



Wood Finishing Industry

Air Pollutants

Wood is coated to protect it from physical and chemical damage and natural degradation, as well as to impart an aesthetically pleasing finish. The coatings traditionally used by the wood finishing industry can contain a large number of solvents that evaporate into the air within the facility and/or are vented outside to the environment.

Through pollution prevention and compliance assistance, the Small Business Technical Assistance Program (SBTAP) can help wood finishers reduce emissions and encourage compliance with environmental requirements to create a healthier environment for workers and improve overall air quality.

To determine if wood finishing operations are subject to air related environmental requirements, wood finishers must estimate or calculate the emissions of volatile organic compounds (VOCs), hazardous air pollutants (HAPs), and regulated toxic air pollutants (RTAPs) from their coating operations. Calculations of air emissions are based on the number of materials that a wood finisher used during the past 12 months. Records of the number of materials used and/or purchased must be maintained. These records should include all materials used in the wood finishing process such as coatings, thinners, solvents used for cleaning spray guns, as well as rags, glues, adhesives, and catalysts.

The SBTAP can help with the emission calculations if the following information is available:

1. Environmental Data Sheets on coatings, thinners, catalysts, etc. that are used for wood finishing activities.
2. Usage amounts over one year (12-months – can consist of purchase records).
3. Air flow of exhaust from the spray booth actual cubic feet per minute (acfm), which should be in owner's manual).
4. Capture efficiency of spray booth exhaust filters (request from filter supplier).
5. Exhaust stack configuration (horizontal/vertical, obstructed/unobstructed).
6. Location in relation to other buildings and property boundary.
7. Spray gun specifications (transfer efficiency – owner's manual/technical specs).

Statewide Permit System

The wood finishing operation would be subject to Statewide Permit System if:

1. **Actual** VOC emissions are greater than or equal to 10 tons per year (tpy) (an annual VOC emission determination is required);
2. **Potential** emissions of HAPs are greater than the thresholds of 10 tpy for any single HAP, or 25 tpy for combined HAPs (a potential HAP emissions determination is required); or
3. **Potential** emissions of VOCs are 50 tpy or more (the potential VOC emissions determination is required).

If the wood finisher meets one or more of the conditions listed in 1 through 3 above, a [State Permit to Operate](#), must be obtained.

The wood finisher may instead choose to limit VOC and HAP emissions to less than the major source thresholds for these pollutants by complying with Limitations on Potential to Emit. The facility must submit a written notification to NHDES or register online, indicating the commitment to operate under the emission caps, maintain recordkeeping requirements, and to vent emissions through a vertical and unobstructed stack.

VOC Reasonably Available Control Technology (RACT)

Wood furniture, burial caskets and gunstock coating are subject to VOC RACT if one of the following is true:

1. Wood furniture coating and finishing operations, including related cleaning activities, have combined theoretical potential VOC emissions (TPEs) during any consecutive 12-month period of 25 tons of VOCs or more;
2. Wood burial casket coating and finishing operations, including related cleaning activities, have combined TPEs during any consecutive 12-month period of 50 tons of VOCs or more; and
3. Wood gunstock coating and finishing operations, including related cleaning activities, have combined TPEs during any consecutive 12-month period of 50 tons of VOCs or more.

Wood finishers coating flat wood paneling are subject to VOC RACT if the combined actual emissions of VOCs, before controls, during any consecutive 12-month period is 3 tons of VOCs or more. Flat wood paneling means any rectangular interior, exterior, or tile board piece of construction material made from trees to which a protective, decorative, or functional material or layer has been applied.

There are additional requirements for these wood finishing sources if the emissions are above the threshold limits listed above. These include training, best management practices, and the VOC content of coatings. Contact SBTAP for assistance.

Regulated Toxic Air Pollutants

In addition to the requirements listed above, wood finishers are subject to Regulated Toxic Air Pollutants (RTAPs), and analyses of the 24-hour and annual emissions of these pollutants must be performed to demonstrate compliance. The facility shall provide documentation of compliance with the ambient air limits to NHDES upon request. Please note that RTAPs are updated every 2 to 3 years, and regardless of whether a permit is required, records sufficient to show compliance with the most recent list of RTAPs and their associated ambient air limits must be kept.

Outdoor Wood Boilers

Effective on July 1, 2017, only commercial outdoor wood boilers qualified by New York State's Energy Research Development Authority may be legally bought, sold or purchased. All outdoor wood boilers that have been legally installed in prior years are grandfathered by the new law and may remain in place; however, they cannot be relocated on the existing property or sold for reinstallation elsewhere.

Facilities must follow all manufacturer requirements for operation and maintenance of the outdoor wood boilers and burn only the grades of pellet fuels, wood or wood chips specific in the owner's manual. Burning of improper fuels are prohibited include commercial garbage, construction or demolition debris, paper products, cardboard, plywood, particleboard, or pressure-treated wood.

Town/City Authority

There may be additional local requirements that may apply, such as zoning, site plan reviews, or local fire and safety regulations. Please contact the town offices to determine those requirements.

To increase your awareness of current and proposed environmental regulations, sign up for [E-News](#). This free service will provide press releases on workshop opportunities, notices of rule changes, and other environmental topics.

This guidance document is intended as an overview only and should not be used without consulting the NHDES Air Program Rules. Contact SBTAP for environmental assistance at (603) 271-1379 or Sara.J.Johnson@des.nh.gov.

Updated: 2023