



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE
GOVERNOR

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COMMISSIONER

**North End Composites LLC
Knox County
Rockland, Maine
A-658-70-D-R**

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

FINDINGS OF FACT

After review of the Part 70 Air 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	North End Composites LLC (NEC)
LICENSE TYPE	Part 70 License Renewal
NAICS CODES	3261, 336612
NATURE OF BUSINESS	Composite Fabrication
FACILITY LOCATION	Merrill Drive Rockland, Maine

NEC manufactures sailboats and power boats utilizing molded fiberglass technology.

NEC had the potential to emit more than 50 TPY of volatile organic compounds (VOC) and the potential to emit more than 10 TPY of a single hazardous air pollutant (HAP) or more than 25 TPY of combined HAP. The facility is therefore subject to the 40 CFR Part 63 Subpart VVVV, National Emissions Standards for Boat Manufacturing (Boatbuilding MACT) and by being subject to a federal Maximum Achievable Control Technology (MACT) standard the facility is a major source and therefore needs a Part 70 Air Emissions License.

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17 STATE HOUSE STATION
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(207) 287-7688 FAX: (207) 287-7826
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106 HOGAN ROAD, SUITE 6
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312 CANCO ROAD
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PRÉSQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
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B. Emission Equipment

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

EMISSION UNIT ID	UNIT CAPACITY	UNIT TYPE
Composite Fabrication	Fugitive VOC	Process Equipment
Hot Air Furnace	2.2 MMBtu/hr	Propane-fired heater
Burnham Boiler #1 *	0.6 MMBtu/hr	Oil-fired Boiler

* considered an insignificant unit per 06-096 Code of Maine Rules (CMR) 140 (as amended)

C. Insignificant Activities

NEC has additional insignificant activities which do not need to be listed in the emission equipment table 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).

NEC has identified fuel burning devices (miscellaneous space heaters) that are classified as insignificant based individual heat input capacity less than 1.7 MMBtu/hr (06-096 CMR 140, Appendix B) and not subject to 40 CFR Part 63 Subpart JJJJJ. Occasional welding conducted as part of the manufacturing process is classified as an insignificant activity based on the threshold of less than one ton per day of welding rod. NEC's oil storage tanks (#2 fuel oil) are classified as insignificant based on the loading and unloading of VOC storage tanks (including petroleum storage tanks), ten thousand gallons capacity or less, with lids, vapor return or other appropriate closure.

D. Application Classification

The application for NEC does not include the licensing of increased actual or licensed allowed emissions. This renewal does, however, incorporate the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Boat Manufacturing (40 CFR, Part 63, Subpart VVVV). NEC has the potential to emit more than 10 tons per year of a single hazardous air pollutant and is therefore classified as a major source. NEC's manufacturing process flow has been modified over the past five years; the process description in this license has been updated to reflect these changes. This license is considered to be a renewal of a Part 70 License issued under 06-096 CMR 140 for a Part 70 source.

E. General Facility Requirements

The following regulations were reviewed for NEC and an "applicability determination" was derived as follows:

Citation	06-096 CMR Description	Applicability Determination
06-096 CMR 101	Visible Emissions Regulation	NEC is subject to this rule because of their potential for fugitive emissions from general process sources.
06-096 CMR 103	Fuel Burning Equipment Particulate Emission Standard	NEC does not have fuel-burning equipment with heat input capacities greater than 3 MMBtu/hr, and is therefore not subject to 06-096 CMR 103.
06-096 CMR 105	General Process Source Particulate Emission Standard	NEC has general process sources and as such is subject to this rule.
06-096 CMR 106	Low Sulfur Fuel	NEC has boilers that burn fuel oil and therefore is subject to this regulation.
06-096 CMR 109	Emergency Episode Regulations	NEC is indirectly subject to this rule. If ambient air quality reaches certain thresholds NEC must comply with the emergency provisions of 06-096 CMR 109.
06-096 CMR 110	Ambient Air Quality Standards	NEC is subject to this 06-096 CMR, however, the Department, based on a case by case analysis has not required NEC to perform modeling to demonstrate compliance with ambient air quality standards.
06-096 CMR 117	Source Surveillance	NEC does not operate fuel-burning equipment that meets the specifications necessary to be subject to this 06-096 CMR.
06-096 CMR 126	Capture Efficiency Test Procedures	Currently NEC does not employ add-on controls to any VOC emissions activities and therefore is not subject to this rule. In the event that NEC installs add-on control devices NEC will review this 06-096 CMR to determine applicability.
06-096 CMR 129	Surface Coating Facilities	NEC does not surface coat cans, fabric, vinyl, metal furniture, flat-wood paneling, or miscellaneous metal parts and is therefore not subject to this rule.

06-096 CMR 130	Solvent Degreasers	NEC does not currently operate solvent degreasers; however in the event one is brought on site NEC will be subject to this 06-096 CMR.
06-096 CMR 134	Reasonably Available Control Technology for Facilities That Emit Volatile Organic Compounds	NEC's potential to emit is greater than 40 TPY, but NEC did not have actual emissions of forty (40) tons or more of VOC per calendar year since January 1, 1987, therefore NEC is not subject to 06-096 CMR 134.
06-096 CMR 137	Emission Statements	Based on NEC's PTE 48 TPY of VOCs, NEC is subject to this regulation.
06-096 CMR 140	Part 70 Air Emission License Regulations	NEC is subject to 06-096 CMR 140 since it is applicable to the federal Major Source boatbuilding MACT.
06-096 CMR 138	Reasonably Available Control Technology For Facilities That Emit Nitrogen Oxides	NEC does not have the potential to emit (PTE) 100 TPY of NOx and is therefore not subject to this regulation.
06-096 CMR 143	New Source Performance Standards	NEC's operations are not subject to any NSPS requirements as written in 40 CFR Part 60, therefore NEC is not subject to this regulation.
06-096 CMR 144	National Emission Standards for Hazardous Air Pollutants	NEC's PTE is greater than 10 TPY for any single HAP and 25 TPY for all HAPs combined. NEC is defined as major source of HAPs and is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Boat Manufacturing (promulgated 8/22/01).
06-096 CMR 151	Architectural and Industrial Maintenance Coatings	NEC does not sell or use architectural and industrial maintenance coatings as defined in 06-096 CMR 151.
06-096 CMR 152	Control of VOCs from Consumer Products	NEC's final product is not considered a consumer product under 06-096 CMR 152.
06-096 CMR 162	Control for Fiberglass Boat Manufacturing Materials	NEC emits more than 2.7 tons per year of VOC and therefore is subject to this rule.

State and Federal Requirements Review

40 CFR Part 63 Subpart II

On December 15, 1995, EPA promulgated the *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Shipbuilding and Ship Repair (Surface Coating)*. The provisions of this subpart apply to shipbuilding and ship repair operations at any facility that is a major source. NEC does it meet the definition of shipbuilding as defined in §63.782. For purposes of Subpart II, pleasure crafts and offshore oil and gas drilling platforms are not considered ships.

40 CFR Part 63 Subpart VVVV

On August 22, 2001 the EPA promulgated the *NESHAP for Boat Manufacturing*. The NESHAP requires all major sources of HAPs to meet emission standards that reflect Maximum Achievable Control Technology (MACT).

The boat manufacturing NESHAP requires all major sources of HAPs to meet emission standards that reflect Maximum Achievable Control Technology (MACT). NEC currently complies with the MACT for boat manufacturing by the emissions averaging option pursuant to 40 CFR Part 63, Subpart VVVV.

40 CFR Part 63 Subpart HHHHHH

On January 9, 2009, EPA promulgated the NESHAP: *Paint Stripping and Miscellaneous Surface Coating Operations at Area Source*. The rule applies to any area source that engages in any of the following activities:

- Paint stripping using paint stripper containing methylene chloride (MeCl)
- Spray application of coatings to metal or plastic substrates with coatings containing compounds of Chromium, Lead, Manganese, Nickel, or Cadmium.

NEC does not use paint strippers containing MeCl but may use paints or coatings in the future that could make the facility subject. If the facility uses any coatings that trigger this regulation, NEC shall meet all applicable requirements at that time.

06-096 CMR 162

The Department has recently adopted 06-096 CMR 162, "Control for Fiberglass Boat Manufacturing Materials" which incorporates EPA's Control Technique Guidelines (CTG) specific to Fiberglass Boat Manufacturing. EPA intends for states to incorporate CTGs into their state rules. 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 VOC emissions from the following operations exceed 2.7 tons (5400 pounds) per rolling twelve month period. NEC is subject to this rule.

F. Units of Measurement

The following units of measurement are used in this license:

lb/hr	pounds per hour
lb/MMBtu	pounds per million British Thermal Units
lb/ton	pounds per ton
MMBtu/hr	million British Thermal Units per hour
tpy	tons per year

G. Facility and Process Description

NEC manufactures fiberglass-reinforced boats at its Rockland, Maine facility. The air emissions at NEC are fugitive emissions, the majority of which come from the use of resins, gelcoats, putties, waxes, paints, and solvents in the boat manufacturing process.

NEC's manufacturing process flow has been modified considerably over the past five years to increase operational efficiency. NEC has resumed the hull mold construction process (Plug construction) at this facility. The following process description has been updated to reflect current manufacturing process flows. The use of infusion molding has become the primary method of molding at NEC. The use of infusion molding has greatly reduced emissions when compared to open molding techniques. The emissions factor for the infusion process has been measured to less than 1% of the resin used by some national and state Air Resource Divisions.

NEC's current manufacturing process can be described as consisting of six production areas. The production areas are: Lamination; Small Part Lamination and Cutting/Grinding; Assembly; Woodshop; and Varnish Room. The emissions from NEC's manufacturing processes are considered fugitive, as there are no specific vents or stacks associated with any phase. A brief description of each current production area follows:

Lamination

Lamination includes the production of hull and deck components for large boats using unsaturated polyester resins and gelcoats. The lamination process includes the gelcoat application, skin out coat, core materials build out, and final lamination and

wet out. The application of gel coat and skin coat utilizes high volume low pressure (HVLP) spray guns. The balance of resin and putty application in the lamination process is completed by resin infusion or manually. The unsaturated polyester

resins contain a styrene monomer as the linking agent, which partially volatilizes during spraying, roll out, and curing process. Fugitive emissions of volatile organic compounds (VOC) occur during the spraying, roll out, and the curing process.

There are two adjacent lamination areas at NEC's facility; the Back Cove lamination area and the Sabre lamination area. Currently, the Back Cove lamination area produces hulls, decks, and parts associated with the Back Cove 30-foot, 34-foot, 37-foot and 41-foot power boat designs. The Sabre lamination area produces parts for some Sabre boats, including the 48-foot and 54-foot power boats. Plug finish / refinish, and mold construction.

Small Parts Lamination and Cutting/Grinding Room

Adjacent to the Back Cove lamination area is the Small Parts Lamination and Cutting/Grinding room. Typically, any small fiberglass reinforced plastic part is produced in this room. Fugitive emissions result from the volatilization of VOCs during the spraying, roll out, and curing process of small part construction.

In addition, this room is typically the area where any cutting and grinding of parts is conducted. Any dust generated by these processes is captured on particulate filters at all building air exhaust points.

Assembly

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, grinding, and repairs may be performed in this phase. There are minor volatile organic compound (VOC) and hazardous air pollutant (HAP) emissions associated with this phase from the use of resins, varnishes, putties, sealers, adhesives, and solvents.

Woodshop

The Woodshop allows for on-site cutting and fabrication of boat components as needed. Applications of cleanup, patching, or adhesive materials result in fugitive VOC and HAP emissions. The Woodshop contains internally exhausted dust collection equipment.

Varnish Room

The Varnish Room allows NEC to varnish components that are to be installed on the boats. Some of the wood to be varnished is fixed on the boats and as such is varnished in place at various stages in the assembly process. There are fugitive VOC and HAP emissions associated with the Varnish Room. All varnish application is by hand, primarily by brush; no spray application.

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. Boiler and Hot Air Furnaces

The boiler at NEC is relatively small in size. The facility operates Boiler #1 which has a maximum heat input capacity of 0.6 MMBtu/hr. This unit fires #2 fuel oil and is considered insignificant based on size (<1.7 MMBtu/hr) per 06-096 CMR 140 Appendix B. The facility also operates two hot air furnaces for building heat (one fires #2 fuel oil and the other fires propane). The oil fired unit is approximately 1 MMBtu/hr which is considered insignificant. The propane fired hot air furnace has a maximum heat input capacity of 2.2 MMBtu/hr which is above the insignificant threshold of 1.7 MMBtu/hr.

Prior to July 1, 2016, or by the date otherwise stated in 38 MRSA §603-A(2)(A)(3), the #2 fuel oil fired at the facility shall be ASTM D396 compliant #2 fuel oil (maximum sulfur content of 0.5% by weight). Per 38 MRSA §603-A(2)(A)(3), beginning July 1, 2016, or on the date specified in the statute, the facility shall fire #2 fuel oil with a maximum sulfur content limit of 0.005% by weight (50 ppm), and beginning January 1, 2018, or on the date specified in the statute, the facility shall fire #2 fuel oil with a maximum sulfur content limit of

0.0015% by weight (15 ppm). The specific dates contained in this paragraph reflect the current dates in the statute as of the effective date of this license; however, if the statute is revised, the facility shall comply with the revised dates upon promulgation of the statute revision.

The boiler is not subject to 40 CFR Part 63 Subpart DDDDD. Hot water boilers (excluding steam units) less than 1.6 MMBtu/hr are included in the hot water heater exemption.

C. Process Equipment

For the facility's boat manufacturing process, NEC utilizes low pressure, low emissions spray guns for the application of gelcoat and resin. The spray guns are designed for application efficiency and emissions reduction. The spray guns used for resin and chop application are internal mixing units while the two spray guns used for gelcoat application are external mixing units. The spray guns design reduces overspray and thereby reduces emissions.

Resin infusion molding has become a significant part of the process flow at NEC. Resin infusion involves strategically laying plastic over the part which will be molded, creating a vacuum, and then infusing the resin through several tubes to the part where it is evenly distributed. No overspray and less flashing waste are produced, while a minimum quantity of resin is used. Resin infusion increases part quality and part-to-part consistency. The use of resin infusion greatly reduces emissions associated with traditional methods of molding (such as open molding) where the entire molding process is enclosed, reducing styrene emissions by up to 90%. NEC now infuses all fiberglass parts that are justified for the technology. Reductions in emissions associated with the resin infusion method are accounted for in the monthly MACT (weighted-average HAP) reports.

NEC's current license conditions relative to BPT are described below:

BPT for NEC is:

- Limit VOC emissions to 48 tons per year, based on a rolling 12 month total. Emissions shall be estimated by mass balance for all processes with the exception of emissions from resin, gelcoat, and putties, which will be estimated based on United Emission Factor (UEF) model for open molding when performed. NEC will estimate emissions from closed molding by using manufacturer information concerning % VOC/HAP reduction (typically less than 10% is emitted).
- Continued research and manufacturing test trials of pollution prevention technologies and products.

- NEC shall continue to use HVLP spray guns for the application of gelcoat and use of HVLP spray guns, resin infusion, or manual methods for resin application.
- Continue to research the use of closed-mold technology whenever economically and technologically feasible for the manufacture of fiberglass boats and boat parts.
- Use controlled spray techniques, including lowest fluid tip pressure which produces an acceptable spray pattern and operator training, when using mechanical sprayers for the application of gelcoats and resins.
- Use manual application methods for open-mold resin processes, when technologically appropriate.
- Maintain good housekeeping practices, such as lids on and proper storage of open containers.
- Maintain records of monthly resin, gel coat, paints, and solvent purchases facility-wide.

In addition to VOC and HAP control, NEC shall meet the following BPT requirements for particulate matter (PM) from various boatyard activities:

- Control PM emissions from any cutting, buffing, grinding, or sanding processes that vent to the ambient air via vent or duct through the use of a particulate filter such that opacity will not exceed 10% for any one, six minute block average;
- Reduce the potential for fugitive PM emissions from any process conducted outside by limiting such activity to periods of calm winds or through the use of a shroud or wind curtain.

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 NEC that are applicable to CAM; therefore the facility is not subject to the requirements of 40 CFR Part 64.

E. Compliance Demonstration

The purpose of this compliance demonstration is to identify current requirements for recordkeeping, reporting, testing, and monitoring. To determine compliance, NEC maintains a list of all resins, gelcoats, putties, paints, and other VOC containing materials in use. This list is available upon request and provides the necessary data to determine compliance, including:

- a) Resin, gelcoat, paints, putties, and cleaning materials in use;
- b) Percent VOC by weight and pounds VOC per gallon for each raw material; and,
- c) The amount and type raw materials used on a monthly basis.

The monthly totals of VOCs and HAPS are calculated and tracked on a 12-month rolling total basis. NEC shall maintain these records for 6 years and make them available upon request from the DEP. These parameters are submitted in an annual report as required by 06-096 CMR 137.

To determine compliance with 06-096 CMR 101 for general process sources and fugitive emissions, NEC will use EPA reference test methods when required.

NEC's general process sources are subject to 06-096 CMR 105 and as such to determine compliance NEC will meet the requirements of 06-096 CMR 105, Section 6 (Test Methods and Procedures) upon request.

To assure compliance with 06-096 CMR 137, NEC shall submit an annual emission statement to the DEP in accordance with the rule.

To assure compliance with 06-096 CMR 144 and 40 CFR Part 63 Subpart VVVV, NEC maintains an emissions tracking system to demonstrate compliance with the emissions averaging option under the boat manufacturing NESHAP.

F. Operational Flexibility

A flexible 06-096 CMR 140 license is necessary to insure a competitive market position. 06-096 CMR 140 incorporates provisions to ensure that companies have the maximum operational flexibility to take advantage of changing market conditions.

Most of NEC's process emissions are/will be generated in the Large Part Lamination area, Back Cove lamination area, Small Part Lamination and Cutting/Grinding Room, Assembly, Woodshop, and Varnish Room. NEC shall meet the applicable state and federal requirements by limiting total VOC emissions to 48 TPY and maintaining facility wide record keeping that is not broken down by manufacturing phase or activity. Given NEC's manufacturing process, combining all operations and facility wide license conditions has proven to be the most effective strategy. NEC is allowed the following terms for reasonably anticipated alternative operating scenarios to be incorporated in this license to insure the needed flexibility:

- 1) NEC maintains the flexibility to substitute and add resin and gelcoat application equipment as necessary without triggering notification of the Department or license revisions provided that the BPT provisions are adhered to.

- 2) The products/chemicals and emissions associated with each phase of the boat manufacturing included in NEC's application are based on usage for the previous year the application was submitted. These products are representative of NEC's chemical usage but do not comprise a complete list of all potential products required by NEC for the manufacturing of boats in the future. Therefore, NEC may interchange products as necessary without triggering reporting or additional licensing as long as all State and Applicable requirements are abided by.

In addition, 06-096 CMR 140 states that insignificant activities and modifications to insignificant activities that remain insignificant will not require notification of the Department. NEC has identified all current insignificant activities in its application; however, it is reasonable to assume that NEC may add additional insignificant activities in the future. NEC does not need notify the Department of these changes.

G. Basis for Certifying Compliance

Included in this section is a table containing the basis for certifying compliance. In an effort to be complete and avoid being redundant, requirements including emission standards are referenced. Section A and K of the license application forms contain the required signatures to complete the compliance certification.

Basis for Certifying Compliance

Emission Unit	Requirement/06-096 CMR	Current License Condition #	Basis for Certifying Compliance
Facility Wide	VOC Limit	15	Purchase Records & Emission Estimates
	PM Std. for General Process Sources, 06-096 CMR 105		*

* Per White Paper #2 EPA allows for a certification of compliance where there is not required monitoring and, despite a "reasonable inquiry" to uncover other existing information, the responsible official has no information to the contrary.

NEC must limit organic HAP emissions from open molding operations to the limit specified by equation 1 of 40 CFR Part 63 Subpart VVVV, based on a 12-month rolling average. The equation below is taken from this rule (for more information about the following equation, the rule should be reviewed).

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

(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 materials exempt under paragraph (d) of this section, megagrams.

M_{PG} = mass of pigmented gel coat used in the past 12 months, excluding any materials exempt under paragraph (d) of this section, megagrams.

M_{CG} = mass of clear gel coat used in the past 12 months, excluding any materials exempt under paragraph (d) of this section, megagrams.

M_{TR} = mass of tooling resin used in the past 12 months, excluding any materials exempt under paragraph (d) of this section, megagrams.

M_{TG} = mass of tooling gel coat used in the past 12 months, excluding any materials exempt under paragraph (d) of this section, megagrams.

H. Annual Emission Restrictions

1. NEC shall be restricted to the following annual emissions, based on the firing of the maximum propane fuel use (205,000 gallons/yr) in the hot air furnace and the 12-month rolling total from the boat building process:

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

Pollutant	Tons/yr
PM	0.1
PM ₁₀	0.1
NO _X	1.3
SO ₂	0.2
CO	0.3
VOC	48.0

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).

Based on the facility's fuel use limit(s), the worst case emission factors from AP-42, IPCC (Intergovernmental Panel on Climate Change), and *Mandatory Greenhouse Gas Reporting*, 40 CFR Part 98, and the global warming potentials contained in 40 CFR Part 98, NEC is below the major source threshold of 100,000 tons of CO₂e per year. Therefore, no additional licensing requirements are needed to address GHG emissions 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, NEC 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-658-70-D-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 NEC 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. [06-096 CMR 140]

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 NEC are below a maximum design heat input capacity of 10 MMBtu/hr.
Facility	40 CFR Part 63, Subpart II	NESHAP for Shipbuilding and Ship Repair	This facility manufactures pleasure crafts and is therefore not considered a "ship builder" as defined by 40 CFR \ 63.782
Facility	40 CFR Part 63, Subpart JJ	NESHAP for Wood Manufacturing	NEC 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	Chapter 129	Surface Coating Facilities	NEC does not surface coat cans, fabric, vinyl, metal furniture, or miscellaneous metal parts.

Facility	Chapter 134	VOC RACT	NEC's potential to emit is greater than 40 TPY, but NEC did not have actual emissions of forty (40) tons or more of VOC per calendar year since January 1, 1987, therefore NEC is not subject to 06-096 CMR 134.
Facility	Chapter 138	NO _x RACT	NEC, at full load, does not have the potential to emit more than 99.9 tons of NO _x per year.

(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 06-096 CMR 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) **Boiler #1** – 0.6 MMBtu/hr

Boiler #1 is licensed to fire #2 fuel oil. [06-096 CMR 140, BPT]

A. Fuel Sulfur Content

- 1. #2 fuel oil
 - a. Until July 1, 2016 or the date specified in 38 MRSA §603-A(2)(A)(3), the #2 fuel oil fired shall be ASTM D396 compliant #2 fuel oil (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 #2 fuel oil 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), #2 fuel oil 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 demonstrated by fuel oil analysis of the bulk fuel oil storage tanks if the fuel is blended on-site or by fuel delivery receipts if the maximum sulfur content delivered is at or below the sulfur content limits listed above. [06-096 CMR 140, BPT]

B. Boiler #1 Emission Limits

Visible emissions from Boiler #1 shall not exceed 20% opacity on a six (6) minute block average basis, except no more than two (2) six minute block averages in a 3-hour block period. [06-096 CMR 101]

- (15) Emissions from the 2.2 MMBtu/hr propane fired hot air furnace shall not exceed the following [06-096 CMR 115, BPT]:

Emission Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Hot air furnace	0.1	0.1	0.1	0.3	0.1	0.1

Visible emissions from the propane fired hot air furnace shall not exceed 10% opacity on a six minute block average basis. [06-096 CMR 101]

- (16) VOC Process Emissions [06-096 CMR 140, BPT]

- NEC shall continue to use atomized spray guns for the application of resins that are applied simultaneously with fiberglass (“chopping”) and use non-atomized spray guns, resin infusion, or manual methods for all other resin and gelcoat application.
- NEC shall use controlled spray techniques, including lowest fluid tip pressure which produces an acceptable spray pattern and operator training, when using mechanical sprayers for the application of gelcoats and resins. NEC shall use manual application methods for open-mold resin processes, when technologically appropriate.
- NEC shall not emit more than 48 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. The % VOC shall be obtained from supplier or SDS sheets.

- (17) NEC shall meet the applicable requirements of 06-096 CMR 162, *Control for Fiberglass Boat Manufacturing Materials*. [06-096 CMR 162]
- (18) HAP Process Emissions
[06-096 CMR Chapter 140 BPT, 40 CFR, Part 63, Subpart VVVV]

NEC is subject to 40 CFR Part 63 Subpart VVVV *National Emission Standards for Hazardous Air Pollutants* (NESHAP) for Boat Manufacturing. The compliance date for existing boat manufacturing sources was August 23, 2004. NEC shall comply with all applicable requirements of this regulation, including the specific coating limits and recordkeeping/reporting requirements. NEC has chosen to meet the requirements of Subpart VVVV by using the emissions averaging option outlined in 40 CFR §63.5704. [40 CFR Part 63 Subpart VVVV]

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.

- (19) New Technology
NEC 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]
- (20) NEC shall develop and 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. NEC 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.
[06-096 CMR 140, BPT]
- (21) NEC shall install particulate filters on all forced ventilation points that are located adjacent or above the sanding, cutting and finishing operations. NEC shall properly maintain all dust collection equipment in the facility and make repairs as necessary to prevent system leakage. NEC shall control PM emissions from any cutting, buffing, grinding, or sanding processes that vent to the ambient air via vent or duct through the use of a particulate filter such that opacity will not exceed 10% for any one, six minute block average.
[06-096 CMR 140, BPT & 06-096 CMR 101]

(22) **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]

NEC shall reduce the potential for fugitive PM emissions from any process conducted outside by limiting such activity to periods of calm winds or through the use of a shroud or wind curtain. [06-096 CMR 115, BPT]

(23) **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]

(24) **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 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.

(25) **Annual Compliance Certification**

NEC shall submit an annual compliance certification to the Department 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 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]

(26) 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]

(27) 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

(28) Units Containing Ozone Depleting Substances

When repairing or disposing of units containing ozone depleting substances, the licensee shall comply with the standards for recycling and emission reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioning units in Subpart B. Examples of such units include refrigerators and any size air conditioners that contain CFCs.

[40 CFR, Part 82, Subpart F]

(29) Asbestos Abatement

When undertaking Asbestos abatement activities, NEC shall comply with the Standard for Asbestos Demolition and Renovation 40 CFR Part 61, Subpart M.

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

- A. NEC 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**

DONE AND DATED IN AUGUSTA, MAINE THIS 7 DAY OF *May*, 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: *Maure 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 22, 2010

Date of application acceptance: January 3, 2011

Date filed with the Board of Environmental Protection:

This Order prepared by Edwin Cousins, Bureau of Air Quality

