lb/MMscf based on AP-42 Table 1.4-2 dated 4/26
Visible Emissions– 06-096 C.M.R. ch. 101

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

Unit	Fuel Type	Pollutant	lb/MMBtu
Boiler #1	Distillate Fuel	PM	0.08
Boiler #1	Natural Gas	PM	0.05
Boiler #2	Distillate Fuel	PM	0.08
Boiler #2	Natural Gas	PM	0.05

Unit	Fuel Type	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	Distillate Fuel	2.07	2.07	2.07	0.04	7.77	0.93	0.04
Boiler #1	Natural Gas	1.30	1.30	1.30	0.02	2.51	2.11	0.14
Boiler #2	Distillate Fuel	0.69	0.69	0.69	0.01	2.58	0.31	0.02
Boiler #2	Natural Gas	0.43	0.43	0.43	0.01	0.83	0.70	0.05

Boilers #1 and #2 shall be limited to an annual heat input capacity limit of 84,000 MMBtu/year (on a calendar year basis) from the combustion of distillate fuel and natural gas combined. Compliance shall be based on records of fuel

use and a heating value of 0.14 MMBtu/gal for distillate fuel and 1,030 MMBtu per million scf of natural gas.

2. Visible Emissions

During periods of time when only natural gas is fired in Boilers #1 and #2, visible emissions shall not exceed 10% opacity on a six-minute block average basis from Stack #1.

During periods of time when distillate fuel is fired in either Boiler #1 and/or Boiler #2, visible emissions shall not exceed 20% opacity on a six-minute block average basis from Stack #1.

3. Periodic Monitoring

Periodic monitoring for Boilers #1 and #2 shall include recordkeeping to document fuel use both on a monthly and a calendar year total basis. Documentation shall include the type of fuel used and sulfur content of the fuel.

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

Boiler #2

Due to its heat input rating, Boiler #2 is not subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989. [40 C.F.R. § 60.40c]

Boiler #1

The burners in Boiler #1 were replaced in 2013, resulting in an increased distillate fuel input heat capacity (increased from 20.7 to 25.9 MMBtu/hr with the burner replacement, as noted in the renewal license issued in 2015) and dual fuel-firing capability. This increased heat input capacity was not considered a modification under Subpart Dc because Boilers #1 and #2 continue to be subject to a heat input limit of 84,000 MMBtu per calendar year, resulting in no increase in the potential to emit for any regulated pollutant.

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

Gas-fired boilers are exempt from 40 C.F.R. Part 63, Subpart JJJJJJ. However, boilers which fire fuel oil are not. A "gas-fired boiler" is defined as any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or for periodic testing, maintenance, or operator training on liquid fuel. Periodic

testing, maintenance, or operator training on liquid fuel shall not exceed a combined total of 48 hours during any calendar year. [40 C.F.R. § 63.11237]

In order to maintain the classification of gas-fired boilers, GAC may only fire distillate fuel in Boilers #1 and #2 during periods of gas curtailment or supply interruption (as defined in 40 C.F.R. § 63.11237 "Period of gas curtailment or supply interruption"), startups, or for periodic testing, maintenance, or operator training on liquid fuel. Periodic testing, maintenance, or operator training on liquid fuel shall not exceed a combined total of 48 hours during any calendar year.

Any boiler designed to burn fuels besides gaseous fuels prior to June 4, 2010, is considered an existing boiler under this rule. A boiler which currently fires gaseous fuels but converts back to firing another fuel (such as distillate fuel) in the future would become subject as an existing boiler at the time it is converted back to oil.

C. Generator #1

GAC operates one emergency generator. Generator #1 is a generator set consisting of an engine and an electrical generator. Generator #1 has an engine rated at 1.12 MMBtu/hr which fires distillate fuel. Generator #1 was manufactured in 1977.

1. BPT Findings

The BPT emission limits for the generators are based on the following:

PM/PM₁₀/PM_{2.5} – 0.12 lb/MMBtu, 06-096 C.M.R. ch. 115, BPT
SO₂ – Combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO_x – 4.41 lb/MMBtu from AP-42 Table 3.3-1 dated 4/25
CO – 0.95 lb/MMBtu from AP-42 Table 3.3-1 dated 4/25
VOC – 0.36 lb/MMBtu from AP-42 Table 3.3-1 dated 4/25
Visible Emissions – 06-096 C.M.R. ch. 101

The BPT emission limits for Generator #1 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)
Generator #1	0.13	0.13	0.13	-	4.94	1.06	0.40

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 GAC

shall either meet the normal operating visible emissions standard or the following work practice standards and alternative visible emissions standard.

- a. The duration of the startup shall not exceed 30 minutes per event;
- b. Visible emissions shall not exceed 50% opacity on a six-minute block average basis; and
- c. GAC shall keep records of the date, time, and duration of each startup.

Use of the work practice standards and alternative visible emissions standard in lieu of the normal operating standard is limited to no more than once per day.

Note: This does not limit the engine to one startup per day. It only limits the use of the alternative emission standard to once per day.

2. Chapter 169

Generator #1 was installed prior to the effective date of *Stationary Generators*, 06-096 C.M.R. ch. 169 and is therefore exempt from this rule pursuant to section 1.

3. 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 IIII since the unit was manufactured prior to April 1, 2006. [40 C.F.R. § 60.4200]

4. 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;
- 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

- (i) GAC shall meet the following operational limitations for the compression ignition emergency engine (Generator #1):
1. Change the oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first;
 2. Inspect the air cleaner every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and
 3. Inspect the hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, 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]

- (ii) The engine shall be operated and maintained according to the manufacturer's emission-related written instructions, or GAC 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

GAC 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, GAC 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) and 40 C.F.R. Part 63, Subpart ZZZZ, Table 2d]

(5) Annual Time Limit for Maintenance and Testing

As an emergency engine, Generator #1 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

GAC 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. Alum Production

The alum production operation was installed in 1952. In 1980, the process was converted to use of bauxite as one of the raw materials to aluminum trihydrate (ATH). However, the equipment itself remained unchanged.

Alum is produced by reacting ATH with sulfuric acid. The reaction is conducted in batches of approximately 27 tons each, under atmospheric pressure. The emissions from this exothermic reaction are steam and a condensing vapor plume. The exhaust steam is vented through Stack #3 extending above the production building.

E. Ammonium Sulfate Production

The original ammonium sulfate production operation was installed in 1949. An amendment to the air emission license was issued on August 28, 1992, to relocate the ammonium sulfate production operation in addition to reconstructing the original reactor/crystallizer. A similar unit was constructed with minor modifications due to product quality concerns. The dryer was relocated without any modifications, only maintenance activities were performed (i.e., cleaning, adjustment, and painting). The ammonium sulfate production operation consists of an ammonia sulfate reactor followed by a cyclonic separator and an ammonia sulfate dryer followed by a venturi scrubber.

Ammonium sulfate is produced from the reaction between anhydrous ammonia and sulfuric acid. The reactor is fitted with an internal demister and an external cyclonic separator for particulate matter control prior to exiting the stack. The particulate emissions from the mist eliminator followed by the cyclonic separator are expected to be de minimus, based on EPA studies (EPA-450/3-79-034a, Ammonium Sulfate Manufacture – Background Information for Proposed Emission Standards). Solids that are collected from the cyclonic separator are returned to the reactor vessel.

The ammonium sulfate exits the reactor and enters the ammonium sulfate dryer via a product centrifuge. The product centrifuge separates the product from the filtrate. The filtrate is then returned to the reactor/crystallizer for continued processing.

According to the New Source Performance Standards (NSPS) *Standards of Performance for Ammonium Sulfate Manufacture*, 40 C.F.R. Part 60, Subpart PP, the ammonium sulfate dryer is the only applicable designated unit of an ammonium sulfate facility. NSPS applies to dryers which commenced construction or modifications after February 4, 1980. Reactor vessels are not identified nor are they defined to be a component of the ammonium sulfate dryers. Since the dryer was originally installed prior to 1980 and no modification occurred when it was relocated in 1992, the dryer was determined not to be subject to NSPS.

The emission control device on the air discharge of the dryer is a MS Super Scrubber Package System manufactured by Fisher-Klosterman, Inc. to remove

particles from the exhaust which exits through Stack #6. The MS Super Scrubber Package System utilizes a venturi scrubber followed by a cyclonic separator to remove mist from the vent air stream. GAC states that the control system is better than 99.5% effective in removing particles 4 microns or greater in diameter, based on manufacturer test data. Emissions from the dry scrubber are expected to be well below the NSPS limit for new ammonium sulfate dryers of 0.3 lb PM/ton product.

In February 1994, the dryer emissions were tested and found to be 0.044 lb PM/ton product and is therefore considered by the Department to be meeting BPT. The potential-to-emit limit will be set at a conservative 1.2 tons per year of PM.

F. Aqueous Ammonia Production

The aqueous ammonia production operation was installed in 1995. Aqueous ammonia is produced by the mixing of anhydrous ammonia with water. Approximately 90 Btu/lb of 30% aqueous ammonia is generated from the dilution of ammonia with water. A refrigeration system is used to remove the generated heat to keep the ammonia in solution and thereby prevent gaseous ammonia emissions. The entire mixing process of aqueous ammonia is enclosed, and emissions are collected by the Ammonia Wet Scrubber System.

After each batch of the solution is mixed, the product is transferred to storage or to vehicles transporting the aqueous ammonia from the facility. As each batch of solution is transferred, displaced air is collected and controlled by the Ammonia Wet Scrubber System.

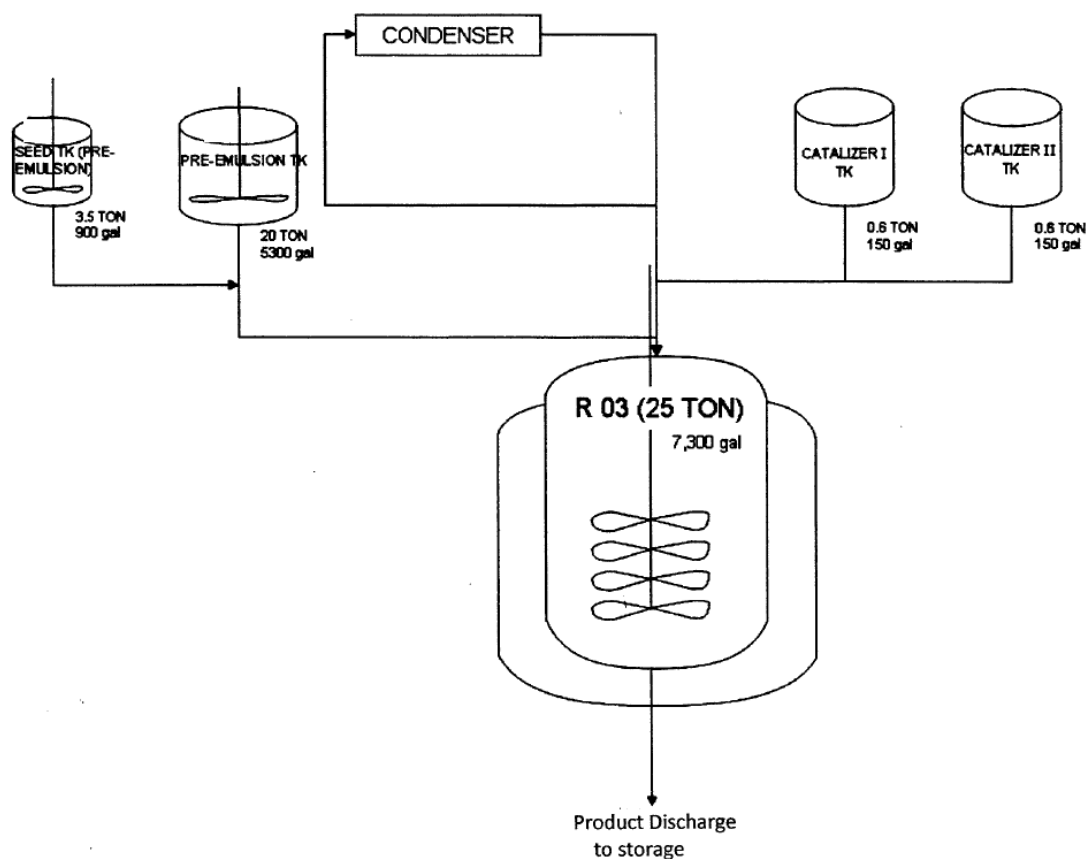
The Ammonia Wet Scrubber System is a two-stage scrubbing configuration composed of a venturi scrubber followed by a passive scrubber. The first scrubber is a venturi scrubber that recirculates the vapor in the system. Fresh water is used in the scrubber for each new production batch. The resulting weak aqueous ammonia solution produced in the scrubber is used for production startup on the next batch. The second stage scrubber is a passive bubble tank partially filled with weak (5%) sulfuric acid. Any air displaced from the production system bubbles through the weak acid and reacts to form ammonium sulfate. This small quantity of ammonium sulfate is later processed in the ammonium sulfate system.

The storage of aqueous ammonia is comprised of two closed vessels with concrete containment, and all vapor spaces for the tanks are collected and controlled by the Ammonia Wet Scrubber System. All air displaced during product transfer to a transportation vehicle is also collected and controlled by the Ammonia Wet Scrubber System.

The Department finds that the use of the Ammonia Wet Scrubber System as described above meets BPT for GAC's aqueous ammonia production.

G. Hollow Sphere Plastic Pigment (HSPP) System / Latex Coatings

GAC produces a water-based, non-hazardous Hollow Sphere Plastic Pigment (HSPP) polymer and other proprietary latex coatings for use in paper mills, paint manufacturing, and possibly other industries. Below is a basic flow chart of the process.



The HSPP Process involves a proprietary blend of raw materials in water with an emulsion polymerization technique of styrene or other monomers including methyl methacrylate, butyl acrylate, and 2-ethylhexyl acrylate as raw materials to form a non-hazardous, non-HAP or VOC product. A condenser redirects particulate back into the reactor. The process equipment does include a 1" vent which allows for small emissions of styrene or other HAP estimated to be less than 0.2 tpy. Emissions are primarily from product displacement. Operation of the condenser while the HSPP Process is in operation is considered BPT for this equipment.

Visible emissions from the HSPP Process shall not exceed 10% opacity on a six-minute block average basis.

H. HSPP Process Tanks

The following raw material storage tanks support the HSPP Process:

Equipment	Capacity (gallons)	Pollutant
Butyl Acrylate Tank #1	30,000	VOC
Butyl Acrylate Tank #2	30,000	VOC
Methyl Methacrylate Tank #1	30,000	VOC, HAP
Styrene Tank #1	30,000	VOC, HAP
2-Ethylhexyl Acrylate Tank #1	25,000	VOC

The raw material storage tanks are not subject to *Standard of Performance for Volatile Organic Liquid Storage Vessels*, 40 C.F.R. Part 60, Subpart Kb. Subpart Kb specifically exempts storage vessels with a capacity between 75 m³ (20,000 gal) and 151 m³ (40,000 gal) storing a liquid with a maximum true vapor pressure less than 15.0 kPa (§60.110b(b)). The vapor pressures of the chemicals stored are well below this threshold.

GAC keeps records of the materials stored in the tanks and the true vapor pressures of those materials to demonstrate they do not exceed 15.0 kPa.

Raw material is delivered either by railcar or truck. When delivered by railcar, the vapors displaced from the receiving tank during tank filling are piped back to the railcar. However, GAC states that emissions were conservatively estimated by assuming 100% of the displaced vapors are uncontrolled. Previous analysis indicated this could account for up to 0.2 ton/yr of styrene emissions.

I. Parts Washer

One 16-gallon parts washer is currently in use. Safety-Kleen Premium Solvent (100% VOC) is the solvent utilized in the parts washer. The parts washer is subject to *Solvent Cleaners*, 06-096 C.M.R. ch. 130 (Chapter 130) and records shall be kept documenting compliance.

Chapter 130 requires the use of solvent with a vapor pressure of 1.00 mmHg or less at 20 °C (68 °F). A copy of a compliant SDS was submitted 10/27/2025 during processing of the renewal application.

This equipment is exempt from *Industrial Cleaning Solvents*, 06-096 C.M.R. ch. 166 pursuant to Section (3)(B).

J. Gasoline Storage

GAC has a 300-gallon above-ground gasoline storage tank. The fill pipe shall extend within 6" of the bottom of the tank, and GAC shall keep monthly and annual records of gasoline throughput.

K. Distillate Fuel Storage

Distillate fuel for use in GAC's boilers and trucks is stored in two storage tanks, Boiler Fuel Tank and Truck Fuel Tank, with capacities of 11,600 gallons and 12,000 gallons, respectively. These tanks have been on-site for 60 and 30 years, respectively, and are being newly addressed in this license due to change in policy.

Based on the EPA's TANKS Emissions Estimation Software, Version 5 calculator, estimated uncontrolled potential emissions of VOC from the distillate storage tanks are less than 0.1 ton/yr. This model calculates emissions based on emission factors and formulas contained in *Compilation of Air Emissions Factors from Stationary Sources*, AP-42, Volume I, Chapter 7. No other criteria pollutants are expected to be emitted from this tank.

1. BPT Findings

VOC emissions may be controlled by using oxidation (thermal or catalytic), adsorption, or condensation. Due to the storage of distillate fuel and based on the calculated emissions estimate, expected emissions are extremely low; thus, the addition of control equipment would be economically infeasible.

The Department has determined that BPT for Boiler Fuel and Truck Fuel tanks is storage of only distillate fuel.

2. 06-096 C.M.R. ch. 111

Boiler Fuel and Truck Fuel tanks are not subject to the requirements of *Petroleum Liquid Storage Vapor Control*, 06-096 C.M.R. ch. 111, because they have capacities each less than 39,000 gallons and store a product with a vapor pressure less than 10.5 kilopascals.

3. 06-096 C.M.R. ch. 118

Boiler Fuel and Truck Fuel tanks are not subject to the requirements of *Gasoline Dispensing Facilities Vapor Control*, 06-096 C.M.R. ch. 118, because they do not store gasoline.

4. 06-096 C.M.R. ch. 133

Boiler Fuel and Truck Fuel tanks are not subject to the requirements of *Petroleum Liquids Transfer Vapor Recovery at Bulk Gasoline Plants*, 06-096 C.M.R. ch. 133, because GAC is not a bulk gasoline plant and Boiler Fuel and Truck Fuel tanks do not store gasoline.

5. 06-096 C.M.R. ch. 170

Boiler Fuel and Truck Fuel tanks are not subject to the requirements of *Degassing of Petroleum Storage Tanks, Marine Vessels, and Transport Vessels*, 06-096 C.M.R. ch. 170, because they each have a capacity of less than 39,000 gallons and are not transport vessels or marine vessels.

6. 06-096 C.M.R. ch. 171

Boiler Fuel and Truck Fuel tanks are not subject to the requirements of *Control of Petroleum Storage Facilities*, 06-096 C.M.R. ch. 171, because GAC is not a petroleum storage facility as defined by the rule.

7. 40 C.F.R. Part 60, Subpart Kb

Boiler Fuel and Truck Fuel tanks are not subject to the requirements of *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced After July 23, 1984, and On or Before October 4, 2023*, 40 C.F.R. Part 60, Subpart Kb, because the true vapor pressure of the product stored is less than 15.0 kilopascals.
[40 C.F.R. § 60.110b(b)]

8. 40 C.F.R. Part 60, Subpart Kc

Boiler Fuel and Truck Fuel tanks are not subject to the requirements of *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced After October 4, 2023*, 40 C.F.R. Part 60, Subpart Kc (Subpart Kc).

Boiler Fuel and Truck Fuel tanks were installed prior to October 15, 2024. Existing storage vessels can become subject to Subpart Kc if modified. Pursuant to 40 C.F.R. § 60.110c(e), a modification occurs if the storage vessel is used to store a volatile organic liquid (VOL) that has a greater maximum true vapor pressure than all VOL historically stored or permitted to be stored. Boiler Fuel and Truck Fuel tanks have historically stored distillate fuel and is limited

to only storing distillate fuel. Therefore, Boiler Fuel and Truck Fuel tanks are not subject to Subpart Kc provided they continue to store the products for which they are currently licensed. GAC shall maintain records of the type and maximum true vapor pressure for each product stored in Boiler Fuel and Truck Fuel tanks.

L. Urea Production

GAC operates a system producing liquid urea by dissolving dry urea crystals in water to form an aqueous solution. This process has been determined to be an insignificant activity and is mentioned for completeness purposes only. [06-096 C.M.R. ch. 115, Appendix B, § B(1)]

M. Polyvinyl Alcohol Production

GAC produces polyvinyl alcohol (PVOH). This process consists of hydration of dry powder PVOH in water and then heating it. This process has been determined to be an insignificant activity and is mentioned for completeness purposes only. [06-096 C.M.R. ch. 115, Appendix B, § B(1)]

N. Optical Brighteners

GAC operates a system to produce optical brighteners for the paper industry. This process is hydration of dry, non-hazardous components in water. This process has been determined to be an insignificant activity and is mentioned for completeness purposes only. [06-096 C.M.R. ch. 115, Appendix B, § B(1)]

O. Ammonium Sulfate Solution System

GAC produces solutions of ammonium sulfate using either the Ammonium Sulfate Production equipment or a separate system in the Solution Building consisting of a mixing tank, filters, pumps, and storage tanks. Dry crystals are transferred into the mixing tank and diluted with water. The solution is then transferred to settling and storage tanks. This process has been determined to be an insignificant activity and is mentioned for completeness purposes only. [06-096 C.M.R. ch. 115, Appendix B, § B(1)]

P. General Process Visible Emissions

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

Q. Fugitive Visible Emissions

GAC shall not cause emissions of any fugitive dust during any period of construction, reconstruction, or operation without taking reasonable precautions. Such reasonable precautions shall be included in the facility's continuing program of best management practices for suppression of fugitive particulate matter. See 06-096 C.M.R. ch. 101, § 4(C) for a list of potential reasonable precautions.

GAC shall not cause or allow visible emissions within 20 feet of ground level, measured as any level of opacity and not including water vapor, beyond the legal boundary of the property on which such emissions occur. Compliance with this standard shall be determined pursuant to 40 C.F.R. Part 60, Appendix A, Method 22.

R. 40 C.F.R. Part 68

GAC is subject to applicable requirements of 40 C.F.R. Part 68, *Chemical Accident Prevention* Provisions. [40 C.F.R. Part 68] This federal rule is outside the minor source licensing program authorized under 06-096 C.M.R. ch. 115 and is not addressed further in this license.

S. Annual Emissions

The table below provides an estimate of facility-wide annual emissions for the purposes of calculating the facility's annual air license fee and establishing the facility's potential to emit (PTE). Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, unquantifiable fugitive particulate matter emissions are not included except when required by state or federal regulations. Maximum potential emissions were calculated based on the following assumptions:

- An annual, combined heat input capacity limit of 84,000 MMBtu/year for the boilers assuming the worst-case emission factor (for either natural gas or distillate fuel) for each pollutant;
- Operating Generator #1 for 100 hrs/yr of non-emergency operation; and
- The maximum production rates for ammonium sulfate production and HSPP production.

This information does not represent a comprehensive list of license restrictions or permissions. That information is provided in the Order section of this license.

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**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	Total HAP
Boilers	3.4	3.4	3.4	0.1	12.6	3.4	0.2	-
Generator #1	-	-	-	-	0.3	0.1	-	-
Ammonium Sulfate Production	1.2	1.2	1.2	-	-	-	-	-
HSPP Production	-	-	-	-	-	-	0.2	0.2
Total TPY	4.6	4.6	4.6	0.1	12.9	3.5	0.4	0.2

III. Ambient Air Quality Analysis

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

Pollutant	Tons/Year
PM ₁₀	25
PM _{2.5}	15
SO ₂	50
NO _x	50
CO	250

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

This determination is based on information provided by the applicant regarding licensed emission units. If the Department determines that any parameter (e.g., stack size, configuration, flow rate, emission rates, nearby structures, etc.) deviates from what was included in the application, the Department may require GAC to submit additional information and may require an ambient air quality impact analysis at that time.

Order

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards, and
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-171-71-U-R subject 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 beginning actual 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] Payment of the annual air emission license fee for GAC is due by the end of May of each year. [38 M.R.S. § 353-A(3)]
- (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).

Specific Conditions

(17) Boilers #1 and #2

A. Fuel

1. Boilers #1 and #2 shall each fire only natural gas and distillate fuel. [06-096 C.M.R. ch. 115, BPT]
2. GAC shall not exceed a combined annual heat input of 84,000 MMBtu/year (on a calendar year basis) from the combustion of distillate fuel and natural gas in these boilers. Compliance shall be based on records of fuel use and a heating value of 0.14 MMBtu/gal for distillate fuel and 1,030 MMBtu per million scf of natural gas. [06-096 C.M.R. ch. 115, BPT]
3. The facility shall not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm). [06-096 C.M.R. ch. 115, BPT]
4. Compliance shall be demonstrated by fuel records showing the quantity, type, and the percent sulfur of the fuel delivered. Records of annual fuel use shall be kept on a monthly and calendar year basis. Fuel sulfur content compliance shall be demonstrated by fuel delivery receipts from the supplier, a statement from the supplier that the fuel delivered meets Maine's fuel sulfur content standards, certificate of analysis, or testing of fuel in the tank on-site. [06-096 C.M.R. ch. 115, BPT]

B. Emissions shall not exceed the following:

Emission Unit	Fuel Type	Pollutant	lb/MMBtu	Origin and Authority
Boiler #1	Distillate Fuel	PM	0.08	06-096 C.M.R. ch. 115, BPT
Boiler #1	Natural Gas	PM	0.05	06-096 C.M.R. ch. 115, BPT

Emission Unit	Fuel Type	Pollutant	lb/MMBtu	Origin and Authority
Boiler #2	Distillate Fuel	PM	0.08	06-096 C.M.R. ch. 115, BPT
Boiler #2	Natural Gas	PM	0.05	06-096 C.M.R. ch. 115, BPT

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

Emission Unit	Fuel Type	PM (lb/hr)	PM ₁₀ (lb/hr)	PM _{2.5} (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	Distillate Fuel	2.07	2.07	2.07	0.04	7.77	0.93	0.04
Boiler #1	Natural Gas	1.30	1.30	1.30	0.02	2.51	2.11	0.14
Boiler #2	Distillate Fuel	0.69	0.69	0.69	0.01	2.58	0.31	0.02
Boiler #2	Natural Gas	0.43	0.43	0.43	0.01	0.83	0.70	0.05

D. Visible Emissions

1. During periods of time when only natural gas is being fired in either Boiler #1 or Boiler #2, visible emissions from Stack #1 shall not exceed 10% opacity on a six-minute block average basis.
2. During periods of time when distillate fuel is being fired in either Boiler #1 or Boiler #2, visible emissions from Stack #1 shall not exceed 20% opacity on a six-minute block average basis.

[06-096 C.M.R. ch. 101, §§ 4(A)(2), 4(A)(3), and 4(D)(1)]

E. Operational Limitation

GAC may only fire distillate fuel in Boilers #1 and #2 during periods of gas curtailment or supply interruption (as defined in 40 C.F.R. § 63.11237 "Period of gas curtailment or supply interruption"), startups, or for periodic testing, maintenance, or operator training on liquid fuel. Periodic testing, maintenance, or operator training on liquid fuel shall not exceed a combined total of 48 hours during any calendar year. [06-096 C.M.R. ch. 115, BPT]

(18) **Generator #1**

- A. Generator #1 is licensed to fire distillate fuel. [06-096 C.M.R. ch. 115, BPT]
- 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 fuel in the tank on-site. [06-096 C.M.R. ch. 115, BPT]

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

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)
Generator #1	0.13	0.13	0.13	-	4.94	1.06	0.40

D. 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 GAC shall either meet the normal operating visible emissions standard or the following work practice standards and alternative visible emissions standard.

1. The duration of the startup shall not exceed 30 minutes per event;
2. Visible emissions shall not exceed 50% opacity on a six-minute block average basis; and
3. GAC shall keep records of the date, time, and duration of each startup.

Use of the work practice standards and alternative visible emissions standard in lieu of the normal operating standard is limited to no more than once per day.

Note: This does not limit the engine to one startup per day. It only limits the use of the alternative emission standard to once per day.

[06-096 C.M.R. ch. 101, § 4(A)(4)]

E. 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. GAC shall meet the following operational limitations for Generator #1:
 - a. Change the oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first;
 - b. Inspect the air cleaner every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and
 - c. Inspect the hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, 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

GAC 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, GAC must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for each 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 Generator #1. [40 C.F.R. § 63.6625(f)]

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

a. As an emergency engine, Generator #1 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. GAC shall keep records that include maintenance conducted on Generator #1 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

Generator #1 shall be operated and maintained according to the manufacturer's emission-related written instructions, or GAC 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)]

GAC 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, BPT]

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) & 40 C.F.R. Part 63, Subpart ZZZZ Table 2d]

(19) **Ammonium Sulfate Production**

- A. Particulate matter emissions from the ammonium sulfate dryer shall not exceed 0.3 lb/ton of ammonium sulfate produced. [06-096 C.M.R. ch. 115, BPT]
- B. GAC shall operate a demister and cyclonic separator on the ammonium sulfate reactor/crystallizer when this process is in operation. [06-096 C.M.R. ch. 115, BPT]
- C. GAC shall operate the MS Super Scrubber Package System on the ammonium sulfate dryer discharge when this process is in operation. [06-096 C.M.R. ch. 115, BPT]

(20) **Aqueous Ammonia Production**

GAC shall operate the Ammonia Wet Scrubber System when this process is in operation. [06-096 C.M.R. ch. 115, BPT]

(21) **HSPP Process**

- A. GAC shall operate the condenser at all times while the HSPP Process is in operation. [06-096 C.M.R. ch. 115, BPT]
- B. Visible emissions from the HSPP Process shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]
- C. The maximum true vapor pressure of the material stored in each of the HSPP raw material and final product storage tanks shall be less than 15.0 kPa. Compliance shall be demonstrated by recordkeeping of all materials stored in the tanks and the true vapor pressures of each. [06-096 C.M.R. ch. 115, BPT]

(22) **Gasoline Storage Tank**

- A. The fill pipe shall extend to within 6 inches of the bottom of the gasoline storage tank. [06-096 C.M.R. ch. 118 §§ 1(B)(1) and 4(A)]
- B. GAC shall maintain records of the monthly and annual throughput of gasoline. [06-096 C.M.R. ch. 118 §§ 1(B)(1) and 10(B)]

(23) **Distillate Fuel Storage Tanks**

- A. Boiler Fuel Tank and Truck Fuel Tank shall store only distillate fuel. [06-096 C.M.R. ch. 115, BPT]
- B. GAC shall maintain records of the type and maximum true vapor pressure for each product stored in Boiler Fuel Tank and Truck Fuel Tank. [06-096 C.M.R. ch. 115, BPT]

(24) **Parts Washers**

Parts washers at GAC are subject to *Solvent Cleaners*, 06-096 C.M.R. ch. 130.

- A. GAC must use a solvent with a vapor pressure of 1.00 mmHg, or less, at 20 °C (68 °F). [06-096 C.M.R. ch. 130 § (3)(E)]
- B. GAC shall keep records of the amount of solvent added to each parts washer. [06-096 C.M.R. ch. 115, BPT]
- C. The following are exempt from the requirements of 06-096 C.M.R. ch. 130. [06-096 C.M.R. ch. 130]
 - 1. Solvent cleaners using less than two liters (68 oz.) of cleaning solvent with a vapor pressure of 1.00 mmHg, or less, at 20° C (68° F);
 - 2. Wipe cleaning; and,
 - 3. Cold cleaning machines using solvents containing less than or equal to 5% VOC by weight.
- D. The following standards apply to cold cleaning machines that are applicable sources under 06-096 C.M.R. ch. 130.
 - 1. GAC shall attach a permanent conspicuous label to each unit summarizing the following operational standards:
 - a. Waste solvent shall be collected and stored in closed containers.
 - b. Cleaned parts shall be drained of solvent directly back to the cold cleaning machine by tipping or rotating the part for at least

- 15 seconds or until dripping ceases, whichever is longer.
- c. Flushing of parts shall be performed with a solid solvent spray that is a solid fluid stream (not a fine, atomized or shower type spray) at a pressure that does not exceed 10 psig. Flushing shall be performed only within the freeboard area of the cold cleaning machine.
 - d. The cold cleaning machine shall not be exposed to drafts greater than 40 meters per minute when the cover is open.
 - e. Sponges, fabric, wood, leather, paper products and other absorbent materials shall not be cleaned in the parts washer.
 - f. When a pump-agitated solvent bath is used, the agitator shall be operated to produce no observable splashing of the solvent against the tank walls or the parts being cleaned. Air agitated solvent baths may not be used.
 - g. Spills during solvent transfer shall be cleaned immediately. Sorbent material used to clean spills shall then be immediately stored in closed containers.
 - h. Work area fans shall not blow across the opening of the parts washer unit.
 - i. The solvent level shall not exceed the fill line.
- 2. The remote reservoir cold cleaning machine shall be equipped with a perforated drain with a diameter of not more than six inches.
 - 3. Each parts washer shall be equipped with a cover that shall be closed at all times except during cleaning of parts or the addition or removal of solvent.
- [06-096 C.M.R. ch. 130]

(25) General Process Visible Emissions

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. 101, § 4(B)(4)]

(26) Fugitive Visible Emissions [06-096 C.M.R. ch. 101, § 4(C)]

- A. GAC shall not cause emissions of any fugitive dust during any period of construction, reconstruction, or operation without taking reasonable precautions. Such reasonable precautions shall be included in the facility's continuing program of best management practices for suppression of fugitive particulate matter. See 06-096 C.M.R. ch. 101, § 4(C) for a list of potential reasonable precautions.
- B. GAC shall not cause or allow visible emissions within 20 feet of ground level, measured as any level of opacity and not including water vapor, beyond the legal boundary of the property on which such emissions occur. Compliance with this standard shall be determined pursuant to 40 C.F.R. Part 60, Appendix A, Method 22.

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(27) 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, GAC may be required to submit additional information. Upon written request from the Department, GAC 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 20th day of AUGUST, 2026.

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: December 18, 2024

Date of application acceptance: December 19, 2024

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