

#AOP-10-004  
DEC#SJ95-0142

Operating Permit Expiration Date: May 2, 2019

State of Vermont  
Agency of Natural Resources  
Department of Environmental Conservation



Air Quality & Climate Division  
Waterbury, Vermont

**TITLE V**  
**AIR POLLUTION CONTROL PERMIT**  
**TO CONSTRUCT AND OPERATE**

Date Permit Issued: May 2, 2014

Owner/Operator: Ethan Allen Operations, Inc.  
Beecher Falls Division  
P.O. Box 217  
Beecher Falls, Vermont 05902-0217

Source: Wood Furniture Manufacturing and Finishing  
Ethan Allen Operations, Inc.  
Beecher Falls Division  
1280 VT Route 253 (Main Street)  
Beecher Falls, Vermont 05902-0217

**FINDINGS OF FACT****(A) FACILITY DESCRIPTION**

Ethan Allen Operations, Inc. - Beecher Falls Division (also referred to herein as "Permittee") owns and operates a wood furniture manufacturing facility at 1280 VT Route 253 in the town of Beecher Falls, Vermont (also referred to herein as "Facility"). Operations at the Facility include a rough mill, drying kilns, woodworking processes, wood gluing, ultra-violet (UV) roll coat wood finishing, and boilers for process and space heat. The Permit herein is the renewal of the Title V Permit to Operate for the Facility.

The Facility currently consists of the following air pollution related equipment and operations:

| <b>Equipment Specifications - Energy Plant <sup>1</sup></b>                      |   |   |                                 |
|--|---|---|---------------------------------|
| <b>Boiler unit</b>   | <b>Unit Rating(s):<br/>MMBtu/hr <sup>2</sup> max heat input</b> | <b>Fuel Type(s)</b>                     | <b>Year of<br/>Installation</b> |
| Bigelow Boiler #240 Type F54/46<br>(6479 ft <sup>2</sup> boiler heating surface) | 54 MMBtu /hr  | Wood<br>(flyash reinjection)            | 1950                            |
| Wickes Boiler #239 Type A<br>(3565 ft <sup>2</sup> boiler heating surface)       | 37 MMBtu/hr (wood)<br>24.9 MMBtu /hr (oil)                      | Wood / No.4 oil<br>(flyash reinjection) | 1950                            |
| Bigelow Boiler #232 Model ST-304-PF  | 19.5 MMBtu /hr  | No.4 oil                                | 1970                            |
| Cleaver-Brooks Boiler #238,<br>Model CB600-500 (finishing<br>bldg)               | 21.0 MMBtu /hr  | No.4 oil                                | 1972                            |
| Dravo Furnace Model 200<br>(sawmill)   | 2.5 MMBtu /hr   | No.2 oil                                | 1972                            |

<sup>1</sup> Equipment specifications are based on the best available information at the time of permit issuance and may be subject to some uncertainty due to use of certain assumptions and calculations for older and site engineered/fabricated equipment.

<sup>2</sup> MMBtu/hr - Million British Thermal Units per hour maximum rated heat input.

| Equipment Specifications – Wood Waste Handling Operations            |                     |  |
|--|---------------------|--|
| Wood Waste Handling Operation (if known: date installed)             | Air Flow (acfm)     | Unit Description/Specifications  |
| Fuel Metering Bin<br>Cyclone #6                                      | Closed loop         | Emergency conveying of wood fuel from silos to metering bin in the event the flight conveyors are inoperable. Conveying air is returned from cyclone outlet back to blower 5022 with no ambient discharge. Cyclone diameter 3' 10".  |
| Sawmill<br>Cyclone #7  | 20,410              | Conveying of green material only (sawdust) to relay silo.<br>Unit: 10'0" diameter.<br>Emission sources:<br>5023 – sawdust (6,280 cfm);<br>5025 – sawdust (7,065 cfm);<br>5026 – sawdust (7,065 cfm).   |
| System B - Rough Mill<br>Pneumafil #4 fabric filter<br>(12/22/2003)  | 48,800              | Conveying of rough mill dry wood wastes.<br>Pneumafil Model 13.5-460-10<br>Unit: 5,922 sq.ft. cloth filter area: 8:1 air to cloth.<br>Emission sources:<br>5003 – planer mill relay (5,500 cfm);<br>5004 – rough mill relay (10,000 cfm);<br>5005 – rough mill relay (6,200 cfm);<br>5009 – UV Pneumafil #3 relay (5,500 cfm);<br>silo #1/cyclone #3 relay (21,600 cfm [10,800 from system A and 10,800 from system B]). |
| System B – Rough Mill<br>MAC #1 fabric filter<br>(12/15/2003)        | 39,300 <sup>1</sup> | Conveying of rough mill dry wood wastes.<br>MAC Model 144MCF416<br>Unit: 6,032 sq.ft. cloth filter area: 5.2:1 air to cloth.<br>Emission sources:<br>5010 – sander BH (8,000 cfm);<br>5011 – sander TH (8,000 cfm);<br>7001 – rip saw relay (15,300 cfm);<br>5018 – double trim & bust-up saw (8,000 cfm) <sup>1</sup> .   |
| System A – Finish Mill/<br>Sanding<br>MAC #2 fabric filter<br>(2004) | 50,400              | Conveying of finish mill dry wood wastes.<br>MAC Model 144MCF361<br>Unit: 5,202 sq.ft. cloth area: 9.7:1 air to cloth.<br>Emission sources:<br>4002 – wide belt sander (5,500 cfm),<br>4003 – orbital sander (4,800 cfm),<br>5012T – molders (19,200 cfm),<br>5017 – CNC routers (8,900cfm),<br>5502 – DMC sander (12,000 cfm).  |
| System A – Finish Mill/<br>Sanding<br>Twin Cyclone #5                | 58,200              | Conveying of finish mill dry wood wastes.<br>Unit: 13'8" diameter<br>Emission sources:<br>5013 – tenors (7,100 cfm);<br>5014T – tenors (19,200 cfm);<br>5015 – lathe (9,800 cfm);<br>5016 – sander (8,000 cfm);<br>6001 – shaper etc (14,100 cfm).   |

| Equipment Specifications – Wood Waste Handling Operations                           |                 |  |
|---|-----------------|--|
| Wood Waste Handling Operation (if known: date installed)                            | Air Flow (acfm) | Unit Description/Specifications  |
| System A – Finish Mill/<br>Sanding<br><br>Pneumafil #1 fabric filter<br>(1981)      | 35,200          | Conveying of finish mill dry wood wastes.<br>Pneumafil model 11.5-316-8<br>Unit: 3,255 sq.ft. cloth area: 10.8:1 air to cloth<br>Emission sources:<br>5019 – sanding (9,800 cfm),<br>5020 – sanding (7,100cfm),<br>5501 – sanding (12,000cfm),<br>5021 – routers (6,300cfm).   |
| Silo #1 with<br><br>Cyclone #30   | 21,600          | Receives material relayed from 6006 – System A (10,800 cfm) and relayed from 6005 – System B (10,800 cfm) which utilizes wood hog line conveying air (5006). Cyclone exit ducted back to System B Pneumafil #4 with emergency bypass to System B MAC #1.   |
| Silo #4 with<br><br>Cyclone #2  | 38,300          | Receives green material only including sawdust, chips and bark relayed from sawmill and hammermill or chip delivery vehicles. Cyclone diameter: 12 feet.<br>Emission sources:<br>4004 – 2 – debarking (8,200 cfm);<br>6003 – relay of sawmill sawdust from cyclone #7 (8,000 cfm);<br>8001 – hammer mill (22,100 cfm).   |
| UV Flat Line Sanding<br><br>Pneumafil #3<br>(2000)                                  | 30,450          | Conveying of sander dust from UV flat line sanding which consists of a two head and a three head wide belt sander.<br>Pneumafil Model 11.5-320-8<br>Unit: 3,200 sq.ft. cloth area: air to cloth 9.5:1<br>Emission sources:<br>5007 – UV flatline wide belt sander (9,800 cfm)<br>5008 – UV flatline wide belt sander (9,800 cfm);<br>5024 – dove tailers (8,850 cfm);<br>3501 – carpenter shop (2,000 cfm) |
| Sawmill/Grinding Room<br>(metal; not wood waste)<br><br>Cyclone w/ fabric filter #9 | 2,700           | Grinding operations for sharpening of cutting tools, namely bandsaw cutting blades.<br>Lavcor model 30-11<br>Unit: cyclone diameter 2' 2", followed by fabric filter with 160 sq.ft. cloth area: 17:1 air to cloth.<br>Emission sources:<br>3001 – grindings (2,700 cfm)   |
| Main Plant Grinding Room<br>(metal; not wood waste)<br><br>Cyclone #1               | 3,000           | Grinding operations for sharpening of cutting tools, namely shaping and molder knives.<br>Unit: 5'6" diameter<br>Emission sources:<br>4001 – grinder (3,000 cfm).  |

<sup>1</sup> June 2008 blower 5018 installed to send material from the double trim saw and the bust-up saw to the MAC #1 dust collector. This increased the flow to the MAC #1 by 8,000 cfm.

| <b>Equipment Specifications – Miscellaneous Equipment and Operations</b>  |
|---|
| Previous permits included a Spray Finishing Operation with (±31) spray booths. <u>This operation ceased on 8/25/2009, and the spray booths were removed in 2011.</u>  |
| UV Flatline Rollcoat Finishing Operations: consists of (3) roll coaters utilizing 100% solid UV finishes, (3) UV curing ovens, (2) sanders (noted above) and (1) offline conventional spray booth for ends and edges. |
| Glue Line Operations (±9) total glue operations: (6) in Glue Panel Dept., (3) in Pre-assembly. All use Poly Vinyl Acetate (PVA) glue.   |
| Dry Kilns (±15) total kilns: (10) drying kilns each with 70,000 board foot capacity and (5) drying kilns each with 40,000 board foot capacity with heat provided by boilers (noted above).                            |

**(B) FACILITY CLASSIFICATION**

The Facility is classified as a source of air contaminants pursuant to Title 10 of the *Vermont Statutes Annotated* ("10 VSA.") §555 and §5-401(4) [Wood products industries], (6)(b) [Wood fuel-burning equipment of greater than 90 H.P. rated output] and (9) [Surface finishing and coating operations, including application of paints, lacquers, solvents and related materials] of the *Vermont Air Pollution Control Regulations* (hereinafter "*Regulations*"). In addition, §5-101 of the *Regulations* defines a *stationary source* as any structure(s), equipment, installation(s), or operation(s), or combination thereof, which emit or may emit any air contaminant, which is located on one or more contiguous or adjacent properties and which is owned or operated by the same person or persons under common control. Based on this definition, all of the equipment, operations, and structures at the Facility are grouped together by the Agency of Natural Resources, Department of Environmental Conservation, Air Quality & Climate Division (hereinafter "Agency") as one stationary air contaminant source for purposes of review under the *Regulations*.

**(C) PRIOR AGENCY ACTIONS/APPROVALS**

The Facility was originally constructed prior to July 1, 1979. The Agency subsequently issued the following "Permit to Construct" approvals pursuant to 10 VSA §556 and §5-501 of the *Regulations* and the following "Permit to Operate" issued by the Agency pursuant to 10 VSA §556a and Subchapter X of the *Regulations*.

| Prior Agency Approvals and Actions |   |
|------------------------------------|---|
| Date of Action                     | Description of Agency Approval/Action   |
| October 19, 1999                   | #AP-99-011 – Approval for construction of the UV flatline coating line and use of pre-catalyzed coatings.   |
| November 26, 2001                  | #AP-01-043 – Amendment of "Permit to Construct" to increase allowed air flow discharge rate of the UV line fabric filter from the existing 23,000 cfm to 30,000 cfm.  |
| May 31, 2006                       | #AOP-04-005 – Issuance of initial "Permit to Operate," which also included a 10/25 tpy limit on HAPs so the boilers will not, be subject to the Major Source boiler MACT rule. The permit also included changes to dust collection System A and System B. |

## (D) FACILITY PERMIT APPLICABILITY

Pursuant to 10 VSA §556a and Subchapter X of the *Regulations* a Permit to Operate is required for any air contaminant source with allowable emissions of all air contaminants combined of ten (10) tons per year ("tpy") or more or that is otherwise subject to Title 40 *Code of Federal Regulations* ("40 CFR") Part 70.

The Facility currently operates under a Permit to Operate issued on May 31, 2006. The allowable emissions from the Facility are estimated to be greater than ten (10) tpy and emissions of particulate matter (PM/PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), and volatile organic compounds (VOC) are estimated to be in excess of the one-hundred (100) tpy threshold (fifty (50) tpy threshold for VOC) for applicability to Title V of the federal Clean Air Act. Therefore, pursuant to §§5-1002, 5-1003, and 5-1005 of the *Regulations* the Facility is classified as a "Subchapter X Major Source" and "Title V Subject Source". In accordance with §5-1009 of the *Regulations*, the agency is issuing the Permit to Operate herein as a renewal of the previous Permit to Operate for the Facility and the Permit herein supersedes all prior Permits for the Facility.

In accordance with 10 VSA §556(e) the Agency has combined the Permit to Construct and the Permit to Operate renewal for this Facility into one combined Permit to Construct and Operate. The allowable emissions for the Facility are summarized below:

| Future Allowable Air Contaminant Emissions (tons/year) <sup>1</sup> |                 |                 |     |      |                   |
|---|-----------------|-----------------|-----|------|-------------------|
| PM/PM <sub>10</sub>   | SO <sub>2</sub> | NO <sub>x</sub> | CO  | VOCs | HAPs <sup>2</sup> |
| 577   | 304             | <100            | 242 | >50  | <10/25            |

<sup>1</sup> PM/PM<sub>10</sub> - particulate matter and particulate matter of 10 micrometers in size or smaller; SO<sub>2</sub> - sulfur dioxide; NO<sub>x</sub> - oxides of nitrogen measured as NO<sub>2</sub> equivalent; CO - carbon monoxide; VOCs - volatile organic compounds (includes 7tpy from boilers); HAPs - hazardous air pollutants as defined in §112 of the federal Clean Air Act.

<sup>2</sup> Emissions of individual HAPs each < 10 tpy and emissions of total HAPs combined <25 tpy.

(E) REVIEW FOR THE PERMIT TO CONSTRUCT

(a) New Source Review Designation

The Permittee has not proposed any modifications to the Facility in conjunction with the review for this Permit to Operate and therefore is not subject to review under the New Source Review requirements in §5-501 or §5-502 of the *Regulations* at this time.

(b) Most Stringent Emission Rate

Pursuant to §5-502 of the *Regulations*, the owner/operator of each new major stationary source or major modification must apply control technology adequate to achieve the Most Stringent Emission Rate ("MSER") with respect to those air contaminants for which there would be a major or significant actual emissions increase, respectively, but only for those currently proposed physical or operational changes which would contribute to the increased emissions.

The Permittee has not proposed any modifications to the Facility in conjunction with the review for this Permit to Operate and therefore is not subject to review under the MSER requirements in §5-502 of the *Regulations* at this time. In addition, there have been no prior MSER evaluations conducted for any of the previous modifications to the Facility.

(c) Ambient Air Quality Impact Evaluation

An ambient air quality impact evaluation is performed to demonstrate whether or not a proposed project will cause or contribute to violations of the ambient air quality standards and/or significantly deteriorate existing air quality. The Agency's implementation procedures concerning the need for an ambient air quality impact evaluation under §5-406(1) of the *Regulations*, specifies that such analyses may be required when a project results in an allowable emissions increase of ten (10) tons per year or more of any air contaminant, excluding VOCs. Additionally, the Agency may require an air quality impact evaluation where the short-term allowable emission rates will significantly increase as a result of a project.

The Permittee has not proposed any modifications to the Facility in conjunction with the review for this Permit to Operate and therefore is not subject to an air quality impact analysis under §5-501 of the *Regulations* at this time. In addition, there have been no prior ambient air quality impact evaluations conducted for any of the previous modifications to the Facility.

(F) REVIEW FOR THE PERMIT TO OPERATE

(a) Applicable Requirements

The operations at the Facility are subject to the following state and federal laws and regulations, the requirements of which are embodied in the conditions of this Permit.

(i) *Vermont Air Pollution Control Regulations:*

| <b>Applicable Requirements from the Vermont Air Pollution Control Regulations</b>   |
|---|
| Section 5-201 – Prohibition of Open Burning   |
| Section 5-211(1) - Prohibition of Visible Air Contaminants, Installations Constructed Prior to April 30, 1970 - Bigelow Boiler #240 and Wickes Boiler #239.   |
| Section 5-211(2) - Prohibition of Visible Air Contaminants, Installations Constructed Subsequent to April 30, 1970 – Facility wide except the two boilers noted above. All dust collectors themselves or one or more tools ducted to the dust collector are assumed to have been modified since 1970. |
| Section 5-221(1) - Prohibition of Potentially Polluting Materials in Fuel, Sulfur in Fuel.  |
| Section 5-231(1) - Prohibition of Particulate Matter; Industrial Process Emissions.   |
| Section 5-231(3) - Prohibition of Particulate Matter; Combustion Contaminants.  |
| Section 5-231(4) - Prohibition of Particulate Matter; Fugitive Particulate Matter.  |
| Section 5-241 – Prohibition of Nuisance and Odor.   |
| Section 5-253.14 - Control of Volatile Organic Compounds from Solvent Metal Cleaning.   |
| Section 5-253.16 – Wood Furniture Manufacturing. This regulation combines the federal MACT requirements of 40 CFR Part JJ and the Control Techniques Guideline for Wood Furniture Manufacturing. The rule was adopted on August 14, 2003 and became effective on March 1, 2004. <sup>1</sup>          |
| Section 5-261(3) – Control of Hazardous Air Contaminants - Hazardous Most Stringent Emission Rate.  |
| Section 5-402 – Written Reports When Requested.   |
| Section 5-403 – Circumvention.  |
| Subchapter VIII – Registration of Air Contaminant Sources.  |
| Subchapter X – Operating Permits.   |

<sup>1</sup> With the exception of subsections 5-253.16(c)(2), (c)(3), (c)(4), (d)(5), (3)(3), or (f)(2), this regulation was adopted by the EPA as part of the Vermont State Implementation Plan on 07/19/2011 (see 76 FR 42560).

(ii) Reasonably Available Control Technology - §5-1010 of the *Regulations*

Pursuant to 10 VSA §556a(d) and §5-1010 of the *Regulations* the Agency may establish and include within any Permit to Operate emission control requirements based on Reasonably Available Control Technology ("RACT"). The Permittee previously proposed to limit NO<sub>x</sub> emissions to

less than 100 tons/year, and the Agency has not imposed any RACT requirements on this Facility under this authority at this time.

(iii) Existing Air Pollution Control Permit to Construct and/or Operate

The Facility currently operates under the confines of a Permit to Construct and Operate issued on May 31, 2006 (#AP-04-005). The conditions within that existing permit are considered applicable requirements pursuant to §5-1002(d) of the *Regulations*. The requirements of that permit which are not being modified herein are incorporated into this new combined Permit to Construct and Operate (#AOP-10-004).

(iv) Federal Requirements:

| <b>Applicable Requirements from<br/>Federal Regulations and the Clean Air Act</b>   |
|---|
| <p>40 CFR Part 63, Subpart JJ - National Emission Standards for Wood Furniture Manufacturing Operations: §63.802 Emission limits; §63.803 Work practice Standards; §63.806 Recordkeeping requirements; §63.807 Reporting requirements. Applicable to all facilities engaged in the manufacture of wood furniture and that are major HAP sources.</p> <p><i>The Facility will remain subject to the above regulation regardless of future actual or allowable emissions based on the U.S. EPA's "Once-in, Always-in" policy, articulated in a memorandum, dated May 16, 1995 from John S. Seitz Director of Air Quality Planning and Standards. However, to the extent that EPA's policy on this issue changes, the Permittee may in the future be able to avoid applicability of 40 CFR Part 63, Subpart JJ based on its future actual or allowable HAP emissions.</i></p>  |
| <p>40 CFR Part 63, Subpart JJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers. This regulation will apply to new and existing fuel oil and solid fuel fired boilers located at area sources (major sources are subject to Subpart DDDDD). It does not apply to natural gas or propane fired boilers. The final rule is effective 3/21/2011. Boilers that commenced construction on or before June 4, 2010 are considered an existing source.</p> <p><i>The boilers at the Facility are subject to this regulation.</i></p>   |
| <p>Clean Air Act §§114(a)(3), 502(b), and 504(a)-(c); 40 CFR Part 70 §§70.6(a)(3)(i)(B) and 70.6(c)(1); and 40 CFR Part 64 - Compliance Assurance Monitoring. Upon renewal of a Title V Permit to Operate, a facility must comply with enhanced monitoring and compliance assurance monitoring requirements for any emission unit with uncontrolled emissions in excess of the Title V major source threshold and which is subject to an emission standard and which is equipped with an emission control device.</p> <p><i>The woodworking operations used to process kiln-dried wood at the Facility are considered to be emission units. These operations have their PM emissions controlled by either fabric filters and/or cyclones, are subject to PM emission limits. The MAC#2 dust collector has potential pre-control emissions of PM<sub>10</sub> that exceed 100 tons/yr. and is therefore subject to the CAM requirements.</i></p> |

(b) Non-Applicable Requirements/Permit Shield

Pursuant to §5-1015(a)(14) of the *Regulations*, an owner or operator of a facility may request a Permit Shield from specific state or federally enforceable regulations and standards which are not applicable to the source. The Permittee has requested and is hereby granted a permit shield. The permit shield applies to the Facility based on the equipment identified in Findings of Fact A in as long as the Permittee operates in accordance with the information contained within this permit.

The list below identifies requirements which are not applicable to the Permittee and the determinations thereof. So long as the Permittee operates within the constraints of these determinations, the permit shield shall apply to the following provisions:

§5-231(2) (a)&(b) – Prohibition of Particulate Matter – Incinerator Emissions

This regulation limits the PM emission rate from incinerators. As defined in the regulations: "incinerator" means any structure or furnace in which combustion takes place, the primary purpose of which is the reduction in volume and weight of an unwanted material.

*The Agency has determined the Permittee does not operate any combustion units which meets the definition of an incinerator. In addition, Condition (10) of this permit prohibits the use of the wood boilers in a manner that would meet the definition of incinerator. Therefore §5-231(2) (a)&(b) does not apply to the wood boilers.*

§5-241(3) – Control of Odor from Industrial Processes.

(a) No person shall operate or use any device, machine, equipment or other contrivance for an industrial process which as determined by the Air Pollution Control Officer is an odoriferous process per se, unless all gases, vapors, and gas-entrained effluents from such facility are incinerated at a temperature of 871 degrees C (1600 degrees F) for a period of not less than five-tenths (0.5) second, or processed in such manner as determined by the Air Pollution Control Officer to be equally or more effective for the purpose of air pollution control.

*The Permittee does not operate any device, machine, equipment or other contrivance which has currently been determined by the Air Pollution Control Officer to be an odoriferous process per se. So this regulation does not apply to the facilities equipment shown in Findings of Fact A of this permit and a permit shield has been granted for this equipment.*

§5-251(1) – No person shall discharge, or cause, allow or permit emissions of oxides of nitrogen, expressed as NO<sub>x</sub>, from any fuel burning equipment with a heat input capacity of 250 million BTU's per hour or more in excess of:

- (a) 0.36 grams per million calories heat input (0.20 pounds per million BTU) derived from gaseous fossil fuel.
- (b) 0.54 grams per million calories heat input (0.30 pounds per million BTU) derived from liquid fossil fuel.

- (c) 1.26 grams per million calories heat input (0.70 pounds per million BTU) derived from solid fossil fuel (except lignite or a fossil fuel containing 25 percent by weight, or more of coal refuse).

*The Facility does not have any fuel burning equipment with a heat input capacity of 250 MMBtu/hr or more. Therefore this regulation does not apply to the Facility.*

§5-251(2) – Reasonably available control technology for large stationary sources.

- (a) The owner or operator of any stationary source that has allowable emissions of one hundred (100) tons per year or more of nitrogen oxides shall install, maintain and use reasonably available control technology, approved by the Secretary, to limit the discharge of nitrogen oxides from the source by May 31, 1995.

*Condition (7) of this permit limits the Facilities total NO<sub>x</sub> emission to less than 100 tons/year. The Agency has determined §5-251(2)(a) does not currently apply to the Facility.*

§5-252 Control of Sulfur Dioxide Emissions

No person shall discharge, or cause, allow or permit emissions of sulfur dioxide from any steam generating fuel burning equipment with a heat input capacity of 250 million BTU's per hour or more in excess of:

- (a) 1.4 grams per million calories heat input (0.80 pounds per million BTU) derived from liquid fossil fuel.  
(b) 2.2 grams per million calories heat input (1.2 pounds per million BTU) derived from solid fossil fuel.

*The Facility does not have any fuel burning equipment with a heat input capacity of 250 MMBtu/hr or more. Therefore this regulation does not apply to the Facility.*

§5-253.1 Petroleum Liquid Storage in Fixed Roof Tanks

- (a) Applicability. This subsection shall apply to any above ground fixed roof storage tank with a capacity greater than 40,000 gallons (151,417 liters) used to store petroleum liquid having a true vapor pressure VAPCR Adopted September 2011 [41] equal to or greater than 1.52 pounds per square inch (10.5 kilopascals).

*The Facility does not have any fixed roof storage tanks with a capacity greater than 40,000 gallons; therefore this regulation does not apply to the Facility*

§5-253.2 Bulk Gasoline Terminals

*The Facility does not own or operate a bulk gasoline terminal, therefore this regulation does not apply to the Facility.*

§5-253.3 Bulk Gasoline Plants

*The Facility does not own or operate a bulk gasoline plant, therefore this regulation does not apply to the Facility.*

§5-253.4 Gasoline Tank Trucks

*The Facility does not own or operate a gasoline tank truck, therefore this regulation does not apply to the Facility.*

§5-253.6 Volatility of Gasoline

- (a) No person shall sell or supply as fuel at or from bulk gasoline terminals and bulk gasoline plants a gasoline having a Reid vapor pressure greater than 9.0 pounds per square inch during the period May 1 through September 15 of each year, beginning in 1989.
- (b) The owner or operator of any bulk gasoline plant or bulk gasoline terminal from which gasoline is distributed shall maintain records of the Reid vapor pressure of any gasoline that is delivered to or distributed from the facility for at least two calendar years.
- (c) Any person who sells or supplies gasoline to retailers, other merchants, and/or industrial, institutional or commercial users shall clearly designate the maximum Reid vapor pressure of the gasoline and the time period in which it is intended to be dispensed.

*The Facility does not sell or supply gasoline, therefore this regulation does not apply to the Facility.*

§5-253.7 Stage II Vapor Recovery Controls at Gasoline Dispensing Facilities

(a) Applicability.

- (1) This subsection shall apply to any gasoline dispensing facility with an annual gasoline throughput of 400,000 gallons or more in the 1994 calendar year, or any year thereafter.

*The Facility does not own or operate a gasoline dispensing facility with an annual gasoline throughput of 400,000 gallon or more/year, therefore this regulation does not apply to the Facility.*

§5-253.10 Paper Coating

(a) Applicability. This subsection applies to all paper coating units, except that any paper coating unit shall be exempt from this subsection that is within a paper coating source that has actual emissions without control devices from all paper coating units within the source of less than 15 lbs of volatile organic compounds per day. Once a source becomes subject to this subsection, it shall remain so even if emission levels subsequently fall below the applicability threshold.

*The Facility does not own or operate a paper coating unit, therefore this regulation does not apply to the Facility.*

§5-253.11 Perchloroethylene Dry Cleaning

*The Facility does not own or operate a perchloroethylene dry cleaning equipment, therefore this regulation does not apply to the Facility.*

§5-253.13 *Coating of Miscellaneous Metal Parts*

(a) Applicability.

- (1) This subsection applies to any *miscellaneous metal parts and products coating unit*, except automobile, light-duty and heavy-duty truck refinishing.
- (2) The *emission* limits in this subsection do not apply to any *coating unit* within a source whose *actual emissions* without *control devices* from all *miscellaneous metal part and product coating units* within the source are less than 5 tons of VOCs per year.
- (3) Any source that becomes or is currently subject to this subsection shall remain so even if *emissions* from the source later fall below the applicability threshold.

*The Facility is not involved in the coating of miscellaneous metal parts, therefore this regulation does not apply to the Facility.*

§5-253.15 *Cutback and Emulsified Asphalt*

(a) Applicability. This subsection applies to the manufacture, mixing, storage, and use of *cutback asphalts* and *emulsified asphalts*. No exemptions are allowable based on the size or throughput of an operation.

*The Facility does not use cutback and emulsified asphalt, therefore this regulation does not apply to the Facility*

§5-253.20 *Other Sources That Emit Volatile Organic Compounds*

(a) Applicability.

- (1) This subsection shall apply to any operation that emits VOCs and that is not subject to any other subsection of Section 5-253. A source is subject to this subsection if it has operations or processes not otherwise regulated under Section 5-253, that, as a group, have *allowable emissions* of 50 tons or more of VOCs per calendar year since January 1, 1990.
- (2) Any source that becomes or is currently subject to the provisions of this subsection by exceeding the applicability threshold shall remain subject to the provisions of this subsection even if its *emissions* later fall below the applicability threshold.
- (3) This subsection does not apply to *fuel* combustion sources, the surface *coating* of wood and waste water treatment plants.

*The Facilities wood furniture manufacturing operations are subject to §5-253.16 and the Facility does not have operations that are not otherwise regulated under §5-253 that, as a group, has allowable emissions of 50 tons or more of VOCs per calendar year since January 1, 1990, therefore this regulation does not apply to the Facility.*

40 CFR Part 60 Subparts Db (Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units)

*Subpart Db applies to steam generating units constructed or modified after June 19, 1984 and which are greater than 100 MMBtu/hr. There are no steam*

*generating units at the Facility with a heat input rating in excess of 100 MMBtu/hr. This regulation does not apply to the smaller (<100 MMBtu/hr) steam generating units installed and operating at the Facility. Should the Permittee modify an existing steam generating unit such that it has a heat input rating greater than 100 MMBtu/hr, or if the Permittee installs a steam generating unit with a heat input rating greater than 100 MMBtu/hr, then this permit shield will be void.*

40 CFR Part 60 Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units).

*Subpart Dc applies to steam generating units constructed or modified after June 9, 1989 which are 10 MMBTU/hr or greater. While four of the boilers at the Facility are in excess of 10 MMBTU/hr, none of them have been modified since June 9, 1989, therefore this regulation does not apply to the smaller steam generating units at the Facility. Should the Permittee modify or reconstruct an existing steam generating, or if the Permittee installs a new steam generating unit with a heat input rating greater than 10 MMBtu/hr, but less than or equal to 100 MMBtu/hr, then this permit shield will be void.*

40 CFR Part 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, Institutional Boilers and Process Heaters. Applicable to boilers and process heaters, other than existing gas or liquid fired units and small (<10 MMBTU) solid fuel fired units, that are located at a major source of HAPs after September 13, 2007.

*The Agency has determined that prior to September 13, 2007, the Facility was not long a major source of HAPs, and therefore the Facility is not subject to this regulation.*

*Note that the facility will be regulated as an area source and is subject to 40 CFR Part 6, Subpart JJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers.*

| <b>Non-Applicable Requirements for which a Permit Shield is Granted</b>  |
|--|
| §5-231(2) (a) & (b) – Prohibition of Particulate Matter – Incinerator Emissions.                                     |
| §5-241(3) – Prohibition of Nuisance and Odor – Control of Odor from Industrial Processes.                            |
| §5-251 – Control of Nitrogen Oxides Emissions.   |
| §5-252– Control of Sulfur Dioxide Emissions.   |
| §5-253.1 – 4; 6, 7, 10 - 13, 15 and 20 – Control of Volatile Organic Compounds.                                      |
| 40 CFR Part 60 Subparts Db (Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units) |
| 40 CFR Part 60 Dc (Standards of Performance for Small Industrial-Commercial- Institutional Steam Generating Units).  |

**Non-Applicable Requirements for which a Permit Shield is Granted**

40 CFR Part 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, Institutional Boilers and Process Heaters.

(c) Enforceability

This section delineates which permit conditions are federally enforceable and which conditions are state only enforceable. All federal enforceable conditions are subject to federal citizen suit provisions. All conditions of this Permit are enforceable by both state and federal authorities with the exception of those conditions related to annual registration pursuant to §§5-807 and 5-808 of the *Regulations* as well as those conditions based on §§5-253.16(c)(2), (c)(3), (c)(4), (d)(5), (3)(3), or (f)(2) of the *Regulations*.

(d) Compliance Certification

The Permittee is required by this Permit to certify compliance as part of its annual registration with the Agency pursuant to the requirements of Subchapter X of the *Regulations*. Additionally, this Permit requires the submission of semi-annual reports of monitoring records used to demonstrate compliance with the limitations contained in this Permit.

(G) HAZARDOUS MOST STRINGENT EMISSION RATE

Pursuant to §5-261 of the *Regulations*, any stationary source whose current or proposed actual emission rate of a hazardous air contaminant ("HAC") is equal to or greater than the respective Action Level (found in Appendix C of the *Regulations*) shall achieve the Hazardous Most Stringent Emission Rate ("HMSE") for the respective HAC. Pursuant to §5-261(1)(b)(ii) of the *Regulations*, all fuel burning equipment which combusts virgin liquid or gaseous fuel is exempt from this section. Based on historical emission levels, the Agency has determined that the Facility has regulated emissions, namely from the finishing operations, of the following HAC compounds in excess of their respective Action Levels and that are subject to review under §5-261:

Crystalline silica (14808-60-7)  
isobutyl acetate (110-19-0)  
isobutyl alcohol (78-83-1)  
methyl amyl ketone (110-43-0)  
1-butoxy-2-propanol (synonym butyl propanol) (5131-66-8)

The Permittee has made substantial efforts over the past years to reduce emissions of state HACs, federal HAPs, and VOCs through the following measures: (1) coating reformulations to reduce VOCs and TRI (Toxic Release Inventory under SARA Title III) reportable toxics and thus replace more toxic HACs and HAPs with less toxic compounds; (2) continued reformulation measures specifically focused on increased use of acetone in place of more toxic components; (3) more extensive use of high volume low pressure (HVLP) spray guns to improve coating transfer efficiency and reduce coating usage; (4) use of high solids "hot spray" coatings (sealer 3.8 lbs VOC/gal;

topcoat 4.8 lbs VOC/gal) in place of the previous conventional and pre-catalyzed coatings (sealer 4.0 - 4.3 lbs VOC/gal; topcoat 3.6 - 6.0 lbs VOC/gal). The high solid hot spray coatings use heat to increase viscosity of higher solids coatings with less solvent. Due to the increased solids content, these coatings also attain the necessary film build thickness with two coats instead of the previous standard of three coats; and (5) the installation of the UV flatline rollcoat finishing system that uses 100% solids (solvent free) coatings where highest quality finishes are not necessary such as drawer bottoms and backs. Emissions of silica are also reduced by measures that decrease coating usage such as HVLP spray guns, high solids coatings and UV coating applications. In addition, overspray filters are used to capture a minimum of 95% of the overspray in the exhaust air. It should also be noted that while the silica in the coatings is in the crystalline silica form it is not emitted with the hazardous properties of free crystalline silica since it is encapsulated in the overspray coatings.

The Agency has determined that the Permittee is achieving HMSER for the respective HACs through implementation of the above noted emission reduction measures along with continued compliance with §5-253.16 of the *Regulations* and a cap on annual emissions of each HAC. In addition, the Permittee will be required to continue to investigate reformulation and coating options to minimize all HAC emissions which are in excess of their respective Action Level with the emphasis on minimizing those HACs with the lowest respective Action Levels (i.e. higher toxicity) and shall submit a report to the Agency annually detailing its findings.

Prior HMSER Determinations: On October 19, 1999 the Agency issued a Permit to Construct (#AP-99-011) to the Permittee for the installation of the UV coating line and the limited use of pre-catalyzed coatings. This approval established HMSER for formaldehyde from the pre-catalyzed coatings to be the use of coatings containing a maximum of 0.01% free formaldehyde by weight, as applied. Annual pre-catalyzed coating usage shall not exceed 55,000 gallons, as applied. Emissions of formaldehyde from the pre-catalyzed coatings shall not exceed a combined emission rate of 0.043 lbs/8hours on an annual average basis calculated assuming 100% of the free formaldehyde in the respective coating is emitted. Emissions of formaldehyde during any single eight hour period are not restricted, provided the annual average emission rate complies with the HMSER limitation. On May 31, 2006, the Agency reevaluated this HMSER determination and concluded that it still represented HMSER. With the issuance of this permit, the Agency has again reevaluated this HMSER determination and continues to conclude that it represents HMSER.

Both HMSER determinations in this Permit shall be subject to re-evaluation five (5) years from the date of issuance of this Permit and shall remain in effect until revised by the Agency.

Current and prior HMSER determinations for this Facility are presented below.

| Hazardous Most Stringent Emission Rate Determinations  |   |   |
|--|---|---|
| Date of Determination/<br>Permit #   | Pollutant   | Description/Emission limit  |
| Initial:<br>October 19, 1999<br>(#AP-99-011)<br>Re-evaluation:<br>May 31, 2006<br>(#AOP-04-005)<br>RE-evaluation:<br>May 2, 2014<br>(AOP-10-004) | formaldehyde  | Restrictions on use of pre-catalyzed coatings limiting free formaldehyde content to a maximum of 0.01% by weight, a maximum of 55,000 gallons per year of all combined pre-catalyzed coatings, and an annual average emission rate not to exceed 0.043 pounds per eight hours.  |
| May 31, 2006<br>(#AOP-04-005)<br><br>RE-evaluation:<br>May 2, 2014<br>(AOP-10-004)   | crystalline silica  | Use of HVLP spray to minimize over spray and use of over spray filters with a minimum ninety-five (95) percent collection efficiency. Crystalline silica emissions shall not exceed 56 lbs/year.  |
|  | isobutyl acetate<br>isobutyl alcohol<br>methyl amyl ketone<br>1-butoxy-2-propanol | (1) continued coating reformulations to reduce more toxic HACs and HAPs with less toxic compounds;<br>(2) continued reformulation with acetone or other low toxicity and low or no VOC compounds where feasible;<br>(3) use of HVLP spray guns where feasible;<br>(4) use of high solids "hot spray" coatings where feasible;<br>(5) use of the UV flatline rollcoat finishing system where feasible;<br>(6) continue to comply with §5-253.16 of the Regulations,<br>(7) individual HAC caps, in pounds per year (see permit condition (35) below). <sup>1</sup> |

<sup>1</sup> HAC caps based on the highest level of respective HAC emission since year 2000 (first full year after implementation of HMSER measures) plus a factor of growth of 33% which is equivalent to the addition of an additional production shift which could reasonably be accomplished without triggering a permit modification

Based on the Agency's review of the Facility's application and the above Findings of Fact, the Agency concludes that the Facility, subject to the following Permit conditions, complies with all applicable state and federal air pollution control laws and regulations or is subject to an acceptable schedule of compliance. Therefore, pursuant to 10 V.S.A. §§556 and 556a, as amended, the Agency hereby proposes to issue a Permit approving the Facility, as described in the above Findings of Fact, subject to the following:

## PERMIT CONDITIONS

### - Construction and Equipment Specifications -

- (1) The Permittee shall construct and operate the Facility in accordance with the plans and specifications submitted to the Agency and in accordance with the conditions set forth herein, including the equipment specifications as listed in Findings of Fact (A) or their regulatory equivalent as approved by the Agency. [10 V.S.A. §§556(c) and 556a(d)]
- (2) **Boilers:** The Permittee shall control emissions of particulate matter from the Bigelow boiler #240 and the Wickes boiler #239 by installing and operating multiple cyclone fly ash collectors of the specifications indicated in its application, or a similar device capable of achieving equivalent emission reductions if approved in writing by the Agency. The collected fly ash is currently reinjected into the respective boiler but reinjection is not a requirement of this Permit. All elements of these air pollution control systems shall be maintained in good working order at all times and operated in accordance with the manufacturer's operation and maintenance recommendations. Each air pollution control system shall be in operation whenever the respective emission source it serves is in operation. [10 V.S.A. §§556(c) and 556a(d)] [§5-1015(a)(1) of the *Regulations*]
- (3) **Wood Waste Dust Collection Systems:** The Permittee shall control emissions of particulate matter from the wood waste handling operations with the respective emission control device having the specifications, including total air flow to the device and with regards to fabric filter devices the stated air to cloth ratio, as listed in Findings of Fact (A) or a similar device capable of achieving equivalent emission reductions if approved in writing by the Agency. All elements of these air pollution control systems shall be maintained in good working order at all times and operated in accordance with the manufacturer's operation and maintenance recommendations. Each air pollution control system shall be in operation whenever the respective emission source is in operation. [10 V.S.A. §§556(c) and 556a(d)] [§§5-231 and 5-1015(a)(1), (3) and (4) of the *Regulations*]
- (4) **Wood Waste Dust Collection Systems:** The Permittee shall equip each fabric filter collector with a pressure drop measurement device which continuously measures and displays the pressure drop across the fabric filter collector (e.g., manometer or magnehelic). All elements of these fabric filters, including their pressure drop measurement device, shall be maintained in good working order at all times and shall be operated in accordance with the manufacturer's operation and maintenance recommendations. The Permittee shall use the pressure drop measurement device to maintain the pressure drop across each fabric filter within acceptable ranges as specified by the manufacturer. Failures due to harsh weather conditions not reasonably preventable by the Permittee shall not be considered a violation of the Permit. [10 V.S.A. §§556(c) and 556a(d)] [§§5-231 and 5-1015(a)(1), (3) and (4) of the *Regulations*]

- (5) **Spray Booths:** The Permittee shall equip each spray booth with filters designed to effectively capture and control a minimum of ninety-five (95) percent of the overspray solids in the exhaust from the spray finishing operations. [10 V.S.A. §§556(c) and 556a(d)] [§§5-261(3) and 5-1015(a)(1) of the *Regulations*]
- (6) **Stack Heights:** The exhaust gases from the Bigelow Boiler #240 and the Wickes Boiler #239 shall be vented vertically through a stack or stacks which extend a minimum of seventy-nine (79) feet above the stack base grade elevation. The stack shall not be equipped with any device that may obstruct the upward discharge of the exhaust gases such as a fixed raincap. [10 V.S.A. §§556(c) and 556a(d)] [§5-406 of the *Regulations*]

**- Operational Limitations -**

- (7) In order to maintain emissions of nitrogen oxides (NO<sub>x</sub>) below the one hundred (100) tons per year threshold of §5-251(2), the Permittee shall not burn fuel in all boilers combined located at its Facility in quantities greater than the following limit during any rolling twelve (12) consecutive calendar month period:

$$0.020 * X + 1.94 * Y + 7.45 * Z < 200,000$$

where:

X = quantity of No.2 and No.4 fuel oil burned in units of gallons;

Y = quantity of wet wood fuel burned in units of tons (as fired, including moisture). Wet wood fuel shall be defined as wood fuel with a moisture content of 20% by weight or greater on a green basis.

Z = quantity of dry wood fuel burned in units of tons (as fired, including moisture). Dry wood fuel shall be defined as wood fuel with a moisture content of less than 20% by weight on a green basis.

The NO<sub>x</sub> emission rates of 1.94 lbs per ton of wet wood and 7.45 lbs per ton of dry wood in the above formula may be revised by the Agency based on the results of any stack emission testing on the Facility boilers or other credible emission data as approved by the Agency. [10 V.S.A. §§556(c) and 556a(d)] [§5-251(2) of the *Regulations*]

- (8) Only No. 4 fuel oil or lighter grade fuel oils with a maximum sulfur content not to exceed 1.0 percent by weight may be used as oil fuel in the Bigelow Boiler #232 and the Cleaver-Brooks Boiler #238 as well as the Wickes Boiler #239, which also is capable of combusting wood fuel, unless the Permittee obtains prior written approval from the Agency to use another type of fuel.

Commencing on July 1, 2014, the sulfur content of No.2 and lighter distillate oils shall not exceed 0.05 percent by weight and commencing July 1, 2018 such oils shall not exceed 0.0015 percent by weight.

Commencing on July 1, 2018, the sulfur content of No.4 residual oil and No.5/No.6 residual fuel oil shall not exceed 0.25 percent and 0.5 percent by weight, respectively. [10 V.S.A. §§556(c) and 556a(d)] [§§5-221(1)(a) and 5-1015(a)(1) of the *Regulations*]

- (9) The Permittee shall operate the Bigelow and Wickes wood fired boilers at optimum combustion efficiency by, at a minimum, ensuring the proper amounts of combustion air are continuously provided to the boilers and by operating the boilers in accordance with the O&M Plan required by this Permit. The Permittee shall also assure that at least one employee who has received instruction in the proper operation and monitoring of the boilers to achieve optimum combustion efficiency is present or on call whenever one or more of the wood fired boilers are in operation. [10 V.S.A. §§556(c) and 556a(d)] [§5-1015(a)(3) and (4) of the *Regulations*]
- (10) Wood: Only natural wood as defined in the *Regulations*, as well as sawdust or other wood waste generated by wood processing operations, may be used as fuel in the wood fuel burning equipment without the prior written approval of the Agency. In addition, the wood fuel burning equipment shall only be used when there is a need for space or process heat, including steam for the steam electric turbine, and shall not be used as an *incinerator* where the primary purpose is the reduction in volume and/or weight of an unwanted material. [10 V.S.A. §§556(c) and 556a(d)] [§5-101, 5-231(2) and 5-1015(a)(1) of the *Regulations*]
- (11) In accordance with 40 *CFR* Part 63 Subpart JJJJJJ (National Emission Standards for Hazardous Air Pollutants: Industrial, Commercial and Institutional Boilers at area sources), the Permittee shall comply with the following requirements, as applicable, for coal, oil and wood fired boilers as well as all other applicable requirements of this regulation.
- (a) Biennial tune-ups of the boiler(s) as required by 40 *CFR* §63.11223. For boilers installed prior to June 4, 2010 the first tune-up is required by March 21, 2014. Subsequent tune-ups must be completed no later than 25 months after the prior tune-up.
- (b) A one-time energy assessment of the boilers as well as any required energy use systems at the Facility as required by 40 *CFR* §63.11201(b). The energy assessment must be completed by March 21, 2014.
- (c) Notification, reporting and recordkeeping requirements as specified in §63.11225. This includes:
- (i) §63.11225(a)(2): Initial Notification:
- a. For boilers installed prior to June 4, 2010 the initial notification must be sent to the EPA no later than January 20, 2014.
- (ii) §63.11225(a)(4): Notification of Compliance Status:
- a. Notification of the initial tune-up of the boiler must be submitted no later than 120 days after the initial tune-up compliance date of March 21, 2014.
- b. Notification of the completion of the energy assessment must be submitted no later than July 19, 2014
- (iii) §63.11225(b): Annual Compliance Certification:
- a. By March 1 of each year, prepare, and submit to the delegated authority upon request, an annual compliance certification report for the previous calendar year. For boilers that are subject only to a requirement to conduct a biennial or 5-year tune-up and are not subject to emission limits or operating limits, you may prepare only a biennial or 5-year compliance report.

## (12) Pre-catalyzed type coatings (sealers and lacquers):

- (a) The Permittee may only use pre-catalyzed coatings that have a free formaldehyde content not to exceed 0.01% by weight, as applied.
- (b) The annual usage of pre-catalyzed coatings shall not exceed a combined 55,000 gallons per year.
- (c) The annual average emission rate of formaldehyde from pre-catalyzed coatings shall not to exceed 0.043 pounds per eight hours.

[§5-261(3) of the *Regulations*] [Application for #AP-99-011]

(13) Diesel Engines: The Permittee shall not install or operate a stationary reciprocating internal combustion engine, as defined in the *Regulations*, unless the engine complies with §5-271 of the *Regulations* as may be applicable as well as any federal regulations including NSPS Subpart IIII and NESHAP ZZZZ, as may be applicable. All engines, including emergency engines, installed on or after July 1, 2007 must comply with the applicable emission standards (Tier 2) of §5-271 immediately upon installation. Installation of any size engine, even those below 450 bhp, may still require approval from the Agency in the form of an amended permit prior to installation. Stationary reciprocating internal combustion engines include those used to power electric generator sets or to provide shaft power for other equipment such as compressors but does not include engines used to power motor vehicles. [§§5-271 and 5-501 of the *Regulations*] [40 CFR Part 60 Subpart IIII and Part 63 Subpart ZZZZ]

(14) Solvent Metal Cleaning: The Permittee shall operate any cold, solvent metal cleaning units (e.g. parts cleaners) in accordance with the following requirements and shall only use a solvent with a vapor pressure equal to or less than 0.3 pounds per square inch measured at 1000F, which includes but is not limited to the Safety-Kleen 105 hydrocarbon solvent. Prior to the Permittee using any solvent with a maximum true vapor pressure greater than 0.3 psi or using a solvent that is heated, the Permittee shall notify the Agency and comply with any additional applicable requirements of §5-253.14 of the *Regulations*.

- (a) Provide a permanent, legible, conspicuous label, summarizing the operating requirements;
- (b) Store waste solvent in covered containers;
- (c) Close the cover whenever parts are not being handled in the cleaner;
- (d) Drain the cleaned parts until dripping ceases;
- (e) Supply a solvent spray, if used, that ensures a solid fluid stream at a pressure that does not exceed ten (10) pounds per square inch gauge;
- (f) Degrease only materials that are neither porous nor absorbent; and
- (g) Cease operation of the unit upon the detection of any visible solvent leak until such solvent leak is repaired.

[10 V.S.A. §§556(c) and 556a(d)] [§5-253.14 of the *Regulations*]

(15) Open Burning: The Permittee shall burn only natural wood in any open burn pile and shall only burn in accordance with this Permit and the *Regulations*. For the purposes of this Permit, natural wood shall be defined as trees, including logs, boles, trunks, branches, limbs, and stumps, lumber including timber, logs or slabs, especially when dressed for use. This definition shall also include pallets which are used for the

shipment of various materials so long as such pallets are not chemically treated with any preservative, paint, or oil. This definition shall not extend to other wood products such as sawdust, plywood, particle board and press board. Prior to conducting any open burning of natural wood, the Permittee shall notify the Air Pollution Control Officer and shall obtain approval from the Air Pollution Control Officer to conduct open burning at the Facility, if required. [§5-202 of the *Regulations*]

**- Operational Limitations –  
[From Wood Furniture Manufacturing Rule]**

- (16) **Work Practice Implementation Plan:** The Permittee shall prepare, maintain and adhere to a written work practice implementation plan that defines environmentally desirable work practices for each wood furniture manufacturing operation and for all other finishing, gluing, cleaning and washoff operations at the source and addresses each of the work practice standards presented in §5-253.16(d)(2) through (11) of the *Regulations*. [§§5-253.16(d)(1 through 11) and 5-261(2) of the *Regulations*] [40 CFR Part 63, Subpart JJ]
- (17) **Operator Training Course:** The Permittee shall train all new and existing personnel, including contract personnel, who are involved in finishing, gluing, cleaning, and washoff operations or implementation of the requirements of this rule. All new personnel shall be trained upon hiring. All personnel shall be given refresher training annually. The owner or operator shall maintain a copy of the training program with the work practice implementation plan. The training program shall include, at a minimum, the following:
- (a) A list of all current personnel by name and job description that are required to be trained;
  - (b) An outline of the subjects to be covered in the initial and refresher training for each position or group of personnel;
  - (c) Lesson plans for courses to be given at the initial and the annual refresher training that include, at a minimum, appropriate application techniques, appropriate cleaning and washoff procedures, appropriate equipment setup and adjustment to minimize finishing material usage and overspray, and appropriate management of cleanup wastes; and
  - (d) A description of the methods to be used at the completion of initial or refresher training to demonstrate and document successful completion.
- [§§5-253.16(d)(2) and 5-261(2) of the *Regulations*] [40 CFR Part 63, Subpart JJ]
- (18) **Inspection and Maintenance Plan:** The Permittee shall prepare, maintain and adhere to a written equipment leak inspection and maintenance plan that specifies:
- (a) A minimum visual inspection frequency of once per month for all equipment used to transfer or apply coatings, adhesives, or organic solvents;
  - (b) An inspection schedule;
  - (c) Methods for documenting the date and results of each inspection and any repairs that were made;

- (d) The timeframe between identifying the leak and making the repair, which adheres, at a minimum, to the following schedule:
- (i) A first attempt at repair (e.g., tightening of packing glands) shall be made no later than five calendar days after the leak is detected; and
  - (ii) Final repairs shall be made within 15 calendar days after the leak is detected, unless the leaking equipment is to be replaced by a new purchase, in which case repairs shall be completed within three months.

[§§5-253.16(d)(3) and 5-261(2) of the *Regulations*] [40 CFR Part 63, Subpart JJ]

- (19) Cleaning and Washoff Solvent Accounting System: The Permittee shall develop and use an organic solvent accounting form to record:
- (a) The quantity and type of organic solvent used each month for washoff and cleaning;
  - (b) The number of pieces washed off, and the reason for the washoff; and
  - (c) The quantity of spent organic solvent generated from each washoff and cleaning operation each month, and whether it is recycled onsite or disposed offsite.

[§§5-253.16(d)(4) and 5-261(2) of the *Regulations*] [40 CFR Part 63, Subpart JJ]

- (20) Chemical Composition of Cleaning and Washoff solvents: The Permittee shall not use cleaning or washoff solvents that contain any of the pollutants listed in Table 4 of 40 CFR, Part 63, Subpart JJ in concentrations subject to MSDS reporting as required by OSHA. [§§5-253.16(d)(5) and 5-261(2) of the *Regulations*] [40 CFR Part 63, Subpart JJ]

- (21) Spray Booth Cleaning: The Permittee shall not use compounds containing more than 8.0 percent by weight of VOC for cleaning spray booth components other than conveyors, continuous coaters and their enclosures, or metal filters. However, when the spray booth coating or other protective material used to cover the booth is being replaced, the owner or operator shall use no more than 1.0 gallon of organic solvent per booth to prepare the surface of the booth prior to applying the booth coating. [§§5-253.16(d)(6) and 5-261(2) of the *Regulations*] [40 CFR Part 63, Subpart JJ]

- (22) Storage Requirements: The Permittee shall use normally closed containers for storing finishing, gluing, cleaning, and washoff materials. [§§5-253.16(d)(7) and 5-261(2) of the *Regulations*] [40 CFR Part 63, Subpart JJ]

- (23) Application Equipment Requirements: The Permittee shall not use conventional air spray guns to apply finishing materials, except when all emissions from the finishing application station are routed to a functioning control device. [40 CFR Part 63, Subpart JJ §63.803(h)]

- (24) Line Cleaning: The Permittee shall pump or drain all organic solvent used for line cleaning into a normally closed container. [§§5-253.16(d)(9) and 5-261(2) of the *Regulations*] [40 CFR Part 63, Subpart JJ]

- (25) Gun Cleaning: The Permittee shall collect all organic solvent used to clean spray guns into a normally closed container. [§§5-253.16(d)(10) and 5-261(2) of the *Regulations*] [40 CFR Part 63, Subpart JJ]

- (26) Washoff Operations: The Permittee shall control emissions from washoff operations by:
- (a) Using normally closed tanks for washoff; and
  - (b) Minimizing dripping by tilting or rotating the part to drain as much solvent as possible.

[§§5-253.16(d)(11) and 5-261(2) of the Regulations] [40 CFR Part 63, Subpart JJ]

- (27) The Permittee shall continue to explore, and implement where feasible, reformulation of coatings to reduce all HAC emissions which are in excess of their respective Action Level with the emphasis on minimizing those HACs with the lowest respective Action Levels (i.e. higher toxicity). The Permittee shall also continue the use of high solids "hot spray" coating technologies where feasible including application of topcoats and sealers. The Permittee shall also continue the use of the UV rollcoat technology where feasible including portions of parts where the highest quality finishes are not necessary. The Permittee shall demonstrate compliance with this condition by submitting to the Agency annually as part of its Annual Compliance Certification (1) a listing of coating HAC emissions in excess of their respective Action Level and the respective emission in pounds per year for the current year and two years prior, (2) a discussion of any measures implemented, including coating reformulations, in the current year and its effect on those HACs in excess of their respective Action Level, and (3) a statement affirming continued use where feasible of the hot spray and UV rollcoating measures, or their equivalent. [10 V.S.A. §§556(c) and 556a(d)] [§§5-261(3) and 5-1015(a)(1) of the Regulations]

**- Emission Limitations -**

- (28) Particulate Matter [Boilers]: Emissions of particulate matter from the Facility boilers shall not exceed the following limits:

| Particulate Matter Emission Limitations |   |                       |
|---|---|-----------------------|
| Boiler                                  | Emission Limitations  |                       |
|   | gr/dscf or lbs/MMBTU <sup>1</sup>                                 | lbs/hour <sup>2</sup> |
| Bigelow #240                            | 0.45 gr/dscf  | --                    |
| Wickes #239                             | 0.45 gr/dscf wood <sup>3</sup><br>0.33 lbs/MMBTU oil <sup>3</sup> | --<br>8.2 oil         |
| Bigelow #232                            | 0.37 lbs/MMBTU  | 7.2                   |
| Cleaver-Brooks #238                     | 0.35 lbs/MMBTU  | 7.4                   |
| Dravo Furnace                           | 0.5 lbs/MMBTU   | 1.3                   |

<sup>1</sup> gr/dscf equals grains of pollutant emitted per dry standard cubic foot of undiluted exhaust gas corrected to 12% carbon dioxide and lbs/MMBTU equals pounds of pollutant emitted per million British Thermal Units of heat input.

<sup>2</sup> lbs/hour equals pounds of pollutant emitted per hour based on the MMBTU/hr rating of the unit as given in Findings of Fact A.

<sup>3</sup> The wood emission limit shall apply when wood comprises 50% or more of the heat input to the boiler and the oil emission limit shall apply when oil comprises greater than 50% of the heat input to the boiler.

Any emission testing conducted to demonstrate compliance with the above emission limits shall be performed in accordance with 40 *CFR* Part 60, Appendix A, Reference Method 5 or an alternative method which has been published in 40 *CFR*, provided the federally approved alternative method has been accepted in writing by the Agency before testing. [10 V.S.A. §§556(c) and 556a(d)] [§§5-231(3) and 5-404 of the *Regulations*]

- (29) **Particulate Matter [Wood Waste Dust Collection Systems]:** Emissions of particulate matter from the Facility wood waste dust collection systems shall not exceed the following limits:

| <b>Particulate Matter Emission Limitations</b> |                      |  |
|--|----------------------|--|
| Unit Make (or equivalent)                      | Emission Limitations |  |
|  | gr/dscf <sup>1</sup> | lbs/hour <sup>2</sup>                      |
| System A – MAC #2                              | 0.02                 | 8.7  |
| System A – Pneumafil #1                        | 0.06                 | 18.1                                       |
| System A – Cyclone #5                          | 0.06                 | 29.9                                       |
| System B – MAC #1                              | 0.02                 | 5.4  |
| System B – Pneumafil #4                        | 0.02                 | 8.4  |
| UV Flat Line Sander Pneumafil #3               | 0.02                 | 5.3 and 5,000 hours per year max operation |
| Sawmill/Grinding Room Fabric Filter #9         | 0.06                 | 1.4  |
| Main Plant Grinding Room Cyclone #1            | 0.06                 | 1.5  |

<sup>1</sup> gr/dscf equals grains of pollutant emitted per dry standard cubic foot of undiluted exhaust gas.

<sup>2</sup> lbs/hour equals pounds of pollutant emitted per hour based on the air flow rates as given in Findings of Fact A.

Any emission testing conducted to demonstrate compliance with the above emission limits shall be performed in accordance with 40 *CFR* Part 60, Appendix A, Reference Method 5 or an alternative method which has been published in 40 *CFR*, provided the federally approved alternative method has been accepted in writing by the Agency before testing. [10 V.S.A. §§556(c) and 556a(d)] [§§5-231(1)(b) and 5-404 of the *Regulations*] [application for #AP-01-043 and AOP-04-005]

- (30) **Visible Emissions [Facility Wide]:** Emissions of visible air contaminants from any installation at the Facility, except where otherwise noted in this Permit, shall not exceed twenty (20) percent opacity for more than a period or periods aggregating six (6) minutes in any hour and at no time shall visible emissions exceed sixty (60) percent opacity.

Any emission testing conducted to demonstrate compliance with the above emission limits shall be performed in accordance with 40 *CFR* Part 51, Appendix M, Methods 203B and 203C, respectively, or equivalent methods approved in writing by the Agency. [§§5-211(2), 5-211(3) and 5-404 of the *Regulations*]

- (31) Visible Emissions [Specific Installations prior to April 30, 1970]: Emissions of visible air contaminants from the Bigelow Boiler #240 and the Wickes Boiler #239 and any other installation at the Facility installed prior to April 30, 1970 shall not exceed forty (40) percent opacity for more than a period or periods aggregating six (6) minutes in any hour and at no time shall visible emissions exceed sixty (60) percent opacity.

Any emission testing conducted to demonstrate compliance with the above emission limits shall be performed in accordance with 40 *CFR* Part 51, Appendix M, Methods 203B and 203C, respectively, or equivalent methods approved in writing by the Agency. [§§5-211(1), 5-211(3) and 5-404 of the *Regulations*]

- (32) Fugitive Emissions: The Permittee shall take reasonable precautions at all times to control and minimize emissions of fugitive particulate matter from the operations at the Facility. This shall include but not be limited to the following:
- (a) Taking precautions to prevent fugitive particulate matter (i.e. wood dust) during the handling and disposal of the wood waste material collected from the wood processing operations. Any drop loading of wood waste material from a silo, storage bin or similar unit into a receiving vehicle or trailer for subsequent removal shall be done in an area enclosed on at least three sides in order to prevent wind currents from re-entraining the material or its equivalent. The Agency may require additional dust control measures to ensure compliance, such as requiring an enclosed chute or stocking be used to limit the drop distance, based on Agency inspections of the actual operations; and
  - (b) The use of wet suppression, calcium chloride applications or other dust control measures as necessary to minimize fugitive dust from all unpaved roads and traffic areas at the Facility;

[10 V.S.A. §§556(c) and 556a(d)] [§5-231(4) of the *Regulations*]

- (33) Hazardous Air Pollutants: Emission of federally regulated hazardous air pollutants (HAPs) from the Facility shall not equal or exceed ten (10) tons per year of any single HAP or twenty-five (25) tons per year of all HAPs combined per year based on any rolling twelve (12) consecutive calendar month period. [40 *CFR* Part 63] [§5-1015(a)(1) of the *Regulations*][AOP-04-005]
- (34) Hazardous Air Contaminants: Emissions of state hazardous air contaminants (HACs) from the applicable operations at the Facility shall not equal or exceed their respective Action Level (found in Appendix C of the *Regulations*) unless the Agency has reviewed and approved such HAC emission under §5-261 of the *Regulations*. [§5-261 of the *Regulations*]

- (35) Hazardous Air Contaminants: Emissions of the following hazardous air contaminants shall not exceed the following limits:

| <b>Hazardous Air Contaminant Emission Limitations</b> |            |   |
|---|------------|---|
| Hazardous Air Contaminant                             | CAS #      | Emission Limitation lbs/year <sup>1</sup> |
| Crystalline silica                                    | 14808-60-7 | 56  |
| Isobutyl acetate                                      | 110-19-0   | 101,080                                   |
| Methyl amyl ketone                                    | 110-43-0   | 103,474                                   |
| Butyl propasol  | 5131-66-8  | 5,825                                     |
| Isobutanol  | 78-83-1    | 22,238                                    |

<sup>1</sup> lbs/year equals pounds of pollutant emitted per rolling twelve (12) consecutive calendar month period.

[10 V.S.A. §§556(c) and 556a(d)] [§5-261(3) of the *Regulations*]

- (36) Nuisance and Odor: The Permittee shall not discharge, cause, suffer, allow, or permit from any source whatsoever such quantities of air contaminants or other material which will cause injury, detriment, nuisance or annoyance to any considerable number of people or to the public or which endangers the comfort, repose, health or safety of any such persons or the public or which causes or has a natural tendency to cause injury or damage to business or property. The Permittee shall not discharge, cause, suffer, allow, or permit any emissions of objectionable odors beyond the property line of the premises. [§5-241(1) and (2) of the *Regulations*]

**- Emission Limitations –  
[from Wood Furniture Manufacturing Rule]**

- (37) The Permittee shall limit VOC emissions from wood furniture manufacturing operations by:
- (a) Using only topcoats containing no more than 1.8 lbs VOC/lb solids, as applied, and sealers containing no more than 1.9 lbs VOC/lb solids, as applied, or the equivalent;
  - (b) Using acid-cured alkyd amino vinyl sealers containing no more than 2.3 lbs VOC/lb solids, as applied, and acid-cured alkyd amino conversion varnish topcoats containing no more than 2.0 lbs VOC/lb solids, as applied, or the equivalent; and
  - (c) Using only strippable spray booth coatings containing no more than 0.8 lbs VOC/lb solids, as applied.

[§5-253.16(c)(1) of the *Regulations*]

- (38) The Permittee shall limit formaldehyde emissions from all wood furniture manufacturing operations at the Facility by:
- (a) Limiting total formaldehyde use in coatings and contact adhesives to no more than 400 pounds per rolling 12 month period, or
  - (b) Using coatings and contact adhesives only if they are low-formaldehyde coatings and adhesives in any wood furniture manufacturing operations. *Low-formaldehyde* means, in the context of a coating or contact adhesive, a product concentration of less than or equal to 1.0 percent formaldehyde by weight, as described in a certified product data sheet for the material.

[40 CFR Part 63, Subpart JJ §63.802(a)(4)]

- (39) The Permittee shall limit VHAP emissions from wood furniture manufacturing operations by:
- (a) Using only stains, washcoats, sealers, topcoats, basecoats and enamels with VHAP contents of no more than 1.0 lbs VHAP/lb solids, as applied; thinners for stains, sealers and topcoats that contain no more than 10% VHAP by weight; and thinners for washcoats, basecoats and enamels that contain no more than 3% VHAP by weight; or the equivalent;
  - (b) Limit VHAP emissions from contact adhesives by achieving a VHAP limit for contact adhesives based on the following criteria:
    - (i) For foam adhesives used in products required to meet flammability requirements, the VHAP content of the adhesive shall not exceed 1.8 lb VHAP/lb solids, as applied; or
    - (ii) For all other contact adhesives, the VHAP content of the adhesive shall not exceed 1.0 lb VHAP/lb solids, as applied, or the equivalent.

[§5-253.16(c)(2) of the Regulations] [40 CFR Part 63, Subpart JJ]

#### - Compliance Testing and Monitoring -

- (40) The Permittee shall perform emission testing on the Bigelow and Wickes wood fired boilers for NO<sub>x</sub>, PM, and Combustion Efficiency and shall furnish the Agency with a written report of the results within thirty (30) days after the completion of the testing. The conditions in this section of the Permit are not to be considered continuous air monitoring requirements. The emission testing shall be performed at a minimum once every five years, with the next test due in 2016. The emission testing shall be performed in order to demonstrate compliance with the emission limitations specified within the conditions of this Permit. At least thirty (30) days prior to performing the emission testing required above, the Permittee shall submit to the Agency a pretest report prepared in accordance with the Agency's "Source Emission Testing Guidelines". [§§5-402, 5-404(1), 5-405(1) and 5-1015(a)(3) and (4) of the Regulations]
- (41) Boiler O&M: The Permittee shall continue to implement an operation and maintenance (O&M) plan for its boilers. The purpose of said plan shall be to ensure that the boilers remain in continuous compliance with the applicable requirements contained in this Permit. The O&M plan shall include, but not be limited to:

- (a) Methods for determining the combustion efficiency trigger level for each affected wood fired boiler. The trigger level shall be based on a minimum of twelve (12) combustion efficiency tests performed during operating conditions representative of the typical operating range of the respective boiler. Two trigger levels may be established by the Permittee to represent winter and summer conditions. The initial combustion efficiency trigger level shall be established within 180 days after the issuance of this Permit. The trigger level may be established by the Permittee using hand held instrumentation or other methods acceptable to the agency;
- (b) The procedures to be followed to increase combustion efficiency whenever the combustion efficiency is determined to be less than the trigger level. The procedures may be in the format of a troubleshooting guide for operators;
- (c) Descriptions of routine maintenance and inspection procedures;
- (d) Provisions for maintaining records of maintenance and inspection procedures, including both routine activities and actions taken in response to observations of low combustion efficiency; and
- (e) Provisions for calibration and maintenance of any testing instruments and/or equipment used to measure the concentrations of CO<sub>2</sub> and CO in the boiler exhaust gases. Oxygen sensors or other methods for testing may be used if acceptable to the Agency and if considered to be appropriate and adequate methods for use in the wood burning combustion systems.

Although not considered continuous air monitoring, failure to take reasonable steps in accordance with said plan to increase the combustion efficiency once it has fallen below the trigger level, may be considered credible evidence of an exceedance of the opacity and particulate emission limits set forth in this Permit. However, exceeding the trigger level itself would not be considered a violation. Said O&M plan shall be present at the Facility at all times and shall be made available to representatives of the Agency upon request. The Permittee shall revise this plan at the Agency's request or on its own motion based on operating experience, or to reflect equipment or operational changes. All O&M Plan modifications are subject to Agency review and shall not be implemented until the Permittee has received written approval from the Agency. [10 V.S.A. §§556(c) and 556a(d)] [§§5-405(1) and 5-1015(a)(4) of the *Regulations*]

- (42) Boiler Combustion Efficiency: The Permittee shall perform periodic combustion efficiency testing of the Bigelow Boiler #240 and the Wickes Boiler #239 by measuring the concentrations of carbon dioxide ("CO<sub>2</sub>") and carbon monoxide ("CO") in the exhaust gases or other Agency approved parameters. The initial test shall be performed within 90 days of issuance of this Permit and may include hand held monitors. Said testing shall be performed at least once every two months thereafter. The Permittee shall perform said testing of the CO<sub>2</sub> and CO concentrations, or other Agency approved parameters, using methods which have been approved in writing in advance by the Agency. The CO<sub>2</sub> and CO concentrations may be on a wet or dry basis as long as they are both on the same basis. Any instruments and/or equipment used for said testing shall be calibrated and maintained in accordance with the manufacturer's recommendations. Each time testing of the boiler exhaust gas is conducted to determine the concentrations of CO<sub>2</sub> and CO, the Permittee shall calculate and record the combustion efficiency of the boiler using methods approved in writing in advance by the Agency. For the purposes of this Permit, combustion efficiency shall be determined using the following equation, unless an alternative method is approved by the Agency:

$$CE (\%) = \frac{CO_2}{CO_2 + CO} \times 100$$

Where;

CE = Combustion efficiency,

CO<sub>2</sub> = % by volume of carbon dioxide in the flue gas, and

CO = % by volume of carbon monoxide in the flue gas.

[§§5-404(1), 5-405(1) and 5-1015(a)(3) and (4) of the *Regulations*]

- (43) General O&M [Wood Waste Dust Collection System Fabric Filters]: The Permittee shall continue to implement an operation and maintenance plan for the wood waste dust collection system fabric filters. The purpose of said plan shall be to ensure that the fabric filters remain in continuous compliance with the conditions of this Permit. The operation and maintenance plan shall include, but not be limited to, a description of routine maintenance and inspection procedures, provisions for maintaining records of such maintenance and inspections as well as findings of those inspections and any corrective actions which were taken. Said operation and maintenance plan shall be present at the facility at all times and shall be made available to representatives of the Agency upon request. The Permittee shall revise this plan at the Agency's request or on its own motion to reflect equipment or operational changes. [10 V.S.A. §§556(c) and 556a(d)] [§5-405(1) of the *Regulations*]

**- Continuous Assurance Monitoring -**

(44) Compliance Assurance Monitoring (CAM) - Particulate Matter:

(a) MAC #2 Baghouse: Finish Mill Sanding

| Compliance Assurance Monitoring (CAM) – Particulate Matter |  |   |
|--|--|---|
| Indicator  | Triboelectric signal   |   |
| Measurement Approach                                       | A triboelectric monitor is installed at the baghouse exhaust. An alarm will sound when the signal remains over a preset limit for 15 seconds to indicate a broken filter bag.  |   |
| Indicator Range  | An excursion is defined as a triboelectric signal greater than 70 percent of scale for 15 seconds. Excursions trigger an inspection, corrective action and reporting requirement. A triboelectric signal of zero during process operation will trigger an investigation for control device bypass. |   |
| Performance Criteria                                       | Data Representativeness  | The data are collected at the emission point – the probe is located inside the baghouse exhaust duct. The triboelectric signal is directly proportional to the amount of particulate in the exhaust if the factors such as velocity and particle size remain relatively constant. |
|  | Verification of Operational Status   | NA  |
|  | QA/QC Practices and Criteria   | The triboelectric probe is inspected periodically (at least quarterly) for dust buildup. The monitor has automatic internal calibration function for the electronics.   |
|  | Monitoring Frequency   | The triboelectric signal is monitored continuously.   |
|  | Data Collection Procedures   | One hour of data are displayed on the monitor in the boiler control room at 2 second intervals. When an alarm occurs (signal over 70% for 15 seconds), it is logged electronically. Six-minute averages are also archived on the computer network as a historical data record.    |

**- Record Keeping and Reporting -**

- (45) Records of Fuel Use: The Permittee shall maintain records of the total quantity of wet/green wood, dry wood and fuel oil consumed in the combined boilers each month. The quantity of wet/green wood and dry wood shall be recorded separately and in units of tons as fired, including the weight of moisture. The quantity No.2 and No.4 fuel oils shall also be recorded separately in units of gallons of No.2 fuel oil and gallons of No.4 fuel oil. At the beginning of each month, the Permittee shall calculate the total quantity of each fuel consumed in the boilers during the previous twelve (12) consecutive month period. [10 V.S.A. §§556(c) and 556a(d)] [§§5-405(1) and 5-1015(a)(3) and (4) of the *Regulations*]
- (46) Records of NO<sub>x</sub> Emissions: Based on the above fuel usage records and the equation contained in condition (7) of this Permit, the Permittee shall calculate and record at the beginning of each month the quantity of NO<sub>x</sub> emitted from the Facility boilers for the previous twelve (12) consecutive calendar month period. [10 V.S.A. §§556(c) and 556a(d)] [§§5-405(1) and 5-1015(a)(3) and (4) of the *Regulations*]
- (47) Records of HAC Emissions: The Permittee shall calculate and record at the beginning of each month the quantity of each hazardous air contaminant identified in condition (35) of this Permit emitted from the Facility finishing operations for the previous twelve (12) consecutive calendar month period. [10 V.S.A. §§556(c) and 556a(d)] [§§5-261, 5-405(1) and 5-1015(a)(3) and (4) of the *Regulations*]
- (48) Records of Combustion Efficiency Testing: The Permittee shall maintain records of the results of the combustion efficiency testing conducted on the respective boilers. These records shall at a minimum include the test date, identification of the boiler tested, a measurement of the load on the boiler (such as fuel feed rate or steam production rate), the concentrations of oxygen (if available), carbon monoxide and carbon dioxide in the exhaust gas as well as the calculated combustion efficiency. [10 V.S.A. §§556(c) and 556a(d)] [§§5-405(1) and 5-1015(a)(3) and (4) of the *Regulations*]
- (49) Records of Fuel Oil Certifications: The Permittee shall obtain from the fuel supplier, for each shipment of fuel oil received at the Facility, a certification or invoice stating the sulfur content of the fuel oil. The certification or invoice shall include the name of the fuel oil supplier, date of delivery, fuel type, quantity of fuel oil delivered, and a statement from the fuel oil supplier that the oil complies with the specifications for fuel oil numbers 1 or 2 as defined by the American Society of Testing and Materials in ASTM D396, "Standard Specifications for Fuel Oils" or for deliveries of No.4 oil, a statement as to the sulfur content of the fuel oil in percent sulfur by weight. [10 V.S.A. §§556(c) and 556a(d)] [§5-405(1) of the *Regulations*]
- (50) Records of Finishing Material Usage: The Permittee shall maintain records of the following:
- (a) A certified product data sheet for each coating, finishing material, thinner, contact adhesive, and strippable spray booth coating used at the source;
  - (b) The VHAP content in lb VHAP/lb solids, as applied, of each finishing material, thinner, and contact adhesive used at the source;
  - (c) The formaldehyde content, in lb/gal, as applied, of each finishing material and contact adhesive subject to the emission limits in Condition (38)(a).

- (d) The VOC content in lb VOC/lb solids, as applied, of each topcoat, sealer, and strippable spray booth coating used at the source;
- (e) The quantity of each finishing material, thinner, contact adhesive, and strippable spray booth coating used at the source each month; and
- (f) For stationary sources demonstrating compliance with the emission limitations of §5-253.16 of the *Regulations* through monthly averaging, the averaging calculation completed in accordance with the following equation, as applicable, for each month.

$$E_{HAPorVOC} = \frac{\sum_{i=1}^n M_i C_i}{\sum_{i=1}^n M_i}$$

Where:

- $E_{HAPorVOC}$  = the average HAP or VOC content of the finishing material, in lbs HAP or VOC/lb solids;
- $C$  = the HAP or VOC content of a particular finishing material, in lbs HAP or VOC/lb solids, as applied;
- $M$  = the mass of solids, in pounds, in a particular finishing material used during the monthly averaging period.

[10 V.S.A. §§556(c) and 556a(d)] [§§5-253.16(e-f), 5-405(1) and 5-1015(a)(3) and (4) of the *Regulations*] [40 CFR Part 63, Subpart JJ]

- (51) Records of Work Practice Implementation Plan Requirements: The Permittee shall maintain records of the work practice implementation plan and all records associated with fulfilling the requirements of that plan, including, but not limited to:
  - (a) Records demonstrating that the operator training program is in place;
  - (b) Records collected in accordance with the inspection and maintenance plan;
  - (c) Records associated with the cleaning solvent accounting system;
  - (d) Records associated with the limitation on the use of conventional air spray guns showing total finishing material usage and the percentage of finishing materials applied with conventional air spray guns for each semiannual period; and
  - (e) Copies of documentation such as logs developed to demonstrate that the other provisions of the work practice implementation plan are followed.

[10 V.S.A. §§556(c) and 556a(d)] [§§5-253.16(f)(8), 5-405(1) and 5-1015(a)(3) and (4) of the *Regulations*] [40 CFR Part 63, Subpart JJ]

- (52) Records of Precatalyzed Coatings: The Permittee shall maintain records of the monthly usage of pre-catalyzed sealer and pre-catalyzed lacquer at the Facility, in units of gallons. At the beginning of each month, the Permittee shall calculate the total quantity of pre-catalyzed coatings used at the Facility, in units of gallons, during the previous twelve (12) consecutive month period. [10 V.S.A. §§556(c) and 556a(d)] [§5-405(1) of the *Regulations*]
- (53) Records of all required compliance testing, including combustion efficiency testing, shall include the following:
- (a) the date, place, and time of sampling or measurements;
  - (b) the date analyses were performed;
  - (c) the company or entity that performed the analyses;
  - (d) the analytical techniques or methods used;
  - (e) the results of all such analyses; and
  - (f) the operating conditions existing at the time of sampling or measurement.  
[§§5-402(1), 5-405(1) and 5-1015(a)(5) of the *Regulations*]
- (54) All records shall be retained for a minimum period of five (5) years from the date of record and shall be made available to the Agency upon request. [§§5-402, 5-405(1) and 5-1015(a)(7) of the *Regulations*]
- (55) Semi-Annual Periodic Monitoring Reports: Within thirty (30) days after July 1 and January 1 of each year, the Permittee shall submit to the Agency a report, signed by a responsible official of the Facility, containing the following information regarding the preceding six (6) months:
- (a) a summary of the fuel usage records required by this Permit;
  - (b) a summary of the NOx emission calculations as required by this Permit;
  - (c) a summary of the periodic combustion efficiency calculations required by this Permit;
  - (d) a statement of the sulfur content of any and all fuel delivered to the Facility during the reporting period;
  - (e) For stationary sources demonstrating compliance with the emission limitations of §5-253.16 of the *Regulations* through the use of compliant coatings, a statement that compliant coatings and thinners have been used each day in the semiannual reporting period;
  - (f) For stationary sources demonstrating compliance with the emission limitations of §5-253.16 of the *Regulations* through monthly averaging, the averaging calculations completed in accordance with §5-253.16, as applicable, for each month within the semiannual reporting period and a statement that the source is in compliance with the respective standard;
  - (g) For stationary sources demonstrating compliance with §5-253.16 of the *Regulations* through the use of compliant contact adhesives, a statement that compliant contact adhesives have been used each day in the semiannual reporting period;
  - (h) A statement that compliant strippable spray booth coatings have been used each day in the semiannual reporting period;
  - (i) A statement that the work practice implementation plan is being followed; and
  - (j) If the stationary source was in violation of any provision of §5-253.16 of the *Regulations*, the measures taken to bring the source into compliance.  
[§§5-402, 5-405(1) and 5-1015(a)(5) of the *Regulations*]

- (56) Annual Compliance Certification: By February 1st of each year, the Permittee shall submit an annual certification of compliance signed by a responsible official of the Facility, which ascertains and identifies the compliance status of the Facility with respect to all terms and conditions of this Permit over the past calendar year, including but not limited to the following:
- (a) Identification of each term or condition of the permit that is the basis of the certification;
  - (b) The compliance status;
  - (c) Whether compliance was continuous or intermittent;
  - (d) The methods used for determining the compliance status of the Facility over the reporting period;

A copy of the compliance certification shall also be sent to the U.S. Environmental Protection Agency at the following address:

Air Compliance Clerk  
U.S. EPA-New England  
5 Post Office Sq. Suite 100 (OES04-2)  
Boston, MA 02109-3912

[§114(a)(3) of the CAA] [§§5-402 and 5-1015(a)(11) of the *Regulations*]

- (57) The Permittee shall notify the Agency in writing within ten (10) days of any violation, of which it is aware, of any requirements of this Permit. This notification shall include, at a minimum, the cause for the violation and corrective action or preventative maintenance taken to correct the violation. [§§5-402 and 5-1015(a)(6) of the *Regulations*]
- (58) The Permittee shall notify the Agency in writing of any significant proposed physical or operational change at the Facility which may increase the emission rate of any air contaminant to the ambient air regardless of any concurrent emission reductions that may be achieved. If the Agency determines that a permit amendment is required, a new application and the appropriate application fee shall be submitted. The permit amendment shall be obtained prior to commencing any such change except as may otherwise may be allowed by the *Regulations*. [10 V.S.A. §556(c)] [§§5-402 and 5-501 of the *Regulations*]
- (59) Annual Registration: The Permittee shall calculate the quantity of emissions of air contaminants from the Facility annually. If the Facility emits more than five (5) tons of any and all air contaminants per year, the Permittee shall register the source with the Secretary of the Agency (hereinafter "Secretary"), and shall renew such registration annually. Each day of operating a source which is subject to registration without a valid, current registration shall constitute a separate violation and subject the Permittee to civil penalties. The registration process shall follow the procedures set forth in Subchapter VIII of the *Regulations*, including the payment of the annual registration fee on or before May 15 of each year. [Subchapter VIII §§5-802, 5-803, 5-807, 5-808 of the *Regulations*]

- (60) All records, reports, and notifications that are required to be submitted to the Agency by this Permit shall be submitted to:

Agency of Natural Resources  
Department of Environmental Conservation  
Air Quality & Climate Division  
One National Life Drive, Davis Building, Second Floor  
Montpelier, Vermont 05620-3802

[§5-402 of the *Regulations*]

**- Standard Permit Conditions -**

- (61) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Agency which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [10 V.S.A. §§556(c) and 556a(d)]
- (62) These Permit conditions may be suspended, terminated, modified, or revoked for cause and reissued upon the filing of a written request with the Secretary of the Agency (hereinafter "Secretary") or upon the Secretary's own motion. Any modification shall be granted only with the written approval of the Secretary. If the Secretary finds that modification is appropriate, only the conditions subject to modification shall be reopened. The filing of a request for modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated non-compliance does not stay any terms or conditions of this Permit. The Secretary may provide opportunity for public comment on any proposed modification of these conditions. If public comments are solicited, the Secretary shall follow the procedures set forth in 10 V.S.A. §556 and §556a, as amended. [10 V.S.A. §§556(d) and 556a(g)] [§§5-1008(a) and 5-1008(e) of the *Regulations*]
- (63) Cause for reopening, modification, termination and revocation of this Permit includes, but is not limited to:
- (a) Inclusion of additional applicable requirements pursuant to state or federal law;
  - (b) A determination that the permit contains a material mistake or that inaccurate information was used to establish emissions standards or other terms or conditions of the operating permit;
  - (c) A determination that the operating permit must be modified or revoked to ensure compliance with applicable requirements;
  - (d) A determination that the subject source has failed to comply with a permit condition;
  - (e) For Title V subject sources, a determination by U.S. EPA that cause exists to terminate, modify, revoke or reissue an operating permit;
  - (f) Those causes which are stated as grounds for refusal to issue, renew or modify an operating permit under §5-1008(a) of the *Regulations*; or
  - (g) If more than three (3) years remain in the permit term and the source becomes subject to a new applicable requirement.
- [§5-1008(e)(4) of the *Regulations*]
- (64) The Permittee shall furnish to the Agency, within a reasonable time, any information that the Agency may request in writing to determine whether cause exists to modify, revoke, reissue, or terminate the Permit or to determine compliance with this Permit. Upon request, the Permittee shall also furnish to the Agency copies of records required to be kept by this Permit. [10 V.S.A. §§556(c) and 556a(d)] [§5-402 of the *Regulations*] [40 CFR Part 70 §70.6(a)(6)(v)]

- (65) By acceptance of this Permit, the Permittee agrees to allow representatives of the State of Vermont access to the properties covered by the Permit, at reasonable times, to ascertain compliance with Vermont environmental and health statutes and regulations and with this Permit. The Permittee also agrees to give the Agency access to review and copy any records required to be maintained by this Permit, and to sample or monitor at reasonable times to ascertain compliance with this Permit. [10 V.S.A. §§556(c), 556a(d) and 557] [ §§5-402, 5-404, and 5-1015(a)(10) of the *Regulations*]
- (66) All data, plans, specifications, analyses and other information submitted or caused to be submitted to the Agency as part of the application for this Permit or an amendment to this Permit shall be complete and truthful and, for Title V permit applications, certified by a responsible official whose designation has been approved by the Secretary. Any such submission which is false or misleading shall be sufficient grounds for denial or revocation of this Permit, and may result in a fine and/or imprisonment under the authority of Vermont statutes. [10 V.S.A. §§556(c) and 556a(d)] [§§5-505 and 5-1006(f) of the *Regulations*]
- (67) For the purpose of establishing whether or not a person has violated or is in violation of any condition of this Permit, nothing in this Permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. [10 V.S.A. §§556(c) and 556a(d)]
- (68) Any permit noncompliance could constitute a violation of the federal Clean Air Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. [10 V.S.A. §§556(c) and 556a(d)] [§§5-1008(a) and 5-1008(e) of the *Regulations*]
- (69) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this Permit. [10 V.S.A. §§556(c) and 556a(d)]
- (70) No person shall build, erect, install or use any article, machine, equipment or other contrivances, the use of which, without resulting in a reduction in the total release of air contaminants to the atmosphere, reduces or conceals an emission which otherwise would constitute a violation of these *Regulations*. [§5-403 of the *Regulations*]
- (71) The provisions of this Permit are severable. If any provision of this Permit, or its application to any person or circumstances is held invalid, illegal, or unenforceable by a court of competent jurisdiction, the invalidity shall not apply to any other portion of this Permit which can be given effect without the invalid provision or application thereof. [10 V.S.A. §§556(c) and 556a(d)]
- (72) This Permit does not convey any property rights of any sort or any exclusive privilege, nor does it authorize any injury to private property or any invasion of personal rights. [10 V.S.A. §§556(c) and 556a(d)]
- (73) All subsequent owners and/or operators of this Facility must request an amendment and transfer of this Permit prior to commencing any operations covered by this Permit. All subsequent owners and/or operators shall submit to the Agency as part of the request for amendment all such information the Agency deems necessary to establish legal

ownership and/or interest in the property and all such information the Agency deems necessary to ensure the new owners and/or operators will construct and operate the Facility in compliance with the *Regulations* and this Permit. The terms and conditions of this Permit shall remain in full force and effect after submittal of the request for amendment and until the issuance of an amended Permit or denial. Should the Secretary deny the request, the new owner and/or operator must take whatever action is necessary to comply with the denial. [10 V.S.A. §§556 and 556a] [§§5-501, 5-1004, and 5-1013(a) of the *Regulations*]

- (74) Renewable Energy Projects – Right to Appeal to Public Service Board. If this decision relates to a renewable energy plant for which a certificate of public good is required under 30 V.S.A. §248, any appeal of this decision must be filed with the Vermont Public Service Board pursuant to 10 V.S.A. §8506. This section does not apply to a facility that is subject to 10 V.S.A. §1004 (dams before the Federal Energy Regulatory Commission), 10 V.S.A. §1006 (certification of hydroelectric projects) or 10 V.S.A. Chapter 43 (dams). Any appeal under this section must be filed with the Clerk of the Public Service Board within 30 days of the date of this decision; the appellant must file with the Clerk an original and six copies of its appeal. The appellant shall provide notice of the filing of an appeal in accordance with 10 V.S.A. 8504(c)(2), and shall also serve a copy of the Notice of Appeal on the Vermont Department of Public Service. For further information, see the Rules and General Orders of the Public Service Board, available on line at [www.psb.vermont.gov](http://www.psb.vermont.gov). The address for the Public Service Board is 112 State Street, Montpelier, Vermont, 05620-2701 (Tel. # 802-828-2358).
- (75) All Other Projects – Right to Appeal to Environmental Court. Pursuant to 10 V.S.A. Chapter 220, any appeal of this decision must be filed with the clerk of the Environmental Court within 30 days of the date of the decision. The Notice of Appeal must specify the parties taking the appeal and the statutory provision under which each party claims party status; must designate the act or decision appealed from; must name the Environmental Court; and must be signed by the appellant or their attorney. In addition, the appeal must give the address or location and description of the property, project or facility with which the appeal is concerned and the name of the applicant or any permit involved in the appeal. The appellant must also serve a copy of the Notice of Appeal in accordance with Rule 5(b)(4)(B) of the Vermont Rules for Environmental Court Proceedings. For further information, see the Vermont Rules for Environmental Court Proceedings, available on line at [www.vermontjudiciary.org](http://www.vermontjudiciary.org). The address for the Environmental Court is 2418 Airport Road, Suite 1, Barre, VT 05641 (Tel. # 802-828-1660).
- (76) Conditions (1), (3), (4), (12), (29) and (43) are derived from the new source review requirements of Subchapter V of the *Regulations*. With the exception of the cited new source review conditions, this Operating Permit shall expire as indicated on the cover page to this Permit. The Permittee shall submit to the Agency a complete application for renewal of the Operating Permit at least twelve (12) months before the expiration of the Operating Permit. If a timely and administratively complete application for an operating permit renewal is submitted to the Secretary, but the Secretary has failed to issue or deny such renewal before the end of the term of this Operating Permit, then the Permittee may continue to operate the subject source and all terms and conditions of this Operating Permit shall remain in effect until the Secretary has issued or denied the operating permit renewal. However, this Operating Permit shall automatically expire if,

subsequent to the renewal application being determined or deemed administratively complete pursuant to §5-1006 of the *Regulations*, the Permittee fails to submit any additional information required by the Secretary as well as information pertaining to changes to the Facility within thirty (30) days or such other period as specified in writing by the Secretary. [§§5-1011 and 5-1012(a) of the *Regulations*] [§§5-1005(c) and 5-1012 of the *Regulations*]

- (77) The conditions of this Permit as set forth above supersede all conditions contained in all prior Permits issued by the Agency to the Permittee for this Facility. [10 V.S.A. §§556(c) and 556a(d)]

The Agency's issuance of this Air Pollution Control Permit relies upon the data, judgment, and other information supplied by the Permittee. The Agency makes no assurances that the air contaminant source approved herein will meet performance objectives or vendor guarantees supplied to the source Permittee. It is the sole responsibility of the Permittee to operate the source in accordance with the conditions herein and with all applicable state and federal standards and regulations.

Dated this 2<sup>nd</sup> day of May, 2014.

Agency of Natural Resources

David Mears, Commissioner  
Department of Environmental Conservation

By:   
Elaine B. O'Grady, Director  
Air Quality & Climate Division

State of Vermont  
Department of Environmental Conservation  
Air Quality & Climate Division  
One National Life Drive  
Davis (North) Building 2<sup>nd</sup> Floor  
Montpelier, VT 05620-3802  
(802)-828-1288

AGENCY OF NATURAL RESOURCES

May 2, 2014

Larry Corrow  
Ethan Allen Operations, Inc.  
PO Box 217  
Beecher Falls, VT 05902-02175

SUBJECT: Final Title V Air Pollution Control Permit to Construct and Operate: #AOP-10-004  
Wood Furniture Manufacturing and Finishing Facility

Dear Mr. Corrow:

The Vermont Agency of Natural Resources, Department of Environmental Conservation, Air Pollution Control Division ("Agency") has completed its review of Ethan Allen Operations, Inc.'s application for the renewal for the Title V Permit to Operate for the facility located at 1280 VT Route 253 in the town of Beecher Falls, Vermont. The Agency is now issuing a final Air Pollution Control Permit to Construct and Title V Operate.

Consistent with the provisions of 10 V.S.A. §556(e) and for the purposes of reducing the administrative burden of enforcing two separate permits for this Facility, the Agency is incorporating the existing Permit to Construct requirements contained in the prior Air Pollution Control Permit to Construct and Operate (#AOP-04-005) previously issued on May 31, 2006 with the current renewal of the Air Pollution Control Permit to Operate. The result is a combined Air Pollution Control Permit to Construct and Operate which satisfies both the construction permit (10 V.S.A. §556 and Subchapter V of the Regulations) and operating permit (10 V.S.A. §556a and Subchapter X of the Regulations) requirements for your Facility. This combined permit incorporates and supersedes all prior Permit to Construct and/or Operate approvals issued in the past. Please note this permit expires in five (5) years and an application to renew the permit must be filed at least twelve (12) months prior to the date of expiration.

Please feel free to contact me at (802) 522-3526, or by email at the address shown below, if I can be of any further assistance or if you have any questions or comments regarding this matter.

Sincerely,



Steven Snook  
Engineering Services Section  
Air Quality & Climate Division

A2: Ethan Allen Operations, Inc. – Beecher Falls, VT

