



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



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**Sabre Yachts
Cumberland County
Raymond, Maine
A-633-70-C-R**

**Departmental
Findings of Fact and Order
Part 70 Air Emission License
Renewal**

FINDINGS OF FACT

After review of the Part 70 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 Annotated (M.R.S.A.), §344 and §590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

Facility	Sabre Yachts (Sabre)
LICENSE TYPE	Part 70 License Renewal
NAICS CODES	3261, 336612
NATURE OF BUSINESS	Composites Fabrication
FACILITY LOCATION	Hawthorne Rd, Raymond, Maine

Sabre is a boat building facility consisting of a manufacturing process divided into the following departments: Fiberglass, Deck, Varnish, Woodshop, Assembly, and Completion. Sabre has the potential to emit 10 TPY or more of a single hazardous air pollutant (HAP) or 25 TPY or more of combined HAP, therefore, the source is a major source for HAP.

B. Emission Equipment

The following fuel burning emission units are addressed by this Part 70 License:

Engines

Equipment	Maximum Heat Input Capacity (MMBtu/hr)	Max. Firing Rate (gal/hr)	Output (hp)	Fuel Type, % sulfur	Mfr. Date
Fire Pump	1.5	3.7	218	Distillate, 0.0015 % S	1980

Sabre operates two #2 fuel oil boilers in the main building that are each rated with a maximum design heat input capacity of 1.3 MMBtu/hr. The facility also has a smaller heating unit (forced hot air) in their router building (<1.3 MMBtu/hr). Per 06-096 CMR 140 Appendix B (Section B), "Fuel burning equipment, including sludge dryers but excluding incinerators and stationary internal combustion engines, with a maximum design heat input of less than 1.7 MMBtu/hr" are considered insignificant units. However, the units may still be subject to federal and state requirements, including 06-096 CMR 101.

Process Equipment

Equipment	Location	Pollution Control Equipment
(5) chopper guns	Lamination Department	exhaust fans with filters
(4) gelcoat applicators	Fiberglass Department	exhaust fans with filters
(2) resin applicators	Fiberglass Department	exhaust fans with filters
(3) HVLP spray guns 3M accuspray	Fiberglass Department	exhaust fans with filters
(2) HVLP paint spray guns	Fiberglass Department	exhaust fans with filters
Paint Booth	Varnish Department	Fabric Filters

Sabre has additional insignificant activities which do not need to be listed in the emission equipment tables above. The list of insignificant activities can be found in the Part 70 license application and in Appendix B of *Part 70 Air Emission License Regulations*, 06-096 CMR 140 (as amended).

C. Application Classification

The application for Sabre does not include the licensing of increased emissions or the installation of new or modified equipment; therefore, the license is considered to be a Part 70 License renewal issued under 06-096 Code of Maine Rules (CMR) 140 (as amended).

D. Facility Process Description

For licensing purposes, the following phases comprise the current manufacturing process at Sabre: fiberglass shop, deck department, engine bay alignment, assembly, finish/completion, woodshop, and varnish department with spray booth. All emissions from Sabre's manufacturing processes are considered fugitive, as there are no specific vents or stacks associated with any phase. While the majority of the emissions from Sabre are attributed to the lamination process conducted in the fiberglass shop, potential exists for emissions from other phases. Therefore, a brief description of each phase follows.

Fiberglass Shop and Deck Department

Sabre's manufacturing process begins with hull and deck construction in the fiberglass shop and deck department, which utilize unsaturated polyester resins and gelcoats that are responsible for the majority of emissions. The unsaturated polyester 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. 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 is allowed to cure.

Following proper curing of the gelcoat, the subsequent 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 1/2 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. slow down polymerization reaction in warm weather).

The laying up of the fiberglass fabric is accomplished by manually placing it on the cured "chop". Multiple dry layers are placed on the cured roving according to the lamination schedule. 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 distributes evenly throughout the fiberglass fabric. The result is a completely saturated fiberglass part contained within the plastic and is left until cured.

Over the past five years, resin infusion molding has become a significant part of the process flow at Sabre. The use of resin infusion greatly reduces emissions associated with traditional methods of molding, such as open molding. Most of their

parts are being molded using the resin infusion method. Reductions in emissions associated with the resin infusion method are accounted for in the monthly MACT (weighted-average HAP) reports.

Deck Department

The decks are prepared for hardware installation in the deck department. Window and access holes are cut out of the deck. In any production phase or process that may generate significant dust, Sabre utilizes dustless power tools when possible and also uses portable dust collection systems to minimize the amount of fugitive emissions from cutting, grinding, and sanding processes.

Engine Bay Alignment

This phase in the operation involves installing the engine mounts into the hull of the boat. The process of installing engine mounts into the hull entails laminating wood supports with resin impregnated reinforced fiberglass material to the hull's interior. The laminating in this section of the building is relatively minor in comparison to the fiberglass application phase. Typically, spray up and/or manual application methods are used by Sabre in the engine bay alignment phase.

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, putty, 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 Department

The finish/completion phase includes installation of the keel, cleaning, buffing, and touch ups. There are minor amounts of adhesives, gelcoats, paints, putty, resins, and solvents used in this phase, resulting in slight emissions. In addition, minimal paint is applied to the rudder, the upper portion of the keel and any through hulls.

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. The majority 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.

E. General Facility Requirements

Sabre is subject to the following state and federal regulations listed below, in addition to the regulations listed for specific units as described further in this license.

CITATION	REQUIREMENT TITLE
06-096 CMR 101	Visible Emissions
06-096 CMR 103	Fuel Burning Equipment Particulate Emission Standard
06-096 CMR 105	General Process Source Particulate Emission Standard
06-096 CMR 106	Low Sulfur Fuel
06-096 CMR 109	Emergency Episode Regulation
06-096 CMR 110	Ambient Air Quality Standard
06-096 CMR 115	Major and Minor Source Air Emission License Regulations
06-096 CMR 130	Solvent Degreasers
06-096 CMR 134	Reasonably Available Control Technology for Facilities that Emit Volatile Organic Compounds
06-096 CMR 137	Emission Statements
06-096 CMR 140	Part 70 Air Emission License Regulations
06-096 CMR 144	National Emission Standards for Hazardous Air Pollutants
06-096 CMR 159	Control of Volatile Organic Compounds from Adhesives and Sealants
06-096 CMR 162	Control for Fiberglass Boat Manufacturing Materials
40 CFR Part 63, Subpart ZZZZ	National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
40 CFR Part 63, Subpart VVVV	National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing
40 CFR Part 70	State Operating Permit Programs

Note: CMR = Code of Maine Regulations
 CFR = Code of Federal Regulations

F. Units of Measurement

The following units of measurement are used in this license:

gal/hr	gallons per hour
hp	horsepower
lb/hr	pounds per hour
lb/MMBtu	pounds per million British Thermal Units
mg/dscm	milligrams per dry standard cubic meters
MMBtu/hr	million British Thermal Units per hour
ppm	parts per million
tpy	tons per year

II. BEST PRACTICAL TREATMENT (BPT) AND EMISSION STANDARDS

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 06-096 CMR 100 (as amended). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

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 emission from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. VOC RACT (Reasonably Available Control Technology)

Reasonably Available Control Technology for Facilities that Emit Volatile Organic Compounds, 06-096 CMR 134 (as amended) is applicable to sources that have the potential to emit quantities of VOC equal to or greater than 40 tons/year. 06-096 CMR 134 VOC RACT requirements are incorporated into this Part 70 license renewal. Sabre was issued Air Emission License A-633-74-A-N on September 13, 1995 which incorporated requirements of Best Available Control Technology (BACT). By meeting BACT in this original air license, it was determined that these requirements were at least as stringent as VOC RACT requirements. Sabre has opted to limit VOC emissions to no more than 35 tons per year and therefore is not subject to the requirements of 06-096 CMR 134. The VOC BACT findings in Air Emission License, A-633-74-A-N, along with

subsequent air licenses BPT analysis will be incorporated into this Part 70 license renewal.

C. PSD/BACT Review

The Department issued Air License A-633-74-A-N on September 13, 1995 to Sabre. The license was issued to permit operation of the facility's boat building processes. The license was issued pursuant to federal Prevention of Significant Deterioration (PSD) requirements and the Department's air licensing requirements for major new sources. Sabre has adjusted/changed/modified equipment and processes, and had undergone the appropriate air licensing procedures to address these changes. Additional licensing actions were issued including: A-633-70-A-I on December 7, 1999 as the initial Part 70 air license and A-633-70-B-R on June 21, 2006 for a Part 70 air license renewal.

D. Compliance Assurance Monitoring (CAM)

40 CFR Part 64, *Compliance Assurance Monitoring*, is applicable to units at major sources if the unit has emission limits, a control device to meet the limits, and pre-control emissions greater than 100 tons/year for any pollutant. There are no units at Sabre that are applicable to CAM; therefore the facility is not subject to the requirements of 40 CFR Part 64.

E. Boilers #1 and #2

Boilers #1 and #2 each have a maximum design heat capacity of 1.3 MMBtu/hr and fire distillate fuel. The units are considered "insignificant" based on size per 06-096 CMR 140 Appendix B. The boilers at Sabre are subject to 06-096 CMR 101, *Visible Emissions Regulation*. Visible emissions from units firing distillate oil shall not exceed an opacity of 20 percent on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 3 hour period.

1. Distillate Fuel requirement

Sabre shall monitor and record parameters for the boilers at the facility that fire distillate fuel by meeting the following:

- a. Prior to July 1, 2016 or the date specified in 38 MRSA §603-A(2)(A)(3), the distillate fuel fired in the boilers shall have a maximum sulfur content of 0.5% by weight. [06-096 CMR 115, BPT]
- b. Beginning July 1, 2016 or on the date specified in 38 MRSA §603-A(2)(A)(3), the facility shall fire distillate fuel with a maximum sulfur content limit of 0.005% by weight (50 ppm). [38 MRSA §603-A(2)(A)(3)]

- c. Beginning January 1, 2018 or on the date specified in 38 MRSA §603-A(2)(A)(3), the facility shall fire distillate fuel with a maximum sulfur content limit of 0.0015% by weight (15 ppm). [38 MRSA §603-A(2)(A)(3)]
- d. Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and the percent sulfur of the fuel delivered (if applicable).

2. New Source Performance Standards (NSPS)

Boilers #1 and #2 are not subject to the New Source Performance Standards (NSPS) titled *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, 40 CFR Part 60, Subpart Dc. These standards apply to steam generating units with a heat input capacity of 10 MMBtu/hr or more that are constructed after June 9, 1989.

3. National Emissions Standards for Hazardous Air Pollutants (NESHAP)

Boilers #1 and #2 are not subject to NESHAP 40 CFR Part 63, Subpart DDDDD: (Boiler MACT) *NESHAP Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters* contained in 40 CFR Part 63, Subpart DDDDD. The following types of boilers and process heaters are not subject to the boiler and process heater MACT for major sources: Hot water boilers combusting gaseous, liquid, or biomass fuel with a heat input capacity less than 1.6 MMBtu/hr. The units at Sabre each have a maximum design heat input capacity of 1.3 MMBtu/hr.

F. Fire Pump

Sabre operates a 218 horsepower (hp) Cummins (Model # N-855-F) emergency fire pump with a maximum heat input design of 1.5 MMBtu/hr. The unit fires distillate fuel and was manufactured in 1980.

1. New Source Performance Standards (NSPS)

The federal regulation 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE)* is applicable to emergency engines ordered after July 11, 2005 and manufactured after April 1, 2006. The fire pump at Sabre was manufactured in 1980 and therefore is not subject to this rule.

2. BACT/BPT Findings

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

- PM/PM₁₀ - 0.12 lb/MMBtu from 06-096 CMR 140, BPT
- SO₂ - combustion of distillate fuel with a maximum sulfur content not to exceed 0.05% sulfur by weight
- NO_x - 4.41 lb/MMBtu from AP-42 dated 10/96
- CO - 0.95 lb/MMBtu from AP-42 dated 10/96
- VOC - 0.35 lb/MMBtu from AP-42 dated 10/96
- Opacity - 06-096 CMR 101

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

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Fire Pump (1.5 MMBtu/hr Distillate fuel)	0.1	0.1	0.1	2.2	0.5	0.2

Visible emissions from the Fire Pump shall not exceed 20% opacity on a 6-minute block average, except for no more than two (2) six (6) minute block averages in a 3-hour period.

3. National Emissions Standards for Hazardous Air Pollutants (NESHAP)

The federal regulation 40 CFR Part 63, Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines* is applicable to Sabre's Fire Pump. The unit is considered an existing, emergency stationary reciprocating internal combustion engines at a major 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.

a. Emergency Definition:

Emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the following criteria:

- (1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc. There is no

time limit on the use of emergency stationary ICE in emergency situations.

(2) Paragraph (1) above notwithstanding, the emergency stationary RICE may be operated for any combination of the purposes specified below for a maximum of 100 hours per calendar year:

- (i) 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 beyond 100 hours per calendar year.
- (ii) Emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.
- (iii) Periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

The Fire Pump shall be limited to the usage outlined in §63.6640(f) and therefore may be classified as an existing emergency stationary RICE as defined in 40 CFR Part 63, Subpart ZZZZ. Failure to comply with all of the requirements listed in §63.6640(f) may cause these engines to not be considered emergency engines and therefore subject to all the requirements for non-emergency engines.

b. 40 CFR Part 63, Subpart ZZZZ Requirements:

(1) Operation and Maintenance Requirements

	Operating Limitations* (40 CFR §63.6603(a) and Table 2(d))
Compression ignition (diesel, fuel oil) units: Fire Pump	- Change oil and filter every 500 hours of operation or annually, whichever comes first;

	<ul style="list-style-type: none">- Inspect the air cleaner every 1000 hours of operation or annually, whichever comes first, and replace as necessary; and- Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
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The Fire Pump shall be operated and maintained according to the manufacturer's emission-related written instructions or facility 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 CFR §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 CFR §63.6625(i)]

(3) Non-Resettable Hour Meter Requirement

A non-resettable hour meter shall be installed and operated on the Fire Pump. [40 CFR §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, after which time the non-startup emission limitations apply. [40 CFR §63.6625(h) & 40 CFR Part 63, Subpart ZZZZ Table 2d]

(5) Annual Time Limit For Maintenance and Testing

The Fire Pump shall be limited to 100 hours/year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving or non-emergency demand response). [40 CFR §63.6640(f)]

(6) Recordkeeping

Sabre shall keep records that include maintenance conducted on the Fire Pump and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the hours spent for emergency operation, including what classified the operation as emergency and how many hours spent for non-emergency. If the generators are operated during a period of demand response or deviation from standard voltage or frequency, Sabre shall keep records of the notification of the emergency situation, and the date, start time, and end time of generator operation for these purposes. [40 CFR §63.6655(e) and (f)]

G. Process Equipment

Sabre has the following process equipment guns at their facility:

- Lamination Department: 5 chopper guns made by Magnum Venus
- Fiberglass Department: 4 Magnum Venus gelcoat applicators, 2 Magnum Venus resin applicators, 3 HVLP 3M accuspray guns, and 2 HVLP Anest Iwata 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.

1. National Emissions Standards for Hazardous Air Pollutants (NESHAP)

Sabre is subject to National Emission Standard for Hazardous Air Pollutants for Boat Manufacturing (40 CFR 63 Subpart VVVV) because the facility emits greater than 10 tpy of styrene (HAP). The NESHAP requires that the affected sources meet a HAP emissions limit based on the amount and types of resin or gel coat used and determined by the facility's method of operation and application. Sources regulated under this NESHAP are also subject to work practice standards that include utilizing cleaning solutions and adhesives that contain no more than 5% HAPs by weight and ensuring all HAP-containing storage vessels remain covered.

Subpart VVVV Requirements

The compliance date for existing boat manufacturing sources was August 23, 2004. Sabre is required to limit organic HAP emissions from open molding operations to the limit specified by Equation 1 in §63.5698 of Part 63 Subpart VVVV, based on a 12-month rolling average:

$$\text{HAP limit} = \{46(M_R) + 159(M_{PG}) + 2919M_{CG}\} + 54(M_{TR}) + 214(M_{TG})$$

(Eq. 1)

Where:

- HAP Limit = total allowable organic HAP that can be emitted from the open molding operations, kilograms.
- M_R = mass of production resin used in the past 12 months, excluding any exempt materials, megagrams.
- M_{PG} = mass of pigmented gelcoat used in the past 12 months, excluding any exempt materials, megagrams.
- M_{CG} = mass of clear gelcoat used in the past 12 months, excluding any exempt materials, megagrams.
- M_{TR} = mass of tooling resin used in the past 12 months, excluding any exempt materials, megagrams.
- M_{TG} = mass of tooling gelcoat used in the past 12 months, excluding any exempt materials, megagrams.

Exempt materials: 1) production resins that must meet specifications for use in military vessels or must be approved by the US Coast Guard for use in the construction of lifeboats, rescue boats, and other lifesaving appliances. 2) pigmented, clear and tooling gelcoat used for part or mold repair and touch up not to exceed 1 percent by weight of all gelcoat used on a 12-month rolling average basis. 3) pure, 100 percent vinyl ester resin used for skin coats not to exceed 5 percent of all resin used on a 12-month rolling average basis.

Sabre has chosen to meet the emission limit for resins and gelcoats used in open molding operations by using the emissions averaging option outlined in 40 CFR 63.5704. Actual HAP emissions are calculated using equations in 63.5710 and Table 3 and compared to the HAP limit calculated in 63.5698 (above). Emissions are calculated on a monthly and 12-month rolling average.

The actual HAP emissions shall be calculated using Equation 1 in 63.5710:

$$\text{HAP emissions} = [(PV_R)(M_R) + (PV_{PG})(M_{PG}) + (PV_{CG})(M_{CG}) + (PV_{TR})(M_{TR}) + (PV_{TG})(M_{TG})]$$

Where:

- PV_R = Weighted-average MACT model point value for production resin used in the past 12 months.

- M_R = mass of production resin used in the past 12 months, excluding any exempt materials, megagrams.
- PV_{PG} = Weighted-average MACT model point value for pigmented gelcoat used in the past 12 months.
- M_{PG} = mass of pigmented gelcoat used in the past 12 months, excluding any exempt materials, megagrams.
- PV_{CG} = Weighted-average MACT model point value for clear gelcoat used in the past 12 months.
- M_{CG} = mass of clear gelcoat used in the past 12 months, excluding any exempt materials, megagrams.
- PV_{TR} = Weighted-average MACT model point value for tooling resin used in the past 12 months.
- M_{TR} = mass of tooling resin used in the past 12 months, excluding any exempt materials, megagrams.
- PV_{TG} = Weighted-average MACT model point value for tooling gelcoat used in the past 12 months.
- M_{TG} = mass of tooling gelcoat used in the past 12 months, excluding any exempt materials, megagrams.

If the actual HAP emissions are less than the HAP limit calculated from the above equation for any 12 month period, the facility is in compliance. Sabre maintains a usage and emissions tracking database to track monthly and 12-month rolling usage and emissions. Sabre prepares semi-annual reports to comply with the requirements of Subpart VVVV and Part 70.

2. VOC and HAP Emission Sources / BPT for VOC and HAP Control

Sabre was issued Air Emission License A-633-74-A-N on September 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 a VOC BPT determination into this Part 70 license renewal.

The Fiberglass Department is responsible for the majority of VOC emissions and hazardous air pollutants (HAP). Styrene emissions, considered a HAP, are attributed to evaporation of resin or gelcoat overspray and vaporization from the applied resin or gelcoat prior to polymerization. Sabre is classified as a major source and subject to Part 70 due to emitting a "single" HAP, styrene

emissions, over 10 tons per year.

Not all of the VOC as delivered is volatilized or emitted. Sabre shall calculate VOC emissions from resin and gelcoat application processes using the Unified Emission Factor (UEF) estimation models for open molding of composites which is based on a compilation of research conducted by the Composites Fabricators Association (CFA), the National Marine Manufacturing Association (NMMA), and the United States Environmental Protection Agency (USEPA). These factors are to be used until the Department determines other factors are applicable.

Sabre is subject to 06-096 CMR 144 and 40 CFR, Part 63, Subpart VVVV, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Boat Manufacturing. Sabre has chosen to meet the requirements of 06-096 CMR 144 and Subpart VVVV by using the emissions averaging option outlined in 40 CFR §63.5704.

The following determinations meet BPT for this Part 70 license renewal:

- Sabre shall not emit more than 35 tons/year, on a 12 month rolling total, of combined VOC emissions from all of the departments that make up the composite fabrication process, based on the mass balance equation and UEF model as specified in the compliance plan.
- To meet the requirements of Chapter 144 and Subpart VVVV, Sabre will maintain an emission tracking system to demonstrate compliance with the emissions averaging option outlined in 40 CFR, §63.5704.
- Sabre shall continue research and manufacturing test trials of pollution prevention technologies (low styrene resins, closed mold system, etc.)
- 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.
- Sabre shall replace filters on exhaust fans and the paint booth when filters are determined to be beyond their useful life upon visual inspection.

3. 06-096 CMR 162: Control for Fiberglass boat Manufacturing Materials

This regulation establishes consistent requirements for testing, evaluating and limiting volatile organic compound (VOC) emissions from fiberglass boat manufacturing operations. This regulation applies to any facility that manufactures hulls or decks of boats and related parts, builds molds to make fiberglass boat hulls or decks and related parts from fiberglass, or makes polyester resin putties for assembling fiberglass parts; and whose total actual VOC emissions from the following operations exceed 2449 kilograms (5400 pounds) per rolling twelve month period, before the application of control systems and devices.

Sabre shall meet the applicable requirements, including the VOC emission standards and recordkeeping, of 06-096 CMR 162. By being subject to and meeting the requirements of 40 CFR Part 63 Subpart VVVV and 06-096 CMR 140, BPT, Sabre is in compliance with many of the requirements specified in 06-096 CMR 162.

4. 06-096 CMR 159: Control of Volatile Organic Compounds from Adhesives and Sealants

Sabre reviewed compliance with 06-096 CMR 159 "Control of Volatile Organic Compounds from Adhesives and Sealants". This regulation limits emissions of volatile organic compounds (VOCs) 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. All adhesives and sealants in use at Sabre are either compliant with the new rule or are exempt from the rule.

5. Periodic Monitoring for VOC and HAP

To determine compliance with the BPT findings in this Part 70 license renewal, Sabre shall record on a monthly basis raw material purchases containing VOC and HAPs. Due to Sabre's short inventory turnover period, resulting in a relatively constant inventory level, raw materials will be considered used during the month they are purchased.

The following equation will be used to calculate VOC emissions on a twelve-month rolling total basis.

$$\text{VOC Emissions} = (\text{Monthly Product Purchases} * \% \text{VOC}) - (\text{Monthly Hazardous Waste Removed from Site} * \% \text{VOC})$$

HAP emissions shall be calculated using the MACT model point values equation (eq. 1) of Subpart VVVV detailed in 40 CFR, §63.5710.

6. Operational Flexibility

06-096 CMR 140 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 and a flexible Part 70 License is necessary to ensure a competitive market position.

Given Sabre's continuously changing process, combining all operations and facility wide license conditions has proven to be the most effective strategy. The following terms for reasonably anticipated alternative operating scenarios will be included in this Part 70 License:

- 1) Sabre will have the flexibility to 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 the boat manufacturing included in the application forms are based on Sabre's 2010 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.
- 3) Currently, Sabre's business is comprised of the manufacturing of boats. However, if during the term of this license market demands or opportunities are identified in manufacturing other composites items, Sabre shall not be restricted to boat manufacturing as long as Sabre complies with all State and Applicable regulations.

In addition, 06-096 CMR 140 states that insignificant activities and modifications to insignificant activities that remain insignificant will not require notification to the Department. Sabre has identified all current insignificant activities in Section IV of the Part 70 license application, however, it is reasonable to assume that Sabre may add additional insignificant activities without notification to the Department.

H. Facility Annual Emissions

1. Total Annual Emissions

Sabre is licensed for the following annual emissions, based on a 12 month rolling total. The tons per year emissions were calculated based on the boilers operating a maximum capacity for 8760 hours per year (160,000 gallons per year) and a maximum 100 hour per year operation for the Fire Pump:

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

	PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Fire Pump	0.1	0.1	0.1	0.6	0.2	0.1
Process Equipment	--	--	--	--	--	35.0
Total TPY	0.1	0.1	0.1	0.6	0.2	35.1

2. Greenhouse Gases

Greenhouse gases are considered regulated pollutants as of January 2, 2011, through 'Tailoring' revisions made to EPA's *Approval and Promulgation of Implementation Plans*, 40 CFR Part 52, Subpart A, §52.21, *Prevention of Significant Deterioration of Air Quality* rule. Greenhouse gases, as defined in 06-096 CMR 100 (as amended), are the aggregate group of the following gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. For licensing purposes, greenhouse gases (GHG) are calculated and reported as carbon dioxide equivalents (CO₂e).

The quantity of CO₂e emissions from this facility is less than 100,000 tons per year, based on the following:

- the facility's fuel use limits;
- worst case emission factors from the following sources: U.S. EPA's AP-42, the Intergovernmental Panel on Climate Change (IPCC), and 40 CFR Part 98, *Mandatory Greenhouse Gas Reporting*; and
- global warming potentials contained in 40 CFR Part 98.

No additional licensing actions to address GHG emissions are required at this time.

III. AMBIENT AIR QUALITY ANALYSIS

According to 06-096 CMR 140, an existing Part 70 source shall be exempt from an impact analysis with respect to a regulated pollutant whose allowable emissions do not exceed the following:

Pollutant	Tons/year
PM	25
PM ₁₀	25
SO ₂	50
NO _x	100
CO	250

Based on facility license allowed emissions, Sabre is below the emissions level required for modeling and monitoring.

ORDER

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

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

The Department hereby grants the Part 70 License A-633-70-C-R pursuant to 06-096 CMR 140 and the preconstruction permitting requirements of 06-096 CMR 115 and subject to the standard and specific conditions below.

All federally enforceable and State-only enforceable conditions in existing air licenses previously issued to Sabre pursuant to the Department's preconstruction permitting requirements in 06-096 CMR 108 or 115 have been incorporated into this Part 70 license, except for such conditions that the Department has determined are obsolete, extraneous or otherwise environmentally insignificant, as explained in the findings of fact accompanying this permit. As such, the conditions in this license supercede all previously issued air license conditions.

Federally enforceable conditions in this Part 70 license must be changed pursuant to the applicable requirements in 06-096 CMR 115 for making such changes and pursuant to the applicable requirements in 06-096 CMR 140.

For each standard and specific condition which is state enforceable only, state-only enforceability is designated with the following statement: **Enforceable by State-only.**

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License 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 STATEMENTS

- (1) 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 CMR 140]

- (2) The Part 70 license does not convey any property rights of any sort, or any exclusive privilege; [06-096 CMR 140]
- (3) All terms and conditions are enforceable by EPA and citizens under the CAA unless specifically designated as state enforceable. [06-096 CMR 140]
- (4) 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 CMR 140]
- (5) Notwithstanding any other provision 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 Part 70 license requirement. [06-096 CMR 140]
- (6) Compliance with the conditions of this Part 70 license shall be deemed compliance with any Applicable requirement as of the date of license issuance and is deemed a permit shield, provided that:
 - A. Such Applicable and state requirements are included and are specifically identified in the Part 70 license, except where the Part 70 license term or condition is specifically identified as not having a permit shield; or
 - B. The Department, in acting on the Part 70 license application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the Part 70 license includes the determination or a concise summary, thereof.

Nothing in this section or any Part 70 license shall alter or affect the provisions of Section 303 of the CAA (emergency orders), including the authority of EPA under Section 303; the liability of an owner or operator of a source for any violation of Applicable requirements prior to or at the time of permit issuance; or the ability of EPA to obtain information from a source pursuant to Section 114 of the CAA.

The following requirements have been specifically identified as not applicable based upon information submitted by the licensee in an application dated December 2010.

SOURCE	CITATION	DESCRIPTION	BASIS FOR DETERMINATION
Boilers	40 CFR Part 60 Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	All boilers at Sabre are below a maximum design heat input capacity of 10 MMBtu/hr.
Facility	40 CFR Part 63, Subpart JJ	NESHAP for Wood Furniture Manufacturing Operations	Sabre is not primarily engaged in the manufacture of wood furniture and uses no more than 100 gallons per month of finishing material or adhesives in the manufacturing of wood furniture components.
Facility	40 CFR Part 63, Subpart II	NESHAP for Shipbuilding and Ship Repair	Sabre does not surface coat metal ships or metal surfaces
Facility	40 CFR Part 60 Subpart DDDDD	NESHAP for Industrial/Commercial/Institutional Boilers and Process Heaters	The boilers at Sabre do not generate steam and each has a maximum design capacity of less than 1.6 MMBtu/hr.
Facility	Chapter 129	Surface Coating Facilities	Sabre does not surface coat cans, fabric, vinyl, metal furniture, or miscellaneous metal parts.
Facility	Chapter 134	VOC RACT	Sabre has a federally enforceable emission limit of less than 40 tons VOC/year.
Facility	Chapter 138	NO _x RACT	Sabre has a federally enforceable emission limit of less than 100 tons NO _x /year

[06-096 CMR 140]

- (7) The Part 70 license shall be reopened for cause by the Department or EPA, prior to the expiration of the Part 70 license, if:
- A. Additional Applicable requirements under the CAA become applicable to a Part 70 major source with a remaining Part 70 license term of 3 or more years. However, no opening is required if the effective date of the requirement is later than the date on which the Part 70 license is due to expire, unless the original Part 70 license or any of its terms and conditions has been extended pursuant to 06-096 CMR 140;
 - B. Additional requirements (including excess emissions requirements) become applicable to a Title IV source under the acid rain program. Upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the Part 70 license;

- C. The Department or EPA determines that the Part 70 license contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Part 70 license; or
- D. The Department or EPA determines that the Part 70 license must be revised or revoked to assure compliance with the Applicable requirements.

The licensee shall furnish to the Department within a reasonable time any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the Part 70 license or to determine compliance with the Part 70 license.

[06-096 CMR 140]

- (8) No license revision or amendment shall be required, under any approved economic incentives, marketable licenses, emissions trading and other similar programs or processes for changes that are provided for in the Part 70 license.
[06-096 CMR 140]

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 and this license (38 M.R.S.A. §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 140. [06-096 CMR 140]
- (3) 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 CMR 140] **Enforceable by State-only**
- (4) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to 38 M.R.S.A. §353-A.
- (5) The licensee shall maintain and operate all emission units and air pollution control systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 140]
Enforceable by State-only

- (6) The licensee shall retain records of all required monitoring data and support information for a period of at least six (6) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the Part 70 license. The records shall be submitted to the Department upon written request or in accordance with other provisions of this license. [06-096 CMR 140]
- (7) The licensee shall comply with all terms and conditions of the air emission license. The submission of notice of intent to reopen for cause by the Department, 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 the renewal of a Part 70 license or amendment shall not stay any condition of the Part 70 license. [06-096 CMR 140]
- (8) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- A. perform stack testing 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;
 - 2. to demonstrate compliance with the applicable emission standards; or
 - 3. 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 CFR 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 CMR 140] **Enforceable by State-only**
- (9) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicates emissions in excess of the applicable standards, then:

- A. within thirty (30) days following receipt of such test results, 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 CFR 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 CMR 140] **Enforceable by State-only**

- (10) The licensee shall maintain records of all deviations from license requirements. Such deviations shall include, but are not limited to malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emission unit itself that is not consistent with the terms and conditions of the air emission license.
 - A. The licensee shall notify the Commissioner within 48 hours of a violation of any emission standard and/or a malfunction or breakdown in any component part that causes a violation of any emission standard, and shall report the probable cause, corrective action, and any excess emissions in the units of the applicable emission limitation;
 - B. The licensee shall submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component part causes a violation of any emission standard, together with any exemption requests.

Pursuant to 38 M.R.S.A. § 349(9), the Commissioner may exempt from civil penalty an air emission in excess of license limitations if the emission occurs during start-up or shutdown or results exclusively from an unavoidable malfunction entirely beyond the control of the licensee and the licensee has taken all reasonable steps to minimize or prevent any emission and takes corrective action as soon as possible. There may be no exemption if the malfunction is caused, entirely or in part, by poor maintenance, careless operation, poor design or any other reasonably preventable condition or

preventable equipment breakdown. The burden of proof is on the licensee seeking the exemption under this subsection.

C. All other deviations shall be reported to the Department in the facility's semiannual report.
[06-096 CMR 140]

- (11) Upon the written request of 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 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 CMR 140]
- (12) The licensee shall submit semiannual reports of any required periodic monitoring. All instances of deviations from Part 70 license requirements must be clearly identified in such reports. All required reports must be certified by a responsible official. [06-096 CMR 140]
- (13) The licensee shall submit a compliance certification to the Department and EPA at least annually, or more frequently if specified in the applicable requirement or by the Department. The compliance certification shall include the following:
- A. The identification of each term or condition of the Part 70 license that is the basis of the certification;
 - B. The compliance status;
 - C. Whether compliance was continuous or intermittent;
 - D. The method(s) used for determining the compliance status of the source, currently and over the reporting period; and
 - E. Such other facts as the Department may require to determine the compliance status of the source.

[06-096 CMR 140]

SPECIFIC CONDITIONS

(14) **Boilers #1 and #2**

A. Allowable Fuels

Boilers #1 and #2 are licensed to fire distillate fuel. [A-633-74-A-N & 06-096 CMR 140, BPT]

B. Fuel Sulfur Content

1. #2 fuel oil

- a. Prior to July 1, 2016 or the date specified in 38 MRSA §603-A(2)(A)(3), the distillate fuel fired shall not exceed a maximum sulfur content of 0.5% by weight. [06-096 CMR 140, BPT]
- b. Beginning July 1, 2016 or on the date specified in 38 MRSA §603-A(2)(A)(3), the distillate fuel fired shall not exceed a maximum sulfur content limit of 0.005% by weight (50 ppm) [38 MRSA §603-A(2)(A)(3)].
- c. Beginning January 1, 2018 or on the date specified in 38 MRSA §603-A(2)(A)(3), the distillate fuel fired shall not exceed a maximum sulfur content limit of 0.0015% by weight (15 ppm). [38 MRSA §603-A(2)(A)(3)]

2. Sulfur Content Compliance

Sulfur content compliance shall be by fuel delivery receipts demonstrating the maximum sulfur content delivered is at or below the sulfur content limits listed above. [06-096 CMR 140, BPT]

C. Boiler Visible Emission Limits

Visible emissions from each boiler (Boiler #1 and Boiler #2) shall not exceed 20% opacity on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 3-hour period.
[A-633-74-A-N & 06-096 CMR 101]

(15) **Fire Pump**

A. Allowable Operation and Fuels

1. The Fire Pump is licensed to fire distillate fuel. [06-096 CMR 140, BPT]
2. The Fire Pump is limited to 100 hours per year total operation for maintenance and readiness testing (there is no limit for emergency situations), based on a 12-month rolling total. [06-096 CMR 140]

B. Fuel Sulfur Content

1. The distillate fuel sulfur content for the Fire Pump shall be limited to 0.0015% sulfur. [06-096 CMR 140, BPT]
2. Fuel sulfur content compliance shall be demonstrated by fuel delivery receipts from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [06-096 CMR 140, BPT]

C. Emissions shall not exceed the following limits [06-096 CMR 115, BPT]:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Fire Pump (1.5 MMBtu/hr Distillate fuel)	0.1	0.1	0.1	2.2	0.5	0.2

D. Visible Emissions

Visible emissions from the Fire Pump shall not exceed 20% opacity on a 6-minute block average, except for no more than two (2) six (6) minute block averages in a 3-hour period. [06-096 CMR 101]

E. The Fire Pump shall meet the applicable requirements of 40 CFR Part 63, Subpart ZZZZ, including the following:

1. Sabre shall meet the following operational limitations for the compression ignition emergency engine (Fire Pump):
 - a. Change the oil and filter annually,
 - b. Inspect the air cleaner annually, and
 - c. Inspect the hoses and belts annually and replace as necessary.

A log shall be maintained documenting compliance with the operational limitations.

[40 CFR §63.6603(a) and Table 2(d); and 06-096 CMR 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 the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR §63.6625(i)]

3. Non-Resettable Hour Meter

A non-resettable hour meter shall be installed and operated on the Fire Pump. [40 CFR §63.6625(f)]

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

- a. The Fire Pump shall be limited to 100 hours/year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year

of the 100 hours/year may be used in non-emergency situations. These limits are based on a calendar year. Compliance shall be demonstrated by a written log of all generator operating hours. [40 CFR §63.6640(f) and 06-096 CMR 115]

- b. Sabre shall keep records that include maintenance conducted on the Fire Pump and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the hours spent for emergency operation, including what classified the operation as emergency and how many hours spent for non-emergency. If the generators are operated during a period of demand response or deviation from standard voltage or frequency, Sabre must keep records of the notification of the emergency situation, and the date, start time, and end time of generator operation for these purposes. [40 CFR §63.6655(e) and (f)]

5. Operation and Maintenance

The Fire Pump 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 CFR §63.6625(e)]

6. Startup Idle and Startup Time Minimization

During periods of startup the facility must minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR §63.6625(h) & 40 CFR Part 63, Subpart ZZZZ Table 2d]

(16) **Process Equipment**

A. VOC Process Emissions [06-096 CMR 140, BPT & A-633-74-A-N issued 9/13/95]

Sabre shall not emit more than 35 tons/year, on a 12 month rolling total basis, of combined VOC emissions from all of the departments that make up the composites fabrication process, based on the UEF model and the following mass balance equation:

$$\text{VOC Emissions} = (\text{Monthly Product Purchases} * \% \text{VOC}) - (\text{Monthly Hazardous Waste Removed from Site} * \% \text{VOC})$$

Purchase records of VOC containing resins, gelcoats, and putties shall be kept on a 12 month rolling total for compliance purposes.

- B. HAP Process Emissions [06-096 CMR 144, 40 CFR Part 63, Subpart VVVV, and A-633-70-B-R issued 6/21/06]

Sabre is subject to 06-096 CMR 144 and 40 CFR Part 63, Subpart VVVV, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Boat Manufacturing. Sabre has chosen to meet the requirements of Chapter 144 and Subpart VVVV by using the emissions averaging option outlined in 40 CFR §63.5704.

HAP emissions shall be calculated using the MACT model point values equation (eq. 1) detailed in 40 CFR, §63.5710 to demonstrate compliance with 06-096 CMR 144 and 40 CFR Part 63, Subpart VVVV as described below:

Subpart VVVV Requirements:

Sabre is required to limit organic HAP emissions from open molding operations to the limit specified by Equation 1 in §63.5698 of Part 63 Subpart VVVV, based on a 12-month rolling average:

$$\text{HAP limit:} = \{46(M_R) + 159(M_{PG}) + 2919M_{CG}\} + 54(M_{TR}) + 214(M_{TG}) \quad (\text{Eq. 1})$$

Where:

- HAP Limit = total allowable organic HAP that can be emitted from the open molding operations, kilograms.
- M_R = mass of production resin used in the past 12 months, excluding any exempt materials, megagrams.
- M_{PG} = mass of pigmented gelcoat used in the past 12 months, excluding any exempt materials, megagrams.
- M_{CG} = mass of clear gelcoat used in the past 12 months, excluding any exempt materials, megagrams.
- M_{TR} = mass of tooling resin used in the past 12 months, excluding any exempt materials, megagrams.
- M_{TG} = mass of tooling gelcoat used in the past 12 months, excluding any exempt materials, megagrams.

Exempt materials:

- 1) Production resins that must meet specifications for use in military vessels or must be approved by the US Coast Guard for use in the construction of lifeboats, rescue boats, and other lifesaving appliances.
- 2) Pigmented, clear and tooling gelcoat used for part or mold repair and touch up not to exceed 1 percent by weight of all gelcoat used on a 12-month rolling average basis.
- 3) Vinyl ester resin (pure, 100%) used for skin coats not to exceed 5 percent of all resin used on a 12-month rolling average basis.

Sabre has chosen to meet the emission limit for resins and gelcoats used in open molding operations by using the emissions averaging option outlined in 40 CFR 63.5704. Actual HAP emissions are calculated using equations in 63.5710 and Table 3 and compared to the HAP limit calculated in 63.5698 (above). Emissions are calculated on a monthly and 12-month rolling average.

The actual HAP emissions shall be calculated using Equation 1 in 63.5710:

$$\text{HAP emissions} = [(PV_R)(M_R) + (PV_{PG})(M_{PG}) + (PV_{CG})(M_{CG}) + (PV_{TR})(M_{TR}) + (PV_{TG})(M_{TG})]$$

Where:

- PV_R = Weighted-average MACT model point value for production resin used in the past 12 months.
- M_R = mass of production resin used in the past 12 months, excluding any exempt materials, megagrams.
- PV_{PG} = Weighted-average MACT model point value for pigmented gelcoat used in the past 12 months.
- M_{PG} = mass of pigmented gelcoat used in the past 12 months, excluding any exempt materials, megagrams.
- PV_{CG} = Weighted-average MACT model point value for clear gelcoat used in the past 12 months.
- M_{CG} = mass of clear gelcoat used in the past 12 months, excluding any exempt materials, megagrams.

- PV_{TR} = Weighted-average MACT model point value for tooling resin used in the past 12 months.
- M_{TR} = mass of tooling resin used in the past 12 months, excluding any exempt materials, megagrams.
- PV_{TG} = Weighted-average MACT model point value for tooling gelcoat used in the past 12 months.
- M_{TG} = mass of tooling gelcoat used in the past 12 months, excluding any exempt materials, megagrams.

If the actual HAP emissions are less than the HAP limit calculated from the above equation for any 12 month period, the facility is in compliance with the emission limit in Section 63.5698 for those operations and materials included in the average. Sabre maintains a usage and emissions tracking database to track monthly and 12-month rolling usage and emissions. Sabre prepares semi-annual reports to comply with the requirements of Subpart VVVV and Part 70.

Sabre shall meet the requirements specified in Section 63.5734 and 63.5737 of 40 CFR Part 63 Subpart VVVV for resin and gelcoat equipment cleaning operations. If Sabre conducts resin and gel coat mixing operations then the facility is subject to 63.5731 of 40 CFR Part 63 Subpart VVVV.

- C. Sabre shall meet the applicable requirements, including the VOC emission standards and recordkeeping, of 06-096 CMR 162, *Control for Fiberglass Boat Manufacturing Materials* and 06-096 CMR 159, *Control of Volatile Organic Compounds from Adhesives and Sealants*.

D. New Technology

Sabre shall continue research and manufacturing test trials of pollution prevention technologies (low styrene resins, closed mold system, etc.) for VOC control. An annual report shall be sent to the Department by January 31st documenting the research and test trial results for the previous year. [06-096 CMR 140, BPT and A-633-70-B-R issued 6/21/06]

- E. Sabre shall continue to implement a procedure to promote “good housekeeping” practices (close lids, proper storage of open containers, etc.) and ensure that all VOC materials are handled properly to minimize emissions. Sabre shall ensure that all VOC containers are properly sealed when not in immediate use, and that all VOC containers are handled in a manner to reduce the chance of spills. Sabre shall conduct and log weekly

self-inspections of each area as needed to minimize emissions. [06-096 CMR 140, BPT and A-633-70-A-I issued 12/7/99]

F. Sabre shall continue to use atomized low pressure spray guns for the application of gelcoats and mechanical non-atomized or manual application techniques for the application of resins.
[06-096 CMR 140, BPT & A-633-70-B-R]

G. Sabre shall properly maintain all dust collection equipment in the facility and make repairs as necessary to prevent system leakage. With the exception of one dust handling system, the exhaust from the dust collectors is vented to the interior of the building with no external vents, however, Sabre shall perform such house-keeping and clean up as is necessary to prevent fugitive emissions. A written log shall be kept to document all dust collection equipment maintenance. [06-096 CMR 140, BPT & A-633-70-B-R]

H. Sabre shall replace filters on exhaust fans and the paint booth when the filters are determined to be beyond their useful life upon visual inspection. [06-096 CMR 140, BPT]

(17) **Fugitive Emissions**

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed an opacity of 20 percent, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20 percent in any one (1) hour. [06-096 CMR 101]

(18) **General Process Sources**

Visible emissions from any general process source shall not exceed an opacity of 20% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. [06-096 CMR 101]

(19) **Semiannual Reporting** [06-096 CMR 140]

- A. The licensee shall submit to the Bureau of Air Quality semiannual reports which are due on **January 31st** and **July 31st** of each year. The facility's designated responsible official must sign this report.
- B. The semiannual report shall be considered on-time if the postmark of the submittal is on or before the due date or if the report is received by the DEP within seven calendar days of the due date.
- C. All instances of deviations from license requirements and the corrective action taken must be clearly identified and provided to the Department in summary form for each six-month interval.

(20) **Annual Compliance Certification**

Sabre shall submit an annual compliance certification to the Department and EPA in accordance with Standard Condition (13) of this license. The annual compliance certification is due January 31 of each year. The facility's designated responsible official must sign this report.

The annual compliance certification shall be considered on-time if the postmark of the submittal is on or before the due date or if the report is received by the Department within seven calendar days of the due date. Certification of compliance is to be based on the stack testing or monitoring data required by this license. Where the license does not require such data, or the license requires such data upon request of the Department and the Department has not requested the testing or monitoring, compliance may be certified based upon other reasonably available information such as the design of the equipment or applicable emission factors. [06-096 CMR 140]

(21) **Annual Emission Statement**

In accordance with *Emission Statements*, 06-096 CMR 137 (as amended), the licensee shall annually report to the Department the information necessary to accurately update the State's emission inventory by means of either:

- A. A computer program and accompanying instructions supplied by the Department; or
- B. A written emission statement containing the information required in 06-096 CMR 137.

The emission statement must be submitted by the date as specified in 06-096 CMR 137.

[06-096 CMR 137]

(22) **General Applicable State Regulations**

The licensee is subject to the State regulations listed below.

Origin and Authority	Requirement Summary	Enforceability
06-096 CMR 102	Open Burning	-
06-096 CMR 109	Emergency Episode Regulation	-
06-096 CMR 110	Ambient Air Quality Standard	-
06-096 CMR 116	Prohibited Dispersion Techniques	-
38 M.R.S.A. §585-B, §§5	Mercury Emission Limit	Enforceable by State-only

(23) **Expiration of a Part 70 license**

- A. Sabre shall submit a complete Part 70 renewal application at least 6 months prior, but no more than 18 months prior, to the expiration of this air license.
- B. Pursuant to Title 5 MRSA §10002, and 06-096 CMR 140, the Part 70 license shall not expire and all terms and conditions shall remain in effect until the Department takes final action on the renewal application of the Part 70 license. An existing source submitting a complete renewal application under 06-096 CMR 140 prior to the expiration of the Part 70 license will not be in violation of operating without a Part 70 license. **Enforceable by State-only**

(24) **New Source Review**

Sabre is subject to all previous New Source Review (NSR) requirements summarized in this Part 70 air emissions license and the NSR requirements remain in effect even if this Air Emissions License, A-633-70-C-R, expires.

DONE AND DATED IN AUGUSTA, MAINE THIS 29 DAY OF May, 2015.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: *Maia Allen Robert Corne for*
PATRICIA W. AHO, COMMISSIONER

The term of this license shall be five (5) years from the signature date above.

[Note: If a complete renewal application as determined by the Department, is submitted at least 6 months prior to expiration but no earlier than 18 months, then pursuant to Title 5 MRSA §10002, all terms and conditions of the Part 70 license shall remain in effect until the Department takes final action on the renewal of the Part 70 license.]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: December 20, 2010

Date of application acceptance: December 21, 2010

Date filed with the Board of Environmental Protection:

This Order prepared by Edwin Cousins, Bureau of Air Quality

