



# Facts About Processes and Equipment That May Require Air Permits

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**B**elow is a list of processes, equipment, and industry categories that includes many air emission sources that may be subject to regulation. If you find an operation listed here that is similar to one found at your facility, you should be aware of air quality regulations. You may require an air emissions permit or be subject to air quality rules. Types of equipment or operations not listed here may also require permits.

## Storage tanks

Solvent and petroleum storage tanks except:

- non-hazardous air pollutant volatile organic compound storage tanks with a combined total capacity less than 10,000 gal. and vapor pressure less than 1.0 psi at 60° Fahrenheit
- tanks for storing liquid petroleum gas, anhydrous ammonia, and liquid natural gas, natural gas or lubricating oils
- gasoline storage tanks with total capacity less than 10,000 gallons
- fuel oil storage tanks with total capacity less than 100,000 gallons

## Materials handling and distribution

- conveyors, screeners and elevators
- shredders and crushers
- bulk petroleum distribution, for loading refined petroleum products into trucks, barges, or railcars

## Combustion

- industrial dryers
- industrial ovens or furnaces used in processing material
- internal combustion engines (diesel generators, for example)
- incinerators
- boilers, if the total maximum rated heat input exceeds the following thresholds:

| Primary or backup fuel          | Total maximum rated heat input (MMBtu/hour) |
|---------------------------------|---|
| Wood                            | 3   |
| Residual oil                    | 5.3   |
| Distillate oil                  | 22.2  |
| Natural or liquid petroleum gas | 83  |

- any size boiler using fuel other than that listed above (such as coal)
- any boiler capable of burning any fuel other than natural gas, if the boiler was installed or modified after June 9, 1989, and it has a maximum rated heat input of more than ten million Btu/hour
- any facility with a combination of boilers capable of burning more than one fuel even if the rated capacity of each boiler is below the threshold listed above

## Manufacturing and finishing

- processes generating particulate emissions, such as blasting, cutting and grinding, except where all emissions are vented indoors 100 percent of the time
- plating (chrome plating or chromic acid anodizing operators should contact the Small Business Assistance Program for guidance)
- solvent cleaning, painting, and surface coating of products where volatile organic compound usage exceeds 200 gallons per year

Surface coating includes but is not limited to coating of wood, metal and plastics. Painting includes but is not limited to paint booths, spray guns and dip tanks. It does not include painting for plant maintenance done without spray gun equipment.

These are the chemicals from the list of hazardous air pollutants that are most commonly used by surface coaters. Thinners and cleaners are also regulated as volatile organic compounds.

- thinners: MIBK, hexane, toluene, xylenes
- pigments: lead, chromium, cadmium
- catalysts: hydrochloric acid
- cleaners/strippers: methylene chloride, trichloroethane, trichloroethylene, perchloroethylene

*Refer to the Material Data Safety Sheet for the composition of the coating you are using.*

If your facility has the potential to release pollutants into the air above these thresholds, you will need an air emissions permit. Potential to emit is an estimate of your facility's possible emissions if it were operating at full capacity 24 hours a day, 365 days a year. Figuring your facility's potential to emit can be a fairly complex process that requires identifying all emission sources at your facility and the pollutants released at the sources.

| Pollutant                  | Permitting thresholds<br>(based on potential to emit) |
|----------------------------|---|
| Volatile organic compounds | 100 tons/year   |
| Carbon monoxide            | 100 tons/year   |
| Nitrogen oxides            | 100 tons/year   |
| Sulfur dioxide             | 50 tons/year  |
| Combined HAPs*             | 25 tons/year  |
| One HAP                    | 10 tons/year  |
| Fine particles             | 25 tons/year  |
| Lead                       | 0.5 tons/year   |
| CO <sub>2</sub> e**        | 100,000 tons/year                                     |

\*hazardous air pollutant

\*\*carbon dioxide equivalent, as defined in 40 CFR § 70.2, regulated as of July 1, 2011, for operating permits

## Industries that may require permits

|  |                       |  |
|--|-----------------------|--|
| asphalt plants                             | foundries             | plastics manufacturing                   |
| boat manufacturing                         | grain elevators       | polystyrene foam manufacturing           |
| chemical manufacturing                     | heat treaters         | printed circuit board operations         |
| commercial printing                        | industrial launderers | publicly owned treatment works           |
| concrete ready mix and block manufacturing | landfills             | soil roasters                            |
| construction aggregate                     | minerals processing   | steel mills                              |
| ethanol manufacturing                      | paper industry        | synthetic organic chemical manufacturing |
| fiberglass products manufacturing          | petroleum refining    | wood products                            |
| food processing industry                   | pharmaceuticals       |  |

## Need more information?

More information about air emissions facility permits, including the list of hazardous air pollutants, is available on the Minnesota Pollution Control Agency's (MPCA) fact sheet on operating permits. For a copy of that fact sheet and other permit application information, contact the MPCA at 651-296-6300 or 800-657-3864.

The MPCA also offers technical assistance to businesses with fewer than 100 employees through its Small Business Environmental Assistance Program by calling 651-282-6143 or toll-free 800-657-3938.