



DEPARTMENT ORDER

Sabre Yachts
Cumberland County
Raymond, Maine
A-633-71-E-R/A

Departmental
Findings of Fact and Order
Air Emission License
Renewal and Amendment

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

Sabre Yachts (Sabre) has applied to renew the Air Emission License for the operation of emission sources associated with their composites manufacturing facility, currently building boats. Additionally, Sabre has requested the addition of an annual limit on HAP emissions which would then reclassify the facility as an area source of HAP.

The equipment addressed in this license is located at 12 Hawthorne Road, Raymond, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Fuel Burning Equipment

| <u>Equipment</u> | Maximum Heat Input Capacity (MMBtu/hr) | Firing Rate (gal/hr) | Fuel Type | Date of Manuf. | Date of Install. |
|-------------------|---|-----------------------------|------------------|-----------------------|-------------------------|
| Boiler #1 | 1.7 | 12.2 | Distillate fuel | 2006 | 2006 |
| Boiler #2 | 1.7 | 12.2 | Distillate fuel | 2006 | 2006 |
| Hot Air Furnace * | <1.0 | Unknown | Propane | Prior to 2006 | Prior to 2006 |
| Boiler #3 * | 0.4 | Unknown | Distillate fuel | Prior to 2006 | Prior to 2006 |

* This fuel burning equipment is below licensing thresholds and is included for completeness purposes only.

Stationary Engine

| Equipment | Max. Input Capacity (MMBtu/hr) | Rated Output Capacity (HP) | Fuel Type | Firing Rate (gal/hr) | Date of Manuf. | Date of Install. |
|-----------|--------------------------------|----------------------------|-----------------|----------------------|----------------|------------------|
| Fire Pump | 1.5 | 218 | Distillate fuel | 10.9 | 1980 | 1980 |

Sabre 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, Sabre 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.

Process Equipment

| Equipment | Location | Pollution Control Equipment |
|-----------------------|-----------------------|-----------------------------|
| chopper guns | Fiberglass Department | exhaust fans with filters |
| gelcoat applicators | Fiberglass Department | exhaust fans with filters |
| resin applicators | Fiberglass Department | exhaust fans with filters |
| HVLP* spray guns | Fiberglass Department | exhaust fans with filters |
| HVLP paint spray guns | Fiberglass Department | exhaust fans with filters |
| Paint Booth | Varnish Department | Fabric Filters |

* HVLP = high volume, low pressure

C. Definitions

Closed molding means a grouping of processes for fabricating composites in a way that HAP-containing materials are not exposed to the atmosphere except during the material loading stage (e.g., compression molding, injection molding, and resin transfer molding). Processes where the mold is covered with plastic (or equivalent material) prior to resin application, and the resin is injected into the covered mold are also considered closed molding.

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.

Open molding means a process for fabricating composites in a way that HAP-containing materials are exposed to the atmosphere. Open molding includes processes such as manual resin application, mechanical resin application, filament application, and gel coat application. Open molding also includes application of resins and gel coats to parts that have been removed from the open mold.

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

An engine is not a non-road (portable) engine if it remains or will remain at a location for more than 12 consecutive months or for a shorter period of time if sited at a seasonal source. A seasonal source is a source that remains in a single location for two years or more and which operates for fewer than 12 months in a calendar year. If an engine operates at a seasonal source for one entire season, the engine does not meet the criteria of a non-road (portable) engine and is subject to applicable stationary engine requirements.

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.

Sabre has applied to renew currently licensed emission units and to add an annual limit of HAP emissions and thereby reclassify the facility from a major HAP source to an area source of HAP.

Therefore, this license is considered to be both a renewal and a minor modification and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules C.M.R. ch. 115.

This amendment will not increase licensed emissions of any pollutant. Therefore, this amendment is determined to be a minor modification and has been processed as such.

E. Facility Classification

With the annual VOC and HAP limits associated with the process activities, the facility is licensed as follows:

- As a synthetic minor source of air emissions for criteria pollutants, because Sabre is subject to license restrictions that keep facility emissions below major source thresholds for VOC; and
- As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for HAP.

Emissions of HAP are licensed above 80% of the major source threshold. Therefore, this facility is classified as an “80% Synthetic Minor” for the purpose of determining the minimum required compliance inspection frequency in accordance with Maine’s Compliance Monitoring Strategy.

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. Process Description

The production activities at Sabre are divided into the following areas.

Fiberglass Shop

Sabre's manufacturing process begins with hull and deck construction in the fiberglass shop and deck department, which utilizes unsaturated polyester resins, vinylester resins, and gelcoats that are the sources of the majority of emissions. The unsaturated polyester and vinylester resins contain a styrene monomer as the linking agent, which partially volatilizes during spraying and curing.

The lamination process consists of vacuum infusion process molding in which layers of fiberglass reinforcement are laid up on an open mold of the desired hull shape. There are male and female molds used in the laminating process, with the difference being that a convex/male mold results in a smooth inner surface while the concave/female mold results in a smooth outer surface (desired for hulls).

The initial step in the lamination process is the spraying of a gelcoat layer on the surface of a waxed mold. Gelcoating is the application of a layer of resin with no reinforcing materials contained in it. The gelcoat is applied using air-assist applicator guns and contains unsaturated polyester resin, catalyst, and pigments, and its function is to create a smooth outer surface of the hull and for ultraviolet light protection. Upon applying the gelcoat layer to the desired thickness, the hull being constructed is allowed to cure.

Following proper curing of the gelcoat, the subsequent hull layers containing reinforced materials are applied. Sabre employs an air-assist applicator with a "chopping" gun to apply the initial layer of fiberglass-reinforced laminate following the gelcoat layer. Fiberglass roving is pulled from bulk balls by the chopper and is guided through a series of guides on a boom. The fiberglass is applied in ½- to 1-inch lengths at a rate of up to 15 pounds per minute (resin and catalyst included). The catalyst serves as an initiator of the polymerization reaction. Depending on ambient conditions, an inhibitor may be added to the resin to control gel curing time (i.e., to slow down the polymerization reaction in warm weather).

Next, laying up of the fiberglass fabric is accomplished by manually placing it on the cured "chop" layer. Multiple dry fiberglass layers are placed on the cured roving according to the design requirements. The entire mold is enclosed with a plastic material, and tubing is run into it so that a vacuum can be established within the mold, chop, and layers of fiberglass. When this plastic is sealed and a vacuum is established, the required amount of resin is introduced to the part and is distributed evenly via vacuum draw throughout the fiberglass fabric. The result is a completely saturated fiberglass part contained within the plastic which remains until the composite cures.

The use of resin infusion (closed molding) greatly reduces emissions associated with traditional methods of molding, such as open molding. Most of Sabre's parts are being molded using the resin infusion method.

Assembly

The installation of the various components/accessories of the boat is completed during this phase of the manufacturing process. Following installation of all interior/cabin furnishings and equipment, the deck is attached to the hull in the assembly phase. Various adhesives, paints, putties, resins, and solvents are used in relatively small amounts. In addition, minor cutting and grinding is performed in this phase. There are minor VOC and HAP emissions associated with this phase from the use of putties, sealers, adhesives, and solvents.

Finish/Completion

The finish/completion phase includes cleaning, buffing, and touch ups. There are minor amounts of adhesives, gelcoats, paints, putties, resins, and solvents used in this phase, resulting in small quantities of emissions.

Woodshop

The woodshop (mill, prefab, and lamination room) fabricates the components and accessories to be installed in the boats. The VOC and HAP emissions from the woodshop are limited to intermittent applications of cleanup, patching, or adhesive materials. Most of the adhesives used in the woodshop are water-based carpenter's glue products. The woodshop contains dust collection equipment, which is vented to the interior of the building with no external vents. For conceptual purposes, the woodshop is not considered a specific phase of the manufacturing process flow.

Varnish Department

While not a specific phase of the manufacturing process flow, the varnish department pre-stains cabinets and other wooden components that are to be assembled on the boats. All varnishes are brushed on manually. Some of the wood to be varnished is fixed on the boats and as such is varnished in place at various stages in the process.

Spray Booth

Similar to the Varnish Department and Woodshop, the Spray Booth is not a specific phase of Sabre's manufacturing process flow. The Spray Booth is operated infrequently for the purpose of spraying touch-up repairs on transom doors and cockpit seats with gelcoat and a very small amount of polyurethane paint for re-work application due to damage to products. The Spray Booth has standard particulate filters on the interior door and the room exhaust.

C. HAP Limits and Air Emission License Reclassification

In previous air emission licenses, Sabre has not been subject to a condition which limited the emissions of HAP to amounts below the major source threshold and therefore has been licensed as a major HAP source. Sabre has proposed to establish a 12-month rolling total limit of HAP emissions from their facility to less than 9.9 tons/year of any single HAP and less than 24.9 tons/year of all HAP emissions. With these new emission limits, the facility is now classified as an area source of HAP, and the conditions of this air emission license renewal will reflect this change.

D. Process Activities

Sabre has the following process activities at their facility:

- Fiberglass Department: gelcoat applicators, chopper guns, resin applicators, HVLP guns, and HVLP paint sprayers.
- Sabre has a paint booth that is not used daily. The booth is approximately 120 square feet and is used to spray gelcoat onto small parts. Sabre visually inspects the filters and changes them as needed based on these visual inspections.

Sabre was issued Air Emission License A-633-74-A-N on 9/13/1995 which incorporated requirements of Best Available Control Technology (BACT). The VOC BACT findings in Air Emission License A-633-74-A-N have been incorporated as VOC BPT determinations into this air emission license renewal.

The Fiberglass Department is the source of most of the emissions of VOC and HAP. Emissions of styrene, both a VOC and a HAP, are from evaporation of resin or gelcoat overspray and vaporization from the applied resin or gelcoat prior to polymerization.

Not all of the VOC/HAP in materials as delivered is volatilized or emitted. Unified Emission Factors (UEF) for open molding of composites are based on a compilation of research conducted by the Composites Fabricators Association, the National Marine Manufacturing Association, and the United States Environmental Protection Agency. These factors are to be used unless the Department determines other factors are applicable to calculate VOC emissions.

1. 06-096 C.M.R. ch. 159, *Control of Volatile Organic Compounds from Adhesives and Sealants*

The process activities at Sabre are subject to Maine rule 06-096 C.M.R. ch. 159, *Control of Volatile Organic Compounds from Adhesives and Sealants*, which limits emissions of VOC from adhesives, sealants, and primers through two basic components: sale and manufacture restrictions that limit the VOC content of specified adhesives, sealants, and primers sold in the state; and use restrictions that apply primarily to commercial/industrial applications.

Sabre is limited in the use of adhesives and sealants with VOC contents not to exceed the values specified in Table 1 of 06-096 C.M.R. ch. 159.

a. Materials

(1) Exemptions

- (a) Adhesives, sealants, adhesive primers, or sealant primers being tested or evaluated in any research and development, quality assurance, or analytical laboratory, provided records are maintained as required in section 4 of Chapter 159;
- (b) Adhesives, sealants, adhesive primers, and sealant primers that are regulated as consumer products under 06-096 C.M.R. Chapter 152, *Control of Volatile Organic Compounds from Consumer Products*;
- (c) Adhesives and sealants that contain less than 20 grams of VOC per liter of adhesive or sealant, less water and less exempt compounds, as applied;
- (d) Cyanoacrylate adhesives;
- (e) Adhesives, sealants, adhesive primers, or sealant primers that are sold or supplied by the manufacturer or supplier in containers with a net volume of 16 fluid ounces or less, or a net weight of one pound or less, except plastic cement welding adhesives and contact adhesives;
- (f) Contact adhesives that are sold or supplied by the manufacturer or supplier in containers with a net volume of one gallon or less; and
- (g) Adhesives and sealants that are applied in a dry, powdered form and activated without the use of solvent.

[06-096 C.M.R. ch. 159 (3)(A)]

(2) The VOC content limits in Table 1 for adhesives applied to particular substrates shall apply as follows:

- (a) If an operator uses an adhesive or sealant subject to a specific VOC content limit for such adhesive or sealant in Table 1, such specific limit is applicable rather than an adhesive-to-substrate limit; and
- (b) If an adhesive is used to bond dissimilar substrates together, the applicable substrate category with the highest VOC content shall be the limit for such use.

[06-096 C.M.R. ch. 159 (1)(C)]

- (3) While using a surface preparation or cleanup solvent, Sabre shall comply with the following:
- (a) Sabre shall not use materials for surface preparation containing VOC unless the VOC content of the surface preparation solvent is less than 70 grams per liter;
 - (b) Except as provided below, Sabre shall not use materials containing VOC for the removal of adhesives, sealants, or adhesive or sealant primers from surfaces, other than spray application equipment, unless the composite vapor pressure of the solvent used is less than 45 mm Hg at 20 degrees Celsius; and
 - (c) Removal of an adhesive, sealant, adhesive primer, or sealant primer from the parts of spray application equipment shall be performed in accordance with 06-096 C.M.R. ch. 130, *Solvent Cleaners*.
[06-096 C.M.R. ch. 159 (1)(D)]

b. Work Practice Standards

While using adhesives, sealants, adhesive primers, sealant primers, surface preparation solvents, or clean-up solvents subject to Chapter 159, Sabre shall store or dispose of all absorbent materials, such as cloth or paper, which are moistened with adhesives, sealants, primers, or solvents subject to this rule, in non-absorbent containers that shall be closed except when placing materials in or removing materials from the container. [06-096 C.M.R. ch. 159 (2)(F)]

c. Recordkeeping

Sabre shall demonstrate compliance by maintaining records of the following information:

- (1) A list of each adhesive, sealant, adhesive primer, sealant primer, cleanup solvent, and surface preparation solvent in use and in storage;
- (2) A data sheet or material list which provides the material name, manufacturer identification, and material application;
- (3) Catalysts, reducers, or other components used and the mix ratio;
- (4) The VOC content of each product as supplied;
- (5) The final VOC content or vapor pressure, as applied; and
- (6) The annual volume of each adhesive, sealant, adhesive primer, sealant primer, cleanup solvent, or surface preparation solvent used or purchased.
[06-096 C.M.R. ch. 159 (4)]

The above information shall be maintained for five years and shall be made available to the Department within 90 days of a request.
[06-096 C.M.R. ch. 159 (4)(C)]

Note: Standard Condition (8) of this license requires all records be retained for six years; therefore, the five-year record retention requirement of ch. 159 shall be streamlined to the more stringent six-year requirement.

2. 06-096 C.M.R. ch. 162, *Control for Fiberglass Boat Manufacturing Materials*

As a manufacturer of fiberglass boats with annual VOC emissions greater than 5,400 lbs, Sabre is subject to 06-096 C.M.R. ch. 162 *Control for Fiberglass Boat Manufacturing Materials*. Chapter 162 establishes consistent requirements for testing, evaluating, and limiting VOC emissions from fiberglass boat manufacturing operations.

a. Exemptions

The following operations and/or materials are exempt from the monomer and nonmonomer VOC requirements of Chapter 162:

- (1) Production resins (including skin coat resins) that meet the specification for use in military vessels or are approved by the U.S. Coast Guard for use in the construction of lifeboats, rescue boats, and other lifesaving appliances approved under 46 C.F.R. Subchapter Q, or the construction of small passenger vessels regulated by 46 C.F.R. Subchapter T, including but not limited to vessels for hire of less than 100 tons carrying more than 6 and less than 150 passengers. Production resins that meet these criteria must be applied with nonatomizing resin application equipment in order to qualify for exemption under this subsection.
- (2) Pigmented, clear, and tooling gel coat used for part or mold repair and touch-up. The total gel coat materials included in this exemption must not exceed 1.0 percent by weight of all resin and gel coat used at a facility on a 12-month rolling average basis.
- (3) Pure, 100 percent vinyl ester resin used for skin coats that are applied with nonatomizing resin application equipment and with the total amount of the resin materials not exceeding five percent by weight of all resin used at a facility on a 12-month rolling average basis. This exemption does not apply to blends of vinyl ester and polyester used for skin coats.

- (4) Any closed molding operation as defined by Chapter 162. Open molding resin and gel coat operations such as gel coat or skin coat layers that precede a closed molding operation are not exempt.
[06-096 C.M.R. ch. 162 (1)(D)]

b. Emission Limits

Sabre has chosen to comply with the emission limitations of Chapter 162 by using the option of emissions averaging among different operations.

- (1) Sabre shall use Equation 1 to establish a facility-specific monomer VOC mass emission limit on a 12-month rolling average basis:

Equation 1

$$\text{Monomer VOC Limit} = 46(M_R) + 159(M_{PG}) + 291(M_{CG}) + 54(M_{TR}) + 214(M_{TG})$$

Where:

Monomer VOC Limit = total allowable monomer VOC that can be emitted from open molding operations included in the average, in kilograms per 12-month period.

M_R = mass of production resin used in the past 12 months, excluding any materials that are exempt, in megagrams.

M_{PG} = mass of pigmented gel coat used in the past 12 months, excluding any materials that are exempt, in megagrams.

M_{CG} = mass of clear gel coat used in the past 12 months, excluding any materials that are exempt, in megagrams.

M_{TR} = mass of tooling resin used in the past 12 months, excluding any materials that are exempt, in megagrams.

M_{TG} = mass of tooling gel coat used in the past 12 months, excluding any materials that are exempt, in megagrams.

The numerical coefficients associated with each term on the right side of Equation 1 are the allowable monomer VOC emission rates for that material in units of kilograms of monomer VOC per megagram of material used.

[06-096 C.M.R. ch. 162 (3)(B)(1)]

- (2) Sabre shall use Equation 2 to demonstrate that the monomer VOC mass emissions from the operations included in the average do not exceed the emission limit calculated using Equation 1 for the same period. This demonstration shall be conducted at the end of the first 12-month averaging period and at the end of every subsequent month for only those operations and materials included in the average.

Equation 2

$$\text{Monomer VOC emissions} = (PV_R)(M_R) + (PV_{PG})(M_{PG}) + (PV_{CG})(M_{CG}) + (PV_{TR})(M_{TR}) + (PV_{TG})(M_{TG})$$

Where:

Monomer VOC emissions = monomer VOC emissions from open molding operations included in the average, in kilograms per 12-month period.

PV_R = weighted-average monomer VOC emission rate for production resin used in the past 12 months, in kilograms per megagram.

M_R = mass of production resin used in the past 12 months, excluding any materials that are exempt, in megagrams.

PV_{PG} = weighted-average monomer VOC emission rate for pigmented gel coat used in the past 12 months, in kilograms per megagram.

M_{PG} = mass of pigmented gel coat used in the past 12 months, excluding any material that are exempt, in megagrams.

PV_{CG} = weighted-average monomer VOC emission rate for clear gel coat used in the past 12 months, in kilograms per megagram.

M_{CG} = mass of clear gel coat used in the past 12 months, excluding any materials that are exempt, in megagrams.

PV_{TR} = weighted-average monomer VOC emission rate for tooling resin used in the past 12 months, in kilograms per megagram.

M_{TR} = mass of tooling resin used in the past 12 months, excluding any materials that are exempt, in megagrams.

PV_{TG} = weighted-average monomer VOC emission rate for tooling gel coat used in the past 12 months, in kilograms per megagram.

M_{TG} = mass of tooling gel coat used in the past 12 months, excluding any materials that are exempt, in megagrams.

[06-096 C.M.R. ch. 162 (3)(B)(2)]

(3) Sabre shall use Equation 3 to compute the weighted-average monomer VOC emission rate for the previous 12 months for each open molding resin and gel coat operation included in the average for use in Equation 2:

Equation 3

$$PV_{OP} = \frac{\sum_{i=1}^n (M_i PV_i)}{\sum_{i=1}^n (M_i)}$$

Where: PV_{OP} = weighted-average monomer VOC emission rate for each open molding operation (PV_R , PV_{PG} , PV_{CG} , PV_{TR} , and PV_{TG}) included in the average, in kilograms of monomer VOC per megagram of material applied.

M_i = mass of resin or gel coat used within an operation in the past 12 months, in megagrams.

PV_i = the monomer VOC emission rate for resin or gel coat used within an operation in the past 12 months, in kilograms of monomer VOC per megagram of material applied. The equations in Table 1 shall be used to compute PV.

Table 1

Monomer VOC Emission Rate Formulas for Open Molding Resin and Gel Coat

| Material | Application Method | Formula |
|--|--|--|
| Production resin, tooling resin | a. Atomized | a. $0.014 \times (\text{Resin VOC}\%)^{2.425}$ |
| | b. Atomized, plus vacuum bagging with roll-out | b. $0.01185 \times (\text{Resin VOC}\%)^{2.425}$ |
| | c. Atomized, plus vacuum bagging without roll-out | c. $0.00945 \times (\text{Resin VOC}\%)^{2.425}$ |
| | d. Nonatomized | d. $0.014 \times (\text{Resin VOC}\%)^{2.275}$ |
| | e. Nonatomized, plus vacuum bagging with roll-out | e. $0.011 \times (\text{Resin VOC}\%)^{2.275}$ |
| | f. Nonatomized, plus vacuum bagging without roll-out | f. $0.0076 \times (\text{Resin VOC}\%)^{2.275}$ |
| Pigmented gel coat, clear gel coat, tooling gel coat | All methods | $0.445 \times (\text{Gel Coat VOC}\%)^{1.675}$ |

[06-096 C.M.R. ch. 162 (3)(B)(3)]

(4) When using a filled production resin or filled tooling resin, Sabre shall calculate the emission rate for the filled material on an as-applied basis using Equation 4:

Equation 4

$$PV_F = \frac{PV_U \times (100\% - \text{Filler})}{100}$$

100

Where: PV_F = The as-applied monomer VOC emission rate for the filled production resin or tooling resin, in kilograms monomer VOC per megagram of filled material.

$PV_U =$ The monomer VOC emission rate for the neat (unfilled) resin before filler is added, as calculated using the formulas in Table 2 of Section 3(B)(3) of Chapter 162.

$\% \text{ Filler} =$ The weight-percent of filler in the as-applied filled resin system.
[06-096 C.M.R. ch. 162 (4)(1)]

If the filled resin ...

- (i) Is used as a production resin, then the value of PV_F calculated by Equation 4 shall not exceed 46 kilograms of monomer VOC per megagram of filled resin applied.
- (ii) Is used as a tooling resin, then the value of PV_F calculated by Equation 4 shall not exceed 54 kilograms of monomer VOC per megagram of filled resin applied.
- (iii) Is included in the emissions averaging procedure, then the facility shall use the value of PV_F calculated by Equation 4 for the value of PV_i in Equation 3.
[06-096 C.M.R. ch. 162 (4)(2)]

(5) Non-Monomer VOC Content

- (i) Up to five percent of the non-monomer VOC content of a resin or gel coat shall be exempt from the VOC content limits of this section.
- (ii) If the non-monomer VOC content limit of a resin or gel coat exceeds five percent, then the excess non-monomer VOC over five percent shall be added to the monomer VOC content. The monomer VOC content of resin and gel coat shall be determined by using the South Coast Air Quality Management District Method 312-9, *Determination of Percent Monomer in Polyester Resins*, revised 1996, unless Sabre maintains records from the manufacturer to document the monomer VOC content of resin and gel coat materials.
[06-096 C.M.R. ch. 162 (5)]

(6) Cleaning Solvent Standards

- (i) The VOC content of cleaning solvents employed for routine application equipment cleaning shall contain a maximum of 5.0 percent VOC by weight, or have a composite vapor pressure of no more than 0.50 mm Hg at 68 degrees Fahrenheit, as determined by the cleaning solvent manufacturer's Safety Data Sheet (SDS) or other appropriate documentation acceptable to the Department and EPA.

- (ii) Only non-VOC solvents shall be used to remove cured resin and gel coat from application equipment.
[06-096 C.M.R. ch. 162 (6)]

c. Work Practice Standards

All resin and gel coat containers with a capacity equal to or greater than 208 liters (55.0 gallons), including those used for on-site mixing of putties and polyester resin putties, must have a cover with no visible gaps in place at all times. This work practice does not apply when materials are being manually added to or removed from a container, or when mixing equipment is being placed in or removed from a container. [06-096 C.M.R. ch. 162 (7)]

d. Monitoring and Recordkeeping Requirements

Sabre shall collect and record the following information on a monthly basis for each operation subject to Chapter 162 and shall maintain the information at the facility for a period of five years:

- (1) The total quantity of atomized molding production resin, nonatomized production resin, pigmented gel coat, clear gel coat, atomized tooling resin, nonatomized tooling resin, and tooling gel coat used per month and the weighted-average monomer VOC contents for each operation.
- (2) All calculations performed pursuant to Chapter 162.
- (3) The VOC content of each non-monomer resin and gel coat employed.
- (4) For each cleaning solvent employed for routine application equipment cleaning, either the VOC content, by weight percent or the composite vapor pressure, in mmHg; whichever is the applicable requirement selected to comply with the cleaning solvent requirements of Section 4 of Chapter 162.

[06-096 C.M.R. ch. 162 (9)]

e. Reporting Requirements

Sabre shall notify the Department of any record maintained in accordance with Section 6(A) of Chapter 162 showing the use of noncomplying materials. A copy of such record shall be sent to the Department within 30 days following the end of the month in which the use of noncomplying materials occurs.

[06-096 C.M.R. ch. 162 (10)]

3. 06-096 C.M.R. ch. 166, *Industrial Cleaning Solvents*

The process activities at Sabre are not subject to 06-096 C.M.R. ch. 166, *Industrial Cleaning Solvents* because all solvent based cleaning activities are exempted per 06-096 C.M.R. ch. 166 (3)(A)(10) and (11).

4. 40 C.F.R. Part 63, Subpart VVVV

With the addition of the annual HAP limit and reclassification of the facility as an area source of HAP, Sabre will no longer be subject to 40 C.F.R. Part 63, Subpart VVVV, *National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing*. Sabre shall submit to the EPA and the Department a notification of the change of applicability to Subpart VVVV within 15 days of the issuance of this license. The notification shall contain the following:

- a. The name and address of the owner or operator;
- b. The address of the facility;
- c. An identification of the standard being reclassified from; and
- d. Effective date of the reclassification.

[40 C.F.R. § 63.9(j)]

Sabre shall maintain records sufficient to demonstrate compliance with Subpart VVVV for any period that the facility was subject to that standard.

5. In addition to requirements of specific state rules as described above, the following has been determined to be BPT for this facility:

- a. Sabre shall limit the emissions of VOC to no more than 35 tons/year, on a 12-month rolling total basis, from all departments that make up the composites fabrication process.
- b. Sabre shall limit the facility wide HAP emissions to no more than 9.9 tons/year of any single HAP and 24.9 tons/year for all HAP combined, each on a 12-month rolling total basis.
- c. Sabre shall maintain an emission tracking system to demonstrate compliance with the emissions averaging option in Chapter 162 or by using an alternative option as provided in the rule.
- d. Sabre shall continue research and manufacturing test trials of pollution prevention technologies (lower styrene resins, closed mold system, etc.). Sabre shall maintain documentation of the research and test trial results for review by the Department upon request.
- e. Sabre shall continue to use atomized low-pressure spray guns for the application of gelcoats and mechanical non-atomized or manual application techniques for resins.
- f. Sabre shall replace filters on exhaust fans and the paint booth when filters are determined by visual inspection to be beyond their useful life.

- g. Sabre shall properly maintain all dust collection equipment in the facility and make repairs as necessary to prevent system leakage. The exhaust from the dust collectors shall be vented to the interior of the building with no external vents; however, Sabre shall perform such housekeeping and clean up as is necessary to prevent fugitive emissions. A written log shall be kept documenting all dust collection equipment maintenance.
- h. Purchase records of VOC containing resins, gelcoats, and putties shall be kept on a 12-month rolling total for compliance purposes.
- i. Sabre shall track total VOC and HAP emissions using either of the following methods for each VOC containing material.

(1) To calculate combined for open molding and closed molding by the following:

Monthly VOC emissions = (monthly facility purchases by mass) (VOC content)

Monthly HAP emissions = (monthly facility purchases by mass) (HAP content)

(2) To calculate separately for open molding and closed molding by the following:

(i) Closed Molding:

For materials used in closed molding operations, Sabre may assume a 1% release of all VOC and may calculate total VOC emissions using the following equation for each applicable material:

Monthly VOC emissions = (monthly facility purchases by mass) (VOC content) (0.01)

Monthly HAP emissions = (monthly facility purchases by mass) (HAP content) (0.01)

(ii) Open Molding:

Sabre may elect to use the UEF for the calculation of VOC and HAP from open molding operations. Sabre shall track the amount and type of each resin and gel coat used for open molding operations, and the VOC and HAP content of each and apply the most current UEF.

E. Boilers #1 and #2

Sabre operates Boilers #1 and #2 for heat. Each boiler is rated at 1.7 MMBtu/hr and fires distillate fuel. The boilers were installed in 2006 and exhaust through individual stacks, designated Stacks #1 and #2.

Previously, Boilers #1 and #2 were considered insignificant because of their size per 06-096 C.M.R. ch. 140, Appendix B. With the reclassification of Sabre from a major source of HAP to an area source of HAP, the exemption no longer applies to Boilers #1 and #2 and they will now be included in this air emission license.

Boilers #1 and #2 are licensed to fire distillate fuel. 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 – 20 lb/1,000 gal based on AP-42 Table 1.3-1 dated 5/10
- CO – 5 lb/1,000 gal based on AP-42 Table 1.3-1 dated 5/10
- VOC – 0.34 lb/1,000 gal based on AP-42 Table 1.3-3 dated 5/10
- Visible Emissions – 06-096 C.M.R. ch. 101

The BPT emission limits for Boilers #1 and #2 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) |
|-----------|------------|--------------------------|---------------------------|-------------------------|-------------------------|------------|-------------|
| Boiler #1 | 0.14 | 0.14 | 0.14 | 0.01 | 0.24 | 0.06 | 0.01 |
| Boiler #2 | 0.14 | 0.14 | 0.14 | 0.01 | 0.24 | 0.06 | 0.01 |

2. Visible Emissions

Visible emissions from Boilers #1 and #2 shall each not exceed 20% opacity on a six-minute block average basis.

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

Due to their size, 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 for units greater than 10 MMBtu/hr manufactured after June 9, 1989. [40 C.F.R. § 60.40c]

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

Boilers #1 and #2 are subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*,

40 C.F.R. Part 63, Subpart JJJJJ. The units are considered existing oil boilers. [40 C.F.R. §§ 63.11193 and 63.11195]

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

a. Compliance Dates, Notifications, and Work Practice Requirements

(1) Initial Notification of Compliance

An Initial Notification submittal to EPA is due within 120 days after the issuance of this license. [40 C.F.R. § 63.11225(a)(2)]

(2) Boiler Tune-Up Program

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

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

| Boiler Category | Tune-Up Frequency |
|---|--------------------------|
| Oil fired boilers with a heat input capacity of $\leq 5\text{MMBtu/hr}$ Boilers #1 and #2 | Every 5 years |

[40 C.F.R. § 63.11223(a) and Table 2]

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

1. As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted, not to exceed 72 months from the previous inspection. [40 C.F.R. § 63.11223(b)(1)]
2. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 C.F.R. § 63.11223(b)(2)]
3. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted, not to exceed 72 months from the previous inspection. [40 C.F.R. § 63.11223(b)(3)]
4. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]

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

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

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

(3) Compliance Report

A compliance report shall be prepared by March 1st every five years which covers the previous five calendar years. The report shall be maintained by the source and submitted to the Department and/or to the EPA upon request. The report must include the items contained in §§ 63.11225(b)(1) and (2), including the following: [40 C.F.R. § 63.11225(b)]

- (i) Company name and address;
- (ii) A statement of whether the source has complied with all the relevant requirements of this Subpart;
- (iii) A statement certifying truth, accuracy, and completeness of the notification and signed by a responsible official and containing the official's name, title, phone number, email address, and signature;
- (iv) The following certifications, as applicable:
 1. "This facility complies with the requirements in 40 C.F.R. § 63.11223 to conduct tune-ups of each boiler in accordance with the frequency specified in this Subpart."
 2. "No secondary materials that are solid waste were combusted in any affected unit."

3. "This facility complies with the requirement in §§ 63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available."

b. Recordkeeping

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

F. Fire Pump

Sabre operates one fire pump. The Fire Pump has an engine rated at 1.5 MMBtu/hr which fires distillate fuel. The Fire Pump was manufactured in 1980.

1. BPT Findings

The BPT emission limits for the Fire Pump are based on the following:

- | | |
|--|---|
| PM/PM ₁₀ /PM _{2.5} | – 0.12 b/MMBtu from 06-096 C.M.R. ch. 115, BPT] |
| SO ₂ | – 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 3.4-1 dated 10/96 |
| CO | – 0.95 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96 |

- VOC – 0.36 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96
Visible Emissions – 06-096 C.M.R. ch. 101, BPT

The BPT emission limits for the Fire Pump 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) |
|-----------|------------|--------------------------|---------------------------|-------------------------|-------------------------|------------|-------------|
| Fire Pump | 0.18 | 0.18 | 0.18 | 0.01 | 6.62 | 1.43 | 0.54 |

Visible emissions from the Fire Pump shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time Sabre shall either meet the normal operating visible emissions standard or the following work practice standards and alternative visible emissions standard.

- The duration of the startup shall not exceed 30 minutes per event;
- Visible emissions shall not exceed 50% opacity on a six-minute block average basis; and
- Sabre 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

The Fire Pump is not a generator and is therefore not subject to *Stationary Generators*, 06-096 C.M.R. ch. 169 rule pursuant to section 1.

3. New Source Performance Standards (NSPS)

Due to the date of manufacture of the compression ignition emergency engine listed above, the engine is not subject to the New Source Performance Standards (NSPS) *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CIICE)*, 40 C.F.R. Part 60, Subpart III 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 the emergency engine listed above. The unit is considered 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 these units 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.

- (a) 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.

- (b) 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.

The Fire Pump 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: Fire Pump | <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 1,000 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. |

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

Sabre 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, Sabre 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, 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

Sabre 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)]

G. Operational Flexibility

Maine rule 06-096 C.M.R. ch. 115 incorporates provisions to ensure that companies in Maine have the maximum operational flexibility to take advantage of changing market conditions. Sabre's process is continually adapting to meet customer demands. The following terms for reasonably anticipated alternative operating scenarios will be included in this Air Emission License:

1. Sabre may substitute and add resin and gelcoat application equipment as necessary without triggering notification of the Department or license revisions provided that Sabre adheres to BPT provisions.

2. The products/chemicals associated with each phase of boat manufacturing included in the application forms are based on Sabre's 2023 use. These products are representative of Sabre's annual chemical usage but do not comprise a complete list of all potential products required by Sabre in the composites fabrication manufacturing process. Therefore, product interchanging as necessary is allowed without triggering reporting or additional licensing as long as Sabre abides by all State and Applicable requirements.

H. General Process Emissions

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

I. Fugitive Emissions

Sabre 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.

Sabre 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.

J. Emission Statements

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

1. The amount of distillate fuel fired in Boilers #1 and #2 (each), and the Fire Pump on a calendar year basis;
2. The sulfur content of the distillate fuel fired in Boilers #1, #2, and the Fire Pump;
3. Hours the Fire Pump was operating on a calendar year basis; and
4. Calculations of the VOC and HAP emissions from the boat building activities on a calendar year total basis.

Every third year, or as requested by the Department, Sabre shall report to the Department emissions of hazardous air pollutants as required pursuant to 06-096 C.M.R. ch. 137, § (3)(C). The next report is due no later than May 15, 2024, for emissions occurring in calendar year 2023. The Department will use these reports to calculate and invoice for the applicable annual air quality surcharge for the subsequent three billing periods. Sabre shall

pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3). [38 M.R.S. § 353-A(1-A)]

K. Annual Emissions

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

- Operating the boilers for 8,760 hr/yr;
- Operating the Fire Pump Engine for 100 hrs/yr, and
- The facility’s VOC and HAP emissions limits.

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

Total Licensed Annual Emissions for the Facility
Tons/year
 (used to calculate the annual license fee)

| | PM | PM ₁₀ | PM _{2.5} | SO ₂ | NO _x | CO | VOC |
|------------------|------------|------------------|-------------------|-----------------|-----------------|------------|-------------|
| Boilers | 1.2 | 1.2 | 1.2 | 0.1 | 2.2 | 0.6 | 0.1 |
| Fire Pump | 0.1 | 0.1 | 0.1 | 0.1 | 0.4 | 0.1 | 0.1 |
| Process Sources | - | - | - | - | - | - | 35.0 |
| Total TPY | 1.3 | 1.3 | 1.3 | 0.2 | 2.6 | 0.7 | 35.2 |

| Pollutant | Tons/year |
|------------|-----------|
| Single HAP | 9.9 |
| Total HAP | 24.9 |

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 Sabre 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-633-71-E-R/A 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 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]
- (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) **Boilers #1 and #2**

A. Fuel

1. Boilers #1 and #2 are licensed to fire distillate fuel. [06-096 C.M.R. ch. 115, BPT]
2. 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]
3. 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 calendar year total 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 [06-096 C.M.R. ch. 115, BPT]:

| Emission Unit | PM (lb/hr) | PM ₁₀ (lb/hr) | PM _{2.5} (lb/hr) | SO ₂ (lb/hr) | NO _x (lb/hr) | CO (lb/hr) | VOC (lb/hr) |
|---------------|------------|--------------------------|---------------------------|-------------------------|-------------------------|------------|-------------|
| Boiler #1 | 0.14 | 0.14 | 0.14 | 0.01 | 0.24 | 0.06 | 0.01 |
| Boiler #2 | 0.14 | 0.14 | 0.14 | 0.01 | 0.24 | 0.06 | 0.01 |

C. Visible emissions from Boilers #1 and #2 shall each not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(2)]

D. Sabre shall comply with all requirements of 40 C.F.R. Part 63, Subpart JJJJJ applicable to Boilers #1 and #2 including, but not limited to, the following:
 [incorporated under 06-096 C.M.R. ch. 115, BPT]

1. An Initial Notification submittal to EPA is due within 120 days after the source becomes subject to the standard. [40 C.F.R. § 63.11225(a)(2)]
2. The facility shall implement a boiler tune-up program. [40 C.F.R. § 63.11223]
 - a. Each tune-up shall be conducted at a frequency specified by the rule and based on the size, age, and operations of the boiler. See chart below:

| Boiler Category | Tune-Up Frequency |
|--|-------------------|
| Oil fired boilers with a heat input capacity of ≤5MMBtu/hr Boilers #1 and #2 | Every 5 years |

[40 C.F.R. § 63.11223(a) and Table 2]

- b. The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:
 - (1) As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted, not to exceed 72 months from the previous inspection. [40 C.F.R. § 63.11223(b)(1)]
 - (2) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer’s specifications. [40 C.F.R. § 63.11223(b)(2)]
 - (3) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted, not to exceed 72 months from the previous inspection. [40 C.F.R. § 63.11223(b)(3)]

- (4) Optimize total emissions of CO, consistent with manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]
 - (5) Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
[40 C.F.R. § 63.11223(b)(5)]
 - (6) If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up.
[40 C.F.R. § 63.11223(b)(7)]
- c. Tune-Up Report: A tune-up report shall be maintained onsite and submitted to the Department and EPA upon request. The report shall contain the following information:
- (1) The concentration of CO in the effluent stream (ppmv) and oxygen (volume percent) measured at high fire or typical operating load both **before** and **after** the boiler tune-up;
 - (2) A description of any corrective actions taken as part of the tune-up of the boiler; and
 - (3) The types and amounts of fuels used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. [40 C.F.R. § 63.11223(b)(6)]
3. Compliance Report

A compliance report shall be prepared by March 1st every five years which covers the previous five calendar years. The report shall be maintained by the source and submitted to the Department and/or to the EPA upon request. The report must include the items contained in §§ 63.11225(b)(1) and (2), including the following: [40 C.F.R. § 63.11225(b)]

- a. Company name and address;
- b. A statement of whether the source has complied with all the relevant requirements of this Subpart;
- c. A statement certifying truth, accuracy, and completeness of the notification and signed by a responsible official and containing the official's name, title, phone number, email address, and signature;
- d. The following certifications, as applicable:
 - (1) "This facility complies with the requirements in 40 C.F.R. § 63.11223 to conduct tune-ups of each boiler in accordance with the frequency specified in this Subpart."

- (2) “No secondary materials that are solid waste were combusted in any affected unit.”
- (3) “This facility complies with the requirement in §§ 63.11214(d) and 63.11223(g) to minimize the boiler’s time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer’s recommended procedures or procedures specified for a boiler of similar design if manufacturer’s recommended procedures are not available.”

4. Recordkeeping

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

(18) **Fire Pump**

- A. The fuel sulfur content for the distillate fuel fire in the Fire Pump 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]

B. 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) |
|-----------|---------------|-----------------------------|------------------------------|----------------------------|----------------------------|---------------|----------------|
| Fire Pump | 0.18 | 0.18 | 0.18 | 0.01 | 6.62 | 1.43 | 0.54 |

C. Visible Emissions

Visible emissions from the Fire Pump shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time Sabre 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. Sabre 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)]

D. The Fire Pump shall meet the applicable requirements of 40 C.F.R. Part 63, Subpart ZZZZ, including the following: [incorporated under 06-096 C.M.R. chs. 115, BPT]

1. Sabre 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

Sabre 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, Sabre 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 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, BPT]

b. Sabre 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 Sabre 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)]

Sabre 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) **Process Activities**

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

1. Sabre shall limit the emissions of VOC to no more than 35.0 tons/year, on a 12-month rolling total basis, from all departments that make up the composites fabrication process.
2. Sabre shall limit the facility wide HAP emissions to no more than 9.9 tons/year of any single HAP and 24.9 tons/year of all HAP combined, each on a 12-month rolling total basis.
3. Sabre shall maintain an emission tracking system to demonstrate compliance with the emissions averaging option in Chapter 162 or by using an alternative option as provided in the rule.
4. Sabre shall continue research and manufacturing test trials of pollution prevention technologies (lower styrene resins, closed mold system, etc.). Sabre shall maintain documentation of the research and test trial results for review by the Department upon request.
5. Sabre shall continue to use atomized low-pressure spray guns for the application of gelcoats and mechanical non-atomized or manual application techniques for resins.
6. Sabre shall replace filters on exhaust fans and the paint booth when filters are determined by visual inspection to be beyond their useful life.
7. Sabre shall properly maintain all dust collection equipment in the facility and make repairs as necessary to prevent system leakage. The exhaust from the dust collectors shall be vented to the interior of the building with no external vents; however, Sabre shall perform such housekeeping and clean up as is necessary to prevent fugitive emissions. A written log shall be kept documenting all dust collection equipment maintenance.
8. Purchase records of VOC containing resins, gelcoats, and putties shall be kept on a 12-month rolling total for compliance purposes.
9. Sabre shall track total VOC and HAP emissions using either of the following methods for each VOC containing material.
 - a. To calculate combined for open molding and closed molding by the following:

Monthly VOC emissions = (monthly facility purchases by mass) (VOC content)

Monthly HAP emissions = (monthly facility purchases by mass) (HAP content)
 - b. To calculate separately for open molding and closed molding by the following:

(1) Closed Molding:

For materials used in closed molding operations, Sabre may assume a 1% release of all VOC and may calculate total VOC emissions using the following equation for each applicable material:

Monthly VOC emissions = (monthly facility purchases by mass) (VOC content) (0.01)

Monthly HAP emissions = (monthly facility purchases by mass) (HAP content) (0.01)

(2) Open Molding:

Sabre may elect to use the UEF for the calculation of VOC and HAP from open molding operations. Sabre shall track the amount and type of each resin and gel coat used for open molding operations, and the VOC and HAP content of each and apply the most current UEF.

B. 06-096 C.M.R. ch. 159, *Control of Volatile Organic Compounds from Adhesives and Sealants*

1. Materials

a. Exemptions

Sabre is exempt from the VOC requirements of 06-096 C.M.R. ch. 159 for the materials and operations listed in 06-096 C.M.R. ch. 159 (3)(A).
[06-096 C.M.R. ch. 159 (3)(A)]

b. The VOC content limits in Table 1 of 06-096 C.M.R. ch. 159 for adhesives applied to particular substrates shall apply as follows:

(1) If an operator uses an adhesive or sealant subject to a specific VOC content limit for such adhesive or sealant in Table 1, such specific limit is applicable rather than an adhesive-to-substrate limit; and

(2) If an adhesive is used to bond dissimilar substrates together, the applicable substrate category with the highest VOC content shall be the limit for such use.

[06-096 C.M.R. ch. 159 (1)(C)]

c. While using a surface preparation or cleanup solvent, Sabre shall comply with the following:

(1) Sabre shall not use materials for surface preparation containing VOC, unless the VOC content of the surface preparation solvent is less than 70 grams per liter;

- (2) Except as provided below, Sabre shall not use materials containing VOC for the removal of adhesives, sealants, or adhesive or sealant primers from surfaces, other than spray application equipment, unless the composite vapor pressure of the solvent used is less than 45 mm Hg at 20 degrees Celsius; and
- (3) Removal of an adhesive, sealant, adhesive primer, or sealant primer from the parts of spray application equipment shall be performed in accordance with 06-096 C.M.R. ch. 130, *Solvent Cleaners*.
[06-096 C.M.R. ch. 159 (1)(D)]

2. Work Practice Standards

While using adhesives, sealants, adhesive primers, sealant primers, surface preparation solvents, or clean-up solvents subject to Chapter 159, Sabre shall store or dispose of all absorbent materials, such as cloth or paper, which are moistened with adhesives, sealants, primers, or solvents subject to this rule, in non-absorbent containers that shall be closed except when placing materials in or removing materials from the container. [06-096 C.M.R. ch. 159 (2)(F)]

3. Recordkeeping [06-096 C.M.R. ch. 159 (4)]

Sabre shall demonstrate compliance by maintaining records of the following information:

- a. A list of each adhesive, sealant, adhesive primer, sealant primer, cleanup solvent, and surface preparation solvent in use and in storage;
- b. A data sheet or material list which provides the material name, manufacturer identification, and material application;
- c. Catalysts, reducers, or other components used and the mix ratio;
- d. The VOC content of each product as supplied;
- e. The final VOC content or vapor pressure, as applied; and
- f. The annual volume of each adhesive, sealant, adhesive primer, sealant primer, cleanup solvent, or surface preparation solvent used or purchased.

The above information shall be maintained for five years and shall be made available to the Department within 90 days of a request.
[06-096 C.M.R. ch. 159 (4)(C)]

Note: Standard Condition (8) of this license requires all records be retained for six years; therefore, the five-year record retention requirement of ch. 159 shall be streamlined to the more stringent six-year requirement.

C. 06-096 C.M.R. ch. 162, *Control for Fiberglass Boat Manufacturing Materials*

1. Exemptions

Sabre shall comply with all applicable requirements of 06-096 C.M.R. ch. 162 and exclude operations and/or materials exempt from the monomer and nonmonomer VOC requirements per 06-096 C.M.R. ch. 162 (1)(D).
[06-096 C.M.R. ch. 162 (1)(D)]

2. Emission Limits

a. Sabre shall use Equation 1 to establish a facility-specific monomer VOC mass emission limit on a 12-month rolling average basis:

Equation 1

$$\text{Monomer VOC Limit} = 46(M_R) + 159(M_{PG}) + 291(M_{CG}) + 54(M_{TR}) + 214(M_{TG})$$

Where: Monomer VOC Limit = total allowable monomer VOC that can be emitted from the open molding operations included in the average, in kilograms per 12-month period.

M_R = mass of production resin used in the past 12 months, excluding any materials that are exempt, in megagrams.

M_{PG} = mass of pigmented gel coat used in the past 12 months, excluding any materials that are exempt, in megagrams.

M_{CG} = mass of clear gel coat used in the past 12 months, excluding any materials that are exempt, in megagrams.

M_{TR} = mass of tooling resin used in the past 12 months, excluding any materials that are exempt, in megagrams.

M_{TG} = mass of tooling gel coat used in the past 12 months, excluding any materials that are exempt, in megagrams.

The numerical coefficients associated with each term on the right side of Equation 1 are the allowable monomer VOC emission rates for that material in units of kilograms of monomer VOC per megagram of material used.
[06-096 C.M.R. ch. 162 (3)(B)(1)]

b. Sabre shall use Equation 2 to demonstrate that the monomer VOC mass emissions from the operations included in the average do not exceed the emission limit calculated using Equation 1 for the same period. This demonstration shall be conducted at the end of the first 12-month averaging period and at the end of every subsequent month for only those operations and materials included in the average.

Equation 2

$$\text{Monomer VOC emissions} = (PV_R)(M_R) + (PV_{PG})(M_{PG}) + (PV_{CG})(M_{CG}) + (PV_{TR})(M_{TR}) + (PV_{TG})(M_{TG})$$

Where:

Monomer VOC emissions = monomer VOC emissions from open molding operations included in the average, in kilograms per 12-month period.

PV_R = weighted-average monomer VOC emission rate for production resin used in the past 12 months, in kilograms per megagram.

M_R = mass of production resin used in the past 12 months, excluding any materials that are exempt, in megagrams.

PV_{PG} = weighted-average monomer VOC emission rate for pigmented gel coat used in the past 12 months, in kilograms per megagram.

M_{PG} = mass of pigmented gel coat used in the past 12 months, excluding any material that are exempt, in megagrams.

PV_{CG} = weighted-average monomer VOC emission rate for clear gel coat used in the past 12 months, in kilograms per megagram.

M_{CG} = mass of clear gel coat used in the past 12 months, excluding any materials that are exempt, in megagrams.

PV_{TR} = weighted-average monomer VOC emission rate for tooling resin used in the past 12 months, in kilograms per megagram.

M_{TR} = mass of tooling resin used in the past 12 months, excluding any materials that are exempt, in megagrams.

PV_{TG} = weighted-average monomer VOC emission rate for tooling gel coat used in the past 12 months, in kilograms per megagram.

M_{TG} = mass of tooling gel coat used in the past 12 months, excluding any materials that are exempt, in megagrams.

[06-096 C.M.R. ch. 162 (3)(B)(2)]

- c. Sabre shall use Equation 3 to compute the weighted-average monomer VOC emission rate for the previous 12 months for each open molding resin and gel coat operation included in the average for use in Equation 2:

Equation 3

$$PV_{OP} = \frac{\sum_{i=1}^n (M_i PV_i)}{\sum_{i=1}^n (M_i)}$$

Where: PV_{OP} = weighted-average monomer VOC emission rate for each open molding operation (PV_R , PV_{PG} , PV_{CG} , PV_{TR} , and PV_{TG}) included in the average, in kilograms of monomer VOC per megagram of material applied.

M_i = mass of resin or gel coat used within an operation in the past 12 months, in megagrams.

PV_i = the monomer VOC emission rate for resin or gel coat used within an operation in the past 12 months, in kilograms of monomer VOC per megagram of material applied. The equations in Table 1 shall be used to compute PV.

Table 1

Monomer VOC Emission Rate Formulas for Open Molding Resin and Gel Coat

| Material | Application Method | Formula |
|--|--|--|
| Production resin, tooling resin | a. Atomized | a. $0.014 \times (\text{Resin VOC}\%)^{2.425}$ |
| | b. Atomized, plus vacuum bagging with roll-out | b. $0.01185 \times (\text{Resin VOC}\%)^{2.425}$ |
| | c. Atomized, plus vacuum bagging without roll-out | c. $0.00945 \times (\text{Resin VOC}\%)^{2.425}$ |
| | d. Nonatomized | d. $0.014 \times (\text{Resin VOC}\%)^{2.275}$ |
| | e. Nonatomized, plus vacuum bagging with roll-out | e. $0.011 \times (\text{Resin VOC}\%)^{2.275}$ |
| | f. Nonatomized, plus vacuum bagging without roll-out | f. $0.0076 \times (\text{Resin VOC}\%)^{2.275}$ |
| Pigmented gel coat, clear gel coat, tooling gel coat | All methods | $0.445 \times (\text{Gel Coat VOC}\%)^{1.675}$ |

[06-096 C.M.R. ch. 162 (3)(B)(3)]

- d. When using a filled production resin or filled tooling resin, Sabre shall calculate the emission rate for the filled material on an as-applied basis using Equation 4:

Equation 4

$$PV_F = \frac{PV_U \times (100\% - \text{Filler})}{100}$$

100

Where: PV_F = The as-applied monomer VOC emission rate for the filled production resin or tooling resin, in kilograms monomer VOC per megagram of filled material.

$PV_U =$ The monomer VOC emission rate for the neat (unfilled) resin before filler is added, as calculated using the formulas in Table 2 of Section 3(B)(3) of Chapter 162.

$\% \text{Filler} =$ The weight-percent of filler in the as-applied filled resin system.
[06-096 C.M.R. ch. 162 (4)(1)]

If the filled resin...

- (1) Is used as a production resin, then the value of PV_F calculated by Equation 4 shall not exceed 46 kilograms of monomer VOC per megagram of filled resin applied.
- (2) Is used as a tooling resin, then the value of PV_F calculated by Equation 4 shall not exceed 54 kilograms of monomer VOC per megagram of filled resin applied.
- (3) Is included in the emissions averaging procedure, then the facility shall use the value of PV_F calculated by Equation 4 for the value of PV_i in Equation 3.

[06-096 C.M.R. ch. 162 (4)(2)]

3. Non-Monomer VOC Content

- a. Up to five percent of the non-monomer VOC content of a resin or gel coat shall be exempt from the VOC content limits of this section.
- b. If the non-monomer VOC content limit of a resin or gel coat exceeds five percent, then the excess non-monomer VOC over five percent shall be added to the monomer VOC content. The monomer VOC content of resin and gel coat shall be determined by using the South Coast Air Quality Management District Method 312-9, *Determination of Percent Monomer in Polyester Resins*, revised 1996, unless Sabre maintains records from the manufacturer to document the monomer VOC content of resin and gel coat materials.

[06-096 C.M.R. ch. 162 (5)]

4. Cleaning Solvent Standards

- a. The volatile organic compound content of cleaning solvents employed for routine application equipment cleaning shall contain a maximum of 5.0 percent VOC by weight, or have a composite vapor pressure of no more than 0.50 mm Hg at 68 degrees Fahrenheit, as determined by the cleaning solvent manufacturer's Safety Data Sheet (SDS) or other appropriate documentation acceptable to the Department and EPA.
- b. Only non-volatile organic compound solvents shall be used to remove cured resin and gel coat from application equipment.

[06-096 C.M.R. ch. 162 (6)]

5. Work Practice Standards

All resin and gel coat containers with a capacity equal to or greater than 208 liters (55.0 gallons), including those used for on-site mixing of putties and polyester resin putties, shall have a cover with no visible gaps in place at all times. This work practice does not apply when materials are being manually added to or removed from a container, or when mixing equipment is being placed or removed from a container. [06-096 C.M.R. ch. 162 (7)]

6. Monitoring and Recordkeeping Requirements

Sabre shall collect and record the following information for each operation subject to Chapter 162 on a monthly basis and shall maintain the information at the facility for a period of five years:

- b. The total quantity of atomized molding production resin, nonatomized production resin, pigmented gel coat, clear gel coat, atomized tooling resin, nonatomized tooling resin, and tooling gel coat used per month and the weighted-average monomer VOC contents for each operation.
- c. All calculations performed pursuant to Chapter 162.
- d. The volatile organic compound content of each non-monomer resin and gel coat employed.
- e. For each cleaning solvent employed for routine application equipment cleaning, either the volatile organic compound content, by weight percent or the composite vapor pressure, in mmHg; whichever is the applicable requirement selected to comply with the cleaning solvent requirements of Section 4 of this Chapter.

[06-096 C.M.R. ch. 162 (9)]

7. Reporting Requirements

Sabre shall notify the Department of any record maintained in accordance with Section 6(A) of Chapter 162 showing the use of noncomplying materials. A copy of such record shall be sent to the Department within 30 days following the end of the month in which the use of noncomplying materials occurs.

[06-096 C.M.R. ch. 162 (10)]

D. 40 C.F.R. Part 63, Subpart VVVV

1. Sabre shall submit to the EPA and the Department a notification of the change of applicability to Subpart VVVV within 15 days of the issuance of this license. The notification shall contain the following:
 - a. The name and address of the owner or operator;
 - b. The address of the facility;

- c. An identification of the standard being reclassified from; and
- d. Effective date of the reclassification.
[40 C.F.R. § 63.9(j)]

2. Sabre shall maintain records sufficient to demonstrate compliance with Subpart VVVV for any period that the facility was subject to that standard.
[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. 101, § 4(B)(4)]

(21) **Fugitive Emissions**

A. Sabre 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. Sabre 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.
[06-096 C.M.R. ch. 101, § 4(C)]

(22) **Annual Emission Statements**

A. In accordance with *Emission Statements*, 06-096 C.M.R. ch. 137, Sabre shall annually report to the Department, in a format prescribed by the Department, the information necessary to accurately update the State's emission inventory. The emission statement shall be submitted as specified by the date in 06-096 C.M.R. ch. 137.

B. Sabre shall keep the following records in order to comply with 06-096 C.M.R. ch. 137:

1. The amount of distillate fuel fired in Boilers #1 and #2 (each), and the Fire Pump on a calendar year basis;
2. The sulfur content of the distillate fuel fired in Boilers #1, #2, and the Fire Pump;
3. Hours the Fire Pump was operating on a calendar year basis; and
4. Calculations of the VOC and/or HAP emissions from the boat building activities on a calendar year total basis.

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

C. Every third year, or as requested by the Department, Sabre shall report to the Department emissions of hazardous air pollutants as required pursuant to 06-096 C.M.R. ch. 137, § (3)(C). The next report is due no later than May 15, 2024, for emissions occurring in calendar year 2023. Sabre shall pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3).
[38 M.R.S. § 353-A(1-A)]

- (23) 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, Sabre may be required to submit additional information. Upon written request from the Department, Sabre shall provide information necessary to demonstrate 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 7th DAY OF MAY, 2024.

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: 1/31/24

Date of application acceptance: 2/7/24

Date filed with the Board of Environmental Protection:

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

