

# AIR MANAGEMENT PROGRAM FACT SHEET



AM-428 2023

## Air Pollution Construction Permit Basics

April 2023

### What facilities need a construction permit?

Any business looking to move to Wisconsin or any existing Wisconsin business wishing to expand, must file an application for an air pollution construction permit with the Wisconsin Department of Natural Resources (DNR). The following are activities that could trigger a construction permit:

1. **New Sources:** a facility, process line or portable source that was either constructed or modified after August 19, 1980, or to which a new emission limit applies.
2. **Modification:** a physical change or change in the method of operation that produces either more air emissions of the same type or "new" air emissions.
3. **Reconstruction:** to remove old - and substitute new - components that exceed 50% of the capital cost of building a new source.
4. **Replacement:** to dismantle and substitute a process or facility with similar one.
5. **Relocation:** to remove a process or facility from one location and place it at a different location on-site or a new site.

Some **smaller new** or **expansion** projects with air emissions **may be exempt** from the requirement to apply for a construction permit. Review the list on the last page for operations likely to need a permit.

### Can a project be exempt from permitting?

The construction permit exemptions are found in chapter NR 406, Wis. Adm. Code. There are three options that may allow the facility to be exempt from a construction permit: (1) specific exemptions, (2) actual emissions-based exemptions, or (3) general exemptions. Only one of these exemptions needs to apply for the operation or facility to be exempt. Review details for all exemption options on the [Air Permit Exemptions](#) webpage.

#### Specific exemptions:

A new or expansion project will be exempt if each emissions unit being added or modified will be smaller than each of the specific exemption levels as follows:

- Painting or coating** operations that emit or will emit no more than 1,666 pounds of volatile organic compounds (VOCs) per month, which are measured prior to entering any emission control device.
- Graphic arts** operations that emit or will emit no more than 1,666 pounds of VOCs per month, which are measured prior to entering any emission control device.
- Motor vehicle refinishing** shops that emit or will emit no more than 1,666 pounds of VOCs per month, which are measured prior to entering any emission control device.
- Cold cleaning equipment** with a total air to vapor interface of 1.0 square meters or less during operation.
- Open top vapor degreasing** equipment with a total air to vapor interface of 1.0 square meters or less during operation.

- ❑ **Dry cleaning operations** with a total maximum operating capacity for all machines of 75 pounds of clothes per hour.
- ❑ **Gasoline dispensing facilities** that dispense gasoline or other petroleum products.
- ❑ **Grain storage** facilities with an average of less than 5,500 tons grain received per month.
- ❑ **Grain processing** facilities with an average of less than 4,500 tons grain received per month.

This is only a partial list of the specific exemption categories. Review the regulation listing all specific exemptions and their full exemption criteria at [s. NR 406.04\(1\)](#), Wis. Adm. Code. If the facility has any emissions units that are not defined by one of the specific emissions categories, then the project cannot be exempt under the specific exemptions. The next options are to evaluate whether the facility can meet the actual emissions-based exemption or the general exemption.

### **Actual Emissions-based Exemptions**

If a new process line or the whole facility has emissions less than 10 tons per year for each pollutant, the facility may be able to use one of the actual emissions-based exemptions.

To qualify for this exemption, the project/facility must meet ALL of these levels.

- Volatile organic compounds (VOCs), particulate matter less than 10 microns (PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO) or nitrogen oxides (NO<sub>x</sub>) – Each criteria pollutant does not exceed 1,666 pounds per month, averaged over 12 consecutive months for a project, or 10 tons per calendar year (TPY) for the whole facility.
- Lead — do not exceed 0.5 TPY.
- State HAPs —emissions less than stack-appropriate thresholds in ch. NR 445, Wis. Admin. Code.
- Not affected by any New Source Performance Standards and National Emissions Standards for Hazardous Pollutants, unless subject solely to recordkeeping or notification requirements.
  - There is an exception to this for engines certified to meet the applicable emission standards in 40 CFR part 60, subpart IIII or JJJJ, for each fuel used.
- If using a control device to achieve these exemption levels, the facility must monitor and record appropriate control device parameters to ensure it functions properly.

For more information on whether the facility can use one of these exemptions, review the following fact sheets:

- For a project that may meet the actual emissions exemption, review [Actual Emissions Based-Exemption from Construction Permits Under s. NR 406.04\(1q\), Wis. Adm. Code](#) (AM-387).
- For a facility where the whole facility may meet the actual emissions exemption, review [Actual Emissions-Based Exemption from Operation Permits](#) (AM-388). Note, if the entire facility qualifies under 407.03(1m), it is automatically also exempt from construction permitting.

The DNR's Small Business Environmental Assistance Program (SBEAP) offers an [example spreadsheet for actual emissions](#) (SB-301).

Another exemption that may be appropriate for the facility is the general exemption.

### **General exemptions**

A general exemption is based on the facility's Maximum Theoretical Emissions (MTE). This is a calculation of the greatest possible amount of air pollution the new project or business could emit if operated at maximum production capacity, 24 hours a day, 365 days a year, without any air pollution control devices. The MTE needs to be less than the exemption thresholds for the pollutants shown in the table below.

An example [spreadsheet for MTE calculations](#) (SB-300) is available from SBEAP.

If calculations show that the MTE is less than the general exemption emission rates, the facility will not need to apply for an air operation permit. Always keep a copy of the calculations to support the exemption claim.

**Calculation Example:**

Below is a general example of how to determine MTE for VOCs in a paint spraying operation:

1. Find the highest VOC content in the material(s) used (VOC lb/gal)
2. Determine the maximum amount of paint that can be used in one hour (gal/hour)
3. Calculate how much VOC would be emitted if using this amount of material for 24 hours a day for a year (24 hours x 365 days = 8,760 hours).

Example:

- VOC per gallon: 6.7 lb/gal
- Maximum usage of material: 4 gal/hr

MTE hourly = 6.7 lb/gal x 4 gal/hr = **26.8 lb/hr**

MTE annual = 26.8 lb/hr x 8760 hr/yr = 234,768 lb/yr 234,768 lb/year / 2000 lb/ton = **117 tons/yr**

General exemptions	
Pollutant	Threshold
VOCs, PM <sub>10</sub> , NO <sub>x</sub>	5.7 lbs/hour
SO <sub>2</sub> or CO	9 lbs/hour
A single federal hazardous air pollutant*	10 tons/year
Combination of any Federal Hazardous Air Pollutants*	25 tons/year
Any state hazardous air pollutant**	Less than ch. NR 445 table value
<p>*There are <a href="#">188 federal hazardous air pollutants</a> as determined by the Environmental Protection Agency (EPA).            **There are over 500 state hazardous air pollutants in NR 445.</p> <p>If help is needed to determine whether the facility has any hazardous air pollutants, look at safety data sheets for all the materials or contact the suppliers or ask DNR's SBEAP for help.</p>	

When calculating emissions, include all possible sources of each air pollutant. For example, a coating operation calculating VOCs should include all coatings and all clean up solvents used and may also need to include VOCs from fuel combustion or other sources where VOCs are created in the process. The information needed for these calculations can be obtained from invoices, safety data sheets (SDS), and other information readily available from suppliers. The EPA has a resource of emission factors for specific processes called [AP-42: Compilation of Air Emissions Factors](#).

In the previous example, the source exceeds the 5.7 pounds/hour VOC exemption and would need to apply for a construction permit. Go to the section *How To Apply for a Construction Permit* below for more details.

**What needs to be done if the facility is exempt?**

It does depend on the exemption that applies. For example, using one of the specific exemptions on VOC emissions the facility needs to keep records for each month that shows that the emissions stay below the exemption level for that category. If production grows close to the exemption level, the facility should start looking at the permit options. The facility must have a construction permit issued by the DNR before the monthly emissions go over the exemption level.

**How to apply for a construction permit**

If the facility is not exempt from the construction permit requirements, then review the [permit options](#). There are currently three types of permits available to sources undergoing construction or expansion:

- Registration operation permits (ROP): for those who can limit emissions to less than 25% or 50% of the major source thresholds, the permit allows the facility to construct without an additional permit so long as the facility meets the ROP eligibility thresholds.
- General operation permits: these are only available for certain industries but also allow construction without any additional permit if the permit criteria are met.
- Source-specific construction permits: written specific to a facility's operations.

Permit application materials and instructions are available on the [Forms](#) webpage. If there are any questions about how to complete the forms, contact the DNR or the SBEAP to help arrange a pre-application meeting.

## What will the application cost?

For registration and general permits there is no application fee. However, covered facilities will pay an annual fee based on which permit is issued:

- Registration operation permits: \$400
- General construction permits:
  - \$400 if emissions capped less than 80 TPY
  - \$4100 if at least 80 TPY but less than 100 TPY

When applying for a source-specific construction permit, an application fee of \$7,500 is due upon submittal of the application. The main application form [4530-100](#) includes instructions on how to pay the fee.

Costs associated with the construction permit review process will vary depending on which requirements apply to the proposed project. Some of the fees include:

- \$3,000 minor source review
- \$12,000 major source review
- \$4,500 or \$12,000 for minor or major modifications (respectively)
- \$2,500 for a stack test of a single pollutant, and \$1,250 for each additional pollutant up to 3; maximum of \$6,000 (may not be required in all permits)
- \$1,000 air quality analysis for minor source
- \$5,000 expedited review of a minor source (this speeds up the review of the application)

The application fee will be returned by the DNR if the project does not need a construction permit. Otherwise, it will be applied to the final construction permit review fee. If the final fee is calculated at less than \$7,500, the remainder may also be returned. A complete listing of charges associated with a construction permit review can be found in chapter [NR 410, Wis. Adm. Code](#).

If a permit is not required, the facility may then begin construction immediately. If a permit is required, **do not** begin construction until a permit is issued by the DNR. There is a possibility that the DNR could deny the permit, if the facility is unable to meet all the requirements that apply. Constructing before the permit is issued could result in violations.

## What are the permit review steps?

Registration and general permits have a streamlined application process.

Registration permit applications have ten questions, and application guides are provided with examples of how to determine the response to each question. Review the application guides, application forms, and the most recent version of the ROPs on the [Registration Permit Options](#) webpage. Once the application is completed, sign the form and mail to the DNR as explained on the [How to apply for air permits](#) webpage.

General permits also have simple application forms. Applications, the most recent version of the GOPs, example compliance documents, and other resources are available on the industry specific webpages:

- [Rock crushing plants](#)
- [Hot-mix asphalt plants](#)

Applying for a source-specific construction permit is a more extensive process. The DNR's [Air Construction Permit Process flow chart](#) (AM-607) explains the process.

Complete the appropriate application forms and submit a complete application to the DNR. Forms and an explanation of how to submit the application are on the [Forms](#) webpage.

After a complete application has been submitted, DNR staff go through the review process, which can take 20 to 60 days or more depending on the size of the project and the current queue of applications. When the review is completed, the DNR then prepares a preliminary decision to approve or deny the application and publishes a notice in the Wisconsin State Journal and posts it on the [Public Involvement](#) webpage. The notice gives the public 30 days from the date the notice was posted online to comment on the proposed project. This is also the facility's chance to review the permit and provide the DNR with comments on elements in the permit.

If the public shows significant interest in the proposed project or specifically requests one, the DNR will schedule a public hearing within 60 days after the end of the public comment period. Then the DNR will issue or deny the construction permit within 60 days after the close of the public hearing. Note that this means a public hearing could add up to 120 days to the process. If there is minimal interest during public comment, the DNR can issue the permit soon after the 30 days is up.

### **What should a facility do when notified a draft permit is available?**

As soon as notification is received that the draft permit has been posted for comment, download a copy and read it through carefully. Pay attention to the specific requirements in the permit. There may be certain criteria the facility will have to meet by certain deadlines during construction of the process or related equipment or structures. The draft permit is the stage when it is easiest to negotiate if the facility feels certain permit requirements will be difficult to meet. Some issues to watch for:

- A new or existing process may be required to perform a stack test to demonstrate emissions will meet the limits in the permit. See the [Stack Testing Requirements](#) (SB-119) fact sheet from SBEAP for details.
- Control devices and the equipment designed to capture emissions from the process and carry them to the control device or exhaust point may have to meet certain criteria. These devices may also have requirements for installation of equipment to monitor operating parameters. Consider how these may affect the design of the process.
- Certain requirements may dictate the type of raw materials allowed to be used in the process. For example: painting, coating or printing operations may be limited on the VOC content of the coatings or inks applied or the amount used each month. Consider how this will affect the operations long term.

Before the final permit is issued, the facility could use the draft permit to get started on preparation of any documentation that will be needed. This documentation may include:

- Tracking sheets to be used on the unit or process line to collect compliance records.
- Verification of "one-time records", e.g., physical stack design parameters that may need to be verified to match permit conditions. These should include a date and signature of the person who verified the information.
- Preparing plans required by the permit, such as: Malfunction Prevention and Abatement Plan, Fugitive Dust Control Plan, and Standard Operating Procedures.

### **What steps should be taken once the final permit is issued?**

Do not just file permit away like a ticket to construct. The final permit outlines all the conditions that will be required to meet during the term of the permit. Read the permit carefully for any specific testing or monitoring requirements or other deadlines. Mark down deadlines and periodic requirements on a calendar as a reminder. The [Air Permit Compliance Calendar](#) (SB-202) available from SBEAP can be used to manage reminders.

It is important to keep track of the deadlines in a construction permit because it has a limited life of 18 months. If the facility cannot meet certain deadlines, talk with the assigned DNR compliance engineer about a possible extension. If construction and/or required emission testing in the construction permit cannot be completed, the

facility can request one 18-month extension. This must be done well in advance of the expiration date of the permit.

**For more information:**

- Contact the SBEAP at 855-889-3021 or [DNRsmallbusiness@wisconsin.gov](mailto:DNRsmallbusiness@wisconsin.gov).
- Air permit contact information is listed by topic on the [Contacts](#) webpage.

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## Common Equipment and Processes Requiring a DNR Air

### Pollution Construction Permit

(Keeping in mind the specific and general exemptions mentioned earlier...)

#### Combustion equipment

- Boilers for building or process heat/steam
- Bake-off ovens for parts coating conveyance systems
- Emergency generators also used for peak shaving or available to the grid
- Gas turbines
- Incinerators
- Malt/grain dryers
- Waste gas flares
- Soil remediation equipment over a certain capacity
- Spray paint booth (anyone using more than 250 gallons per month is likely over the exemption)
- Styrene based plastics (expandable foam, fiberglass reinforced composites)
- VOC storage tanks with combined capacity greater than 10,000 gallons

#### Equipment that Generates particulate matter (dust, fumes, etc.)

- Concrete batch plants over 20,000 cubic yards per month
- Construction/demolition
- Cutting, sawing, or sanding wood
- Grain drying/handling operations
- Heat treating furnaces/ovens
- Large welding operations (multiple stations with total capacity ~1000 lb electrode/hr; range 150-2800+ lb elec/hr)
- Rock crushing equipment
- Sand/aggregate drying and handling equipment
- Sand or other abrasive blasting equipment (if not vented inside year-round)

#### Processes that generate VOCs

- Adhesive application
- Coating operations-including flow coat, roll coat, and brush or other hand application techniques (see spray paint)
- Cold cleaners, degreasers, other solvent parts cleaners
- Organic liquid storage tanks with greater than 40,000 gallons capacity combined
- Printing press (using over 200 gallons of ink per month, likely over exemption)

#### Sources of HAPs or other concerns

- Asbestos removal and disposal
- Chromium electroplating operations
- Styrene based plastics (expandable foam, fiberglass reinforced composites)

#### Equipment or activities usually exempt from permit (other air pollution requirements may still apply)

- Bulk gasoline plants that distribute gasoline or other petroleum products
- Crematories
- Dry cleaning operations
- Gasoline dispensing facilities which dispense gasoline or other petroleum products
- HVAC equipment, except boilers to be used for plant and process heating as well
- Individual welding stations
- Janitorial cleaning materials/chemicals and equipment
- Paper sorting equipment
- Refrigeration units not used for air pollution control and not using an ammonia-based coolant
- Research and testing equipment for use in short term
- Restaurant grills/ovens
- Small natural gas space heaters
- Water chlorination facilities
- Water tower stripping and painting