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**Johnson Outdoors Watercraft, Inc.  
Penobscot County  
Old Town, Maine  
A-319-71-K-N/M**

**Departmental  
Findings of Fact and Order  
Air Emission License  
After-the-Fact Renewal  
with Minor Revision**

**FINDINGS OF FACT**

After review of the air emissions 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**

The Air Emission License for Johnson Outdoors Watercraft, Inc. (JOW) expired on November 3, 2014. JOW has applied to renew their expired license permitting the operation of emission sources associated with their canoe and kayak manufacturing facility.

The equipment addressed in this license is located at 125 Gilman Falls Ave, Old Town, Maine.

JOW has requested a minor revision to their license in order to:

1. Remove Boiler #3;
2. Update the size of Oven #4;
3. Remove Oven #5;
4. Replace Oven #7; and
5. Add Oven #9.

**B. Emission Equipment**

The previously licensed Boiler #3 was located at the facility's 35 Middle Street location. This equipment is no longer owned or operated by JOW and has been removed from the license.

The following equipment is addressed in this air emission license:

**Ovens**

| <u>Equipment</u> | <u>Maximum Capacity (MMBtu/hr)</u> | <u>Fuel Type, % sulfur</u> | <u>Manf. Date</u> | <u>Install Date</u> | <u>Stack #</u> |
|------------------|------------------------------------|----------------------------|-------------------|---------------------|----------------|
| Oven #1          | 1.8                                | Natural Gas, negligible    | 1999              | 2009                | 1              |
| Oven #2          | 1.8                                | Natural Gas, negligible    | 1999              | 2009                | 2              |
| Oven #3          | 4.0                                | Natural Gas, negligible    | rebuilt 2009      | 2009                | 3              |
| Oven #4*         | 3.0                                | Natural Gas, negligible    | rebuilt 2015      | 2009                | 4              |
| Oven #6          | 2.5                                | Natural Gas, negligible    | rebuilt 2013      | 2009                | 6              |
| Oven #7          | 3.0                                | Natural Gas, negligible    | 2014              | 2014                | 7              |
| Oven #8          | 2.5                                | Natural Gas, negligible    | 2009              | 2009                | 8              |
| Oven #9          | 2.5                                | Natural Gas, negligible    | 2009              | 2009                | 9              |

\*Oven #4 previously had a heat input of 1.1 MMBtu/hr. In 2015 the burner in this oven was replaced with a larger, 3.0 MMBtu/hr, natural gas-fired burner.

JOW also has a small amount of associated chemical usage described later in this license.

**C. Application Classification**

The previous air emission license for JOW expired on November 3, 2014. A complete application was not submitted prior to the expiration date, therefore JOW is considered to be an existing source applying for an after-the-fact renewal. The Department has determined the facility is a minor source and the application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended). Based on maximum fuel usage and with the HAP limits associated with chemical usage, the facility is licensed below the major source thresholds for hazardous air pollutants (HAP) and is considered an area source of HAP.

The amendment included in this renewal will not increase emissions of any pollutant. Therefore, this amendment is determined to be a minor revision and has been processed as such.

## II. BEST PRACTICAL TREATMENT (BPT)

### A. Introduction

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

BPT for an after-the-fact renewal requires an analysis similar to a Best Available Control Technology analysis per 06-096 CMR 115 (as amended).

### B. Ovens

JOW is licensed to operate eight rotomolding ovens that are too large to be considered insignificant activities. In these ovens, powdered polyethylene is introduced into a mold which is heated and rotated until the powder melts and is distributed evenly. This process may involve three layers of molding. All of the rotomolding ovens fire natural gas

#### 1. New Source Performance Standards

The ovens do not heat water. They do not meet the definition of “steam generating units” and therefore are not subject to New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hr manufactured after June 9, 1989.

#### 2. National Emission Standards for Hazardous Air Pollutants

The ovens do not heat water. They do not meet the definition of “boiler” and therefore are not subject to *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* (40 CFR Part 63 Subpart JJJJJ).

#### 3. BACT Findings

The BACT emission limits for the ovens were based on the following:

|                     |   |  |
|---------------------|---|--|
| PM/PM <sub>10</sub> | – | 0.05 lb/MMBtu based on 06-096 CMR 115, BPT           |
| SO <sub>2</sub>     | – | 0.6 lb/MMscf based on AP-42, Table 1.4-2, dated 7/98 |
| NO <sub>x</sub>     | – | 100 lb/MMscf based on AP-42, Table 1.4-1, dated 7/98 |
| CO                  | – | 84 lb/MMscf based on AP-42, Table 1.4-1, dated 7/98  |
| VOC                 | – | 5.5 lb/MMscf based on AP-42, Table 1.4-2, dated 7/98 |
| Opacity             | – | 06-096 CMR 115, BACT                                 |

The BACT emission limits for the ovens are the following:

| <u>Unit</u> | <u>Pollutant</u> | <u>lb/MMBtu</u> |
|-------------|------------------|-----------------|
| Oven #3     | PM               | 0.05            |
| Oven #4     | PM               | 0.05            |
| Oven #7     | PM               | 0.05            |

| <u>Unit</u> | <u>PM<br/>(lb/hr)</u> | <u>PM<sub>10</sub><br/>(lb/hr)</u> | <u>SO<sub>2</sub><br/>(lb/hr)</u> | <u>NO<sub>x</sub><br/>(lb/hr)</u> | <u>CO<br/>(lb/hr)</u> | <u>VOC<br/>(lb/hr)</u> |
|-------------|-----------------------|------------------------------------|-----------------------------------|-----------------------------------|-----------------------|------------------------|
| Oven #1     | 0.09                  | 0.09                               | neg                               | 0.17                              | 0.15                  | 0.01                   |
| Oven #2     | 0.09                  | 0.09                               | neg                               | 0.17                              | 0.15                  | 0.01                   |
| Oven #3     | 0.20                  | 0.20                               | neg                               | 0.39                              | 0.33                  | 0.02                   |
| Oven #4     | 0.15                  | 0.15                               | neg                               | 0.29                              | 0.24                  | 0.02                   |
| Oven #6     | 0.13                  | 0.13                               | neg                               | 0.24                              | 0.20                  | 0.01                   |
| Oven #7     | 0.15                  | 0.15                               | neg                               | 0.29                              | 0.24                  | 0.02                   |
| Oven #8     | 0.13                  | 0.13                               | neg                               | 0.24                              | 0.20                  | 0.01                   |
| Oven #9     | 0.13                  | 0.13                               | neg                               | 0.24                              | 0.20                  | 0.01                   |

Visible emissions from each oven shall not exceed 10% opacity on a 6 minute block average, except for no more than one (1) six (6) minute block average in a 3 hour period.

C. VOC/HAP Emissions

JOW previously produced fiberglass and wooden products. However, JOW no longer uses gel-coats and resins in the production of fiberglass and wood/canvas canoes.

JOW does continue to have some chemical usage as part of their Research and Development phase of product development. JOW also uses resins and gel-coats in the production of drilling jigs. These jigs are used for the placement of drilled holes in the finished kayaks. The jigs are used until they are worn out or the product line is discontinued. Very few of these are produced in a year.

JOW shall uses a mass balance method to determine the amount of VOCs/HAPs emitted from the facility. JOW shall ensure all mold release, resin, varnish, sealer, and other potential sources of VOC emitting compounds are tightly sealed in containers when not being used.

D. Annual Emissions

1. Total Annual Emissions

JOW shall be restricted to the following annual emissions, based on a calendar year. The tons per year limits were calculated based on firing each oven for 8760 hours per year and a facility-wide limit on VOC and HAP emissions.

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

|                  | PM         | PM <sub>10</sub> | SO <sub>2</sub> | NO <sub>x</sub> | CO         | VOC        | Total HAP  |
|------------------|------------|------------------|-----------------|-----------------|------------|------------|------------|
| Oven #1          | 0.4        | 0.4              | –               | 0.8             | 0.6        | –          | –          |
| Oven #2          | 0.4        | 0.4              | –               | 0.8             | 0.6        | –          | –          |
| Oven #3          | 0.9        | 0.9              | –               | 1.7             | 1.4        | –          | –          |
| Oven #4          | 0.7        | 0.7              | –               | 1.3             | 1.1        | –          | –          |
| Oven #6          | 0.6        | 0.6              | –               | 1.1             | 0.9        | –          | –          |
| Oven #7          | 0.7        | 0.7              | –               | 1.3             | 1.1        | –          | –          |
| Oven #8          | 0.6        | 0.6              | –               | 1.1             | 0.9        | –          | –          |
| Oven #9          | 0.6        | 0.6              | –               | 1.1             | 0.9        | –          | –          |
| Facility wide    | –          | –                | –               | –               | –          | 9.9        | 2.0        |
| <b>Total TPY</b> | <b>4.9</b> | <b>4.9</b>       | <b>–</b>        | <b>9.2</b>      | <b>7.5</b> | <b>9.9</b> | <b>2.0</b> |

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 (CO<sub>2</sub>e).

The quantity of CO<sub>2</sub>e emissions from this facility is *less* than 100,000 tons per year, based on the following:

- the facility’s maximum fuel use;
- 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

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

| <u>Pollutant</u> | <u>Tons/Year</u> |
|------------------|------------------|
| PM <sub>10</sub> | 25               |
| SO <sub>2</sub>  | 50               |
| NO <sub>x</sub>  | 50               |
| CO               | 250              |

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

### ORDER

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

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

The Department hereby grants Air Emission License A-319-71-K-N/M subject to the following conditions.

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 CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the

purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S.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 115. [06-096 CMR 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353-A. [06-096 CMR 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]

- (11) 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 to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
    - 1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
    - 2. pursuant to any other requirement of this license to perform stack testing.
  - B. install or make provisions to install test ports that meet the criteria of 40 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 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. within thirty (30) days following receipt of 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 115]
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]

- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

**SPECIFIC CONDITIONS**

(16) **Ovens**

- A. The rotomolding ovens shall fire only natural gas. [06-096 CMR 115, BACT]
- B. Emissions shall not exceed the following:

| Emission Unit | Pollutant | lb/MMBtu | Origin and Authority |
|---------------|-----------|----------|----------------------|
| Oven #3       | PM        | 0.05     | 06-096 CMR 115, BACT |
| Oven #4       | PM        | 0.05     | 06-096 CMR 115, BACT |
| Oven #7       | PM        | 0.05     | 06-096 CMR 115, BACT |

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

| Emission Unit | PM (lb/hr) | PM <sub>10</sub> (lb/hr) | SO <sub>2</sub> (lb/hr) | NO <sub>x</sub> (lb/hr) | CO (lb/hr) | VOC (lb/hr) |
|---------------|------------|--------------------------|-------------------------|-------------------------|------------|-------------|
| Oven #1       | 0.09       | 0.09                     | neg                     | 0.17                    | 0.15       | 0.01        |
| Oven #2       | 0.09       | 0.09                     | neg                     | 0.17                    | 0.15       | 0.01        |
| Oven #3       | 0.20       | 0.20                     | neg                     | 0.39                    | 0.33       | 0.02        |
| Oven #4       | 0.15       | 0.15                     | neg                     | 0.29                    | 0.24       | 0.02        |
| Oven #6       | 0.13       | 0.13                     | neg                     | 0.24                    | 0.20       | 0.01        |
| Oven #7       | 0.15       | 0.15                     | neg                     | 0.29                    | 0.24       | 0.02        |
| Oven #8       | 0.13       | 0.13                     | neg                     | 0.24                    | 0.20       | 0.01        |
| Oven #9       | 0.13       | 0.13                     | neg                     | 0.24                    | 0.20       | 0.01        |

D. Visible emissions from the ovens shall each not exceed 10% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a continuous 3-hour period. [06-096 CMR 115, BACT]

(17) **Facility Wide Emission Limits**

A. JOW shall not exceed an annual emission limit of 9.9 ton/year for VOC based on a calendar year total. [06-096 CMR 115, BACT]

B. JOW shall not exceed an annual emission limit of 2.0 ton/year for all HAP combined based on a calendar year total.[06-096 CMR 115, BACT]

C. Compliance with the VOC and HAP emission limits above shall be based on record keeping. Records shall include type of material used, volume of material used, and VOC and HAP content based on Safety Data Sheets (SDS). Records shall be maintained monthly as well as on a calendar year basis. [06-096 CMR 115, BACT]

(18) JOW shall ensure all mold release, resin, varnish, sealer, paint, and other potential sources of VOC and/or HAP emitting compounds are tightly sealed in containers when not in use. [06-096 CMR 115, BACT]

(19) JOW shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S.A. §605).

DONE AND DATED IN AUGUSTA, MAINE THIS 18 DAY OF February, 2015.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Cone for  
PATRICIA W. AHO, COMMISSIONER

**The term of this license shall be ten (10) years from the signature date above.**

[Note: If a complete renewal application, as determined by the Department, is submitted prior to expiration of this license, then pursuant to Title 5 MRSA §10002, all terms and conditions of the license shall remain in effect until the Department takes final action on the renewal of the license.]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 1/9/15

Date of application acceptance: 1/9/15

Date filed with the Board of Environmental Protection:

This Order prepared by Lynn Muzzey, Bureau of Air Quality.

