FACT SHEET

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Good Management Practices for Small Woodworking Manufacturing Facilities

Office of Pollution Prevention and Technical Assistance

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Introduction:

- Furniture manufacturers, refinishing businesses, and furniture repair shops may be subject to regulations for controlling air emissions, managing and disposing used wipes and rags, managing and disposing waste liquids, and storing fuel for generators and other gasoline-powered equipment.
- The purpose of this fact sheet is to encourage owners and operators of small woodworking manufacturing facilities to consider implementing good management practices that will reduce the environmental impacts from the business. By reducing its environmental impacts, a small business may reduce or become exempt from environmental permitting requirements.

Are you a small business?

The Indiana Department of Environmental Management (IDEM) defines a small business as one that:

- Is owned or operated by a person that employs 100 or fewer individuals;
- Is a stationary source that does not move;
- Emits less than 50 tons per year of a single regulated air pollutant; and
- Emits less than 75 tons per year of all combined regulated air pollutants.

Air Emissions:

Primary sources of air emissions from small woodworking manufacturing facilities include coatings and strippers that emit volatile organic compounds and hazardous air pollutants, as well as wood dust. The following recommendations for reducing emissions may help small businesses reduce or become exempt from air permit requirements.

- Use HAP-free or low-HAP materials. IDEM recommends each stain, paint, sealer, topcoat, thinner, solvent, or other petroleum-based liquid contain the lowest amount of hazardous air pollutants (HAPs) suitable for the intended use. Most coating suppliers offer a full line of HAP-free or low-HAP materials that accomplish the same work as materials that contain HAPs. By using HAP-free materials, a woodworking facility should be able to accomplish the same work while reducing obligations under environmental law.
- Use low-VOC coatings. IDEM recommends purchasing stains, paints, sealers, topcoats or other coating additives with the lowest possible volatile organic compound (VOC) content. The VOC component of coatings, such as toluene, benzene, and formaldehyde, only serves to keep the coating in a liquid state. The VOC components are emitted (given off) during the drying process. Therefore, it is both environmentally responsible and economically sensible to use coatings with the lowest VOC content possible. Please note that most "water-based" coatings will have some VOC content. With regard to environmental regulations, the VOC content of a coating is considered without the water and "exempt solvents," such as acetone. For example, the Safety Data Sheet (SDS) for a water-based coating may indicate that it has a VOC content of 1.37 pounds per gallon (a low VOC content). However, when the VOC content of the coating is calculated without the water and "exempt solvents," the VOC content may be significantly higher (i.e., 5.5 pounds per gallon) and may be higher than some coatings that are not marketed as "water-based." Upon request, a coatings manufacturer or supplier should be able to provide the VOC content of a coating "less water and federally exempt solvents."
- Apply spray coatings in a booth with filters. IDEM recommends that all coatings applied with a spray gun be applied in a booth equipped with filters designed to collect overspray particulate matter (PM). The facility staff should inspect the PM filters daily to ensure that all filters are relatively clean and in place with no gaps that would allow PM to escape and accumulate on the exhaust fan or the ground outside the building. Excessive coating accumulation on the exhaust fan may present both a fire hazard to the structure and

possible violation of environmental air compliance conditions. Coating accumulation on the ground outside the facility may indicate the presence of soil and/or groundwater contamination that will require a costly cleanup on the part of the business owner.

- Use a high volume, low pressure (HVLP) spray gun. IDEM recommends that coatings applied with a spray gun be applied with a high volume, low pressure (HVLP) spray gun. The applicator should carefully read the directions for proper spray gun operation. All supplied air should be provided at the minimum air pressure. The operator should also adjust the spray pattern to ensure maximum coverage with minimum overspray. Excess air pressure and inappropriate spray patterns will cause the facility to waste coating material and unnecessarily generate pollution that may require compliance with environmental regulations. Other recommended spray gun technologies that may help further reduce air emissions include: airless spray application systems, air-assisted airless spray guns, or an electrostatic spray application system.
- Properly train spray gun operators. IDEM recommends that spray operators be properly trained. Studies have shown that having a well trained paint operator can greatly reduce the amount of coating lost due to overspray. Reducing overspray not only helps to reduce air pollution, it also saves the company money because using less coating means that less coating is purchased. Therefore, it is important to have a good operator training program in place.
- Use sealed, air tight containers to collect used cleaning solvents and waste coatings from spray equipment. IDEM recommends that used cleaning solvents and waste coatings from cleaning spray equipment be collected in sealable containers at the end of the day or during color changes. Seal the container as soon as the equipment is cleaned, and dispose of the solvent and waste coatings to minimize evaporation. Containers should remain closed when not in use.
- Collect and reduce wood dust emissions using a cyclone/baghouse type dust collection system. IDEM recommends that wood dust created from all woodworking operations be collected and discharged through a cyclone/baghouse type dust collection system. By routing all woodworking exhaust through a cyclone/baghouse dust collector, the facility can efficiently collect 80 to 99% of all dust generated. The cyclone/baghouse dust collection system effectively reduces the amount of PM emitted to the environment and increases the amount of material that can be sold or otherwise used. Both the cyclone and/or the baghouse should be regularly checked and repaired to make sure that the equipment is functioning properly (e.g. no bags are torn in the baghouse).
- Reuse clean sawdust and clean wood scraps to generate heat, steam and/or hot water. A facility may burn sawdust or clean wood scraps from its processes in a stove or boiler to generate heat, steam, or hot water.
    - However, at no time may the facility burn any material for the purposes of trash disposal.
    - Furthermore, at no time can a facility burn any wood that is treated or coated, unless it has an air permit that specifically authorizes burning such material.
    - The illegal open burning of solid waste and/or the use of unpermitted materials in a boiler or stove may result in state or federal violations and enforcement actions, including possible fines.

Hazardous Waste:

Facilities that generate solid waste must determine if that solid waste is hazardous and if the waste needs to be treated before being disposed. The following information about hazardous waste regulations includes recommendations for reducing the amount of wastes generated and associated requirements.

- The facility must characterize all waste that is generated and identify if wastes are solid wastes. Solid wastes must be further characterized to determine if they are hazardous wastes.
- The facility is encouraged to reduce the amount of hazardous waste generated in order to reduce compliance requirements and meet waste minimization requirements.
- Typical hazardous wastes include, but are not limited to: rags, paper and cardboard contaminated with liquids from the finishing operations, PM filters from the spray booth in the finishing operation, fluorescent light bulbs, used oil, gloves or other protective clothing used in the finishing operations and waste liquids from the finishing operations.
    - The generator must characterize rags that are contaminated with any liquids from the finishing operations to determine if they are a hazardous or non-hazardous waste. Rags that are sent for washing at a professional cleaning service or cleaned on-site with wash water being discharged to a CWA-regulated unit are conditionally exempt from hazardous waste regulations, and therefore do not count toward a facility's monthly hazardous waste generation. Additional information on the exemption of

solvent-contaminated rags can be found on U.S. EPA's website at www.epa.gov/osw/hazard/wastetypes/wasteid/solvents/sumry_chrt_wipes_fnl_rul_070913.pdf.
    - Fluorescent or mercury vapor light bulbs must be counted as a hazardous waste unless they are recycled at a permitted facility under the Universal Waste requirements.
    - Used oil that is recycled can be managed under Indiana's "Used Oil Rule," and not considered a hazardous waste.
- The facility must track the weight of the remaining hazardous waste generated per month. If the cumulative amount of hazardous waste generated during any calendar month exceeds 220 pounds, the facility is a small quantity generator (SQG). If the total amount of hazardous waste generated in any calendar month exceeds 2,200 pounds, the facility is a large quantity generator (LQG) of hazardous waste. Both generator statuses must comply with all the requirements of the appropriate classification.
- All hazardous waste accumulation containers must follow the proper labeling and accumulation requirements. To prevent the contamination of usable material or non-hazardous waste with hazardous waste, the facility should label each storage container with:
    - The words "Hazardous Waste";
    - A description of the contents; and
    - The date when the waste first began accumulating.
- The hazardous waste containers must be kept closed, except when adding or removing materials, and in good condition without any leaks or visible damage.

Spills:

- All facilities should put measures in place for responding to accidental spills and train employees in responding to and reporting spills to IDEM's 24-hour toll free Spill Line at (888) 233-7745.
    - If a spill of a quantity of chemicals or petroleum occurs in a gravel driveway or on uncovered ground, the facility must take immediate action to contain the spill and must act as quickly as possible to clean up any spilled materials that may cause soil or groundwater contamination.
    - As soon as possible, but within two (2) hours of discovery, the facility must communicate a reportable spill to the IDEM 24-hour toll free Spill Line at (888) 233-7745.
- When a spill is reported to IDEM, an IDEM Emergency Responder will guide the facility through actions required to complete a cleanup of the spill in accordance with state and federal laws. IDEM staff can provide technical guidance to help the facility with the cleanup of spills of any size, including small spills that are not required to be reported. There is no penalty for contacting IDEM about a spill that does not need to be reported.
- Proper planning and training will help reduce the environmental impacts of accidental chemical and petroleum spills and associated cleanup costs.

Spill Prevention Control and Countermeasures (SPCC):

Facilities with petroleum products in equipment or storage containers with a capacity of 55 gallons or more should evaluate whether a Spill Prevention Control and Countermeasures (SPCC) Plan is required. SPCC plans are required for facilities with an underground storage capacity of 42,000 gallons and/or above ground storage capacity of 1,320 gallons. By reducing onsite storage capacity to the lowest amount necessary, a small business may be able to qualify as a "Tier I" facility and be eligible to self-certify its SPCC Plan and reduce associated costs.

Storage Tanks:

- Underground Storage Tanks (USTs): Because of the environmental risks presented by USTs, it is recommended that the facility avoid installing any USTs. IDEM strongly recommends the facility try to avoid installing any single underground storage tank (UST) equal to, or larger than 1,100 gallon capacity.
- Above Ground Storage Tanks (ASTs): If an above ground storage tank is installed, it should be placed in a water tight basin (secondary containment) that is large enough to contain the entire contents of the above ground storage tank without releasing any material to the ground. The above ground storage tank and secondary containment should be covered to either reduce or eliminate the accumulation of rain or snow in the secondary containment. Rain or snow that accumulates in the secondary containment reduces the amount of material that can be held if the above ground storage tank fails and causes the facility to determine if the accumulated rain or snow is a hazardous waste requiring disposal as such.

Public Drinking Water:

- IDEM recommends the facility avoid placing any material within 100 feet of any drinking water well to ensure that no contamination from an outside source will impact the quality of the well water. This restriction should apply to all industrial sources of pollution as well as any animal- or farm-related sources of pollution.
- If the facility has its own well and has 25 or more employees or regularly serves more than 25 people per day, the facility is a public water system and must comply with state and federal drinking water rules.
- If the facility is not a public water system, water from the well should be periodically tested to determine if it has been adversely impacted by a source of contamination. Water samples should be collected once a year and submitted for laboratory analyses of bacteria and nitrates. If water quality is found to be compromised, the facility should investigate water treatment technologies that will protect the health of the facility workers and all who use the well.

Wastewater:

- The facility must not discharge any wastewater generated as part of the manufacturing process into waters of the State without first obtaining a National Pollutant Discharge Elimination System (NPDES) permit. IDEM's Office of Water Quality is authorized to issue NPDES permits in Indiana.
- Where facilities discharge wastewater from their manufacturing processes to a municipal sanitary sewer system, they should obtain the permission of the local municipal wastewater treatment facility.
- Waste waters generated from a kitchen or bathroom that are discharged to a septic system do not require an NPDES permit.

Storm water:

- Industrial facilities that operate under specific standard industrial classification codes may be required to obtain a general storm water permit for industrial processes that are exposed to storm water.
- IDEM recommends that facilities eliminate sources associated with industrial activities that are exposed to storm water or snow melt. For example, the facility should take steps to prevent the accumulation of liquids or coating overspray outside the building structure.
- Properly managing storm water will reduce the chance for violations and associated costs of cleanup.

More Information:

- For more information on the topics contained in this fact sheet, or to request confidential assistance, please contact IDEM's Confidential Compliance and Technical Assistance Program (CTAP) at (317) 232-8172 or (800) 988-7901.
- To submit an online request for a free, confidential CTAP consultation, visit http://www.in.gov/surveytool/public/survey.php?name=CTAP_Consulation_Form_2014.
- Visit the following websites:
  - IDEM Compliance and Technical Assistance: www.in.gov/idem/ctap/index.htm
  - IDEM Air Permits: www.in.gov/idem/airquality/2356.htm
  - IDEM Hazardous Waste: www.in.gov/idem/4995.htm
  - IDEM Emergency Response (spills): www.in.gov/idem/4155.htm
  - U.S. EPA Oil Spill Prevention: www.epa.gov/emergencies/index.htm
  - IDEM Underground Storage Tanks: www.in.gov/idem/4999.htm
  - Indiana Department of Homeland Security (Above Ground Storage Tanks - Flammable and Combustible Liquids and Gases): www.IN.gov/dhs/3712.htm.
  - IDEM Public Drinking Water: http://in.gov/idem/cleanwater/2386.htm
  - IDEM Wastewater: http://in.gov/idem/cleanwater/2337.htm
  - IDEM Storm Water: http://in.gov/idem/cleanwater/2370.htm

This fact sheet is intended to provide a description of activities that may minimize the environmental impact of a facility and reduce a facility's obligations under current environmental law. Following the recommendations contained in this fact sheet may not guarantee the facility's compliance with state or federal environmental regulations.