

Controlling Odors

Are odors created at your business? More specifically, does exhaust from your business' operations create objectionable odors? If the Wisconsin Department of Natural Resources (DNR) Air Management Program is contacted by your neighbors about odors from your business, how will you respond? The Wisconsin Administrative Code air pollution rules state that any source of air pollution must minimize or control odors produced by its activities. What implications does this rule have for your business?

What Are the Requirements?

Chapter NR 429 of the Wisconsin Administrative Code says that no one can create or release any emissions with odors that are considered "objectionable." If a business does cause any objectionable odors, it must control or minimize those emissions to the greatest extent feasible.

DNR uses two tests to determine when odors are considered "objectionable." They are:

- 1) when a DNR inspector investigates and determines that an odor is objectionable by the nature, intensity, frequency and duration of that odor and the type of area involved; or
- 2) when 60% of a random sample of people exposed to the odor—either in their home or workplace—claim it is objectionable because of its nature, intensity, frequency, and duration.

What is meant by "the nature, intensity, frequency and duration" of an odor? To determine the **nature and intensity**, the DNR inspector will ask: What is causing the odor? Is it a chemical with hazardous properties or a natural substance like cow manure? How often is the odor detected? Does it last all day or only for a few minutes? Once these questions are answered, the DNR inspector would take the appropriate course of action with the source. DNR and the business causing the odor will discuss measures to control and/or minimize the odor and establish a schedule for implementation.

These questions are intertwined. A short burst of odor from a chemical with highly toxic effects must be acted on more quickly than an odor that may last all day but is caused by something that is not toxic, like cow manure.

Will My Business Be Affected?

Any business has the potential to be affected by this rule. If anything at your business creates any sort of odor, someone might consider it objectionable and file a complaint with the DNR. Some neighbors will contact the business directly before going to the regulatory agency. It is usually **best** to deal with the odors you are creating and/or releasing from your operations as soon as someone in the neighborhood contacts you, instead of waiting for DNR to become involved.

If I'm Affected, How Do I Comply?

If your business is the source of objectionable odors, the following control or minimizing measures may apply. The measures required at your business will depend on the nature, intensity, frequency and duration of the odor.

- Use of catalytic incinerators, afterburners, scrubbers, adsorbers, absorbers, or other mechanical methods approved by the DNR. These are most often required for sources of odors caused by chemicals with some toxic nature.
- Removal and disposal of odorous materials.



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- Use of methods for handling and storage of odorous materials that minimize emissions.
- Follow prescribed standards in maintenance of premises to reduce odorous emissions.

The last three measures are more likely to be applied to natural sources of odor, like cow manure, but may be applied to industrial sources as well. Sometimes, repairs or maintenance of leaky equipment will address odor problems.

Any control measures can only be expected to the extent that it is economically feasible. Odor control measures may produce acceptable results, but businesses can experience varying levels of success. Consider industry standards and success rates of control measures to determine the most appropriate measure for your operations. DNR will consider these issues when helping you comply with the rules.

Tips to Make Compliance Easier

Taking a proactive approach in reducing or eliminating odors at the source could prevent complaints. This could mean:

- Inspect your facility for odor problems. New employees may notice problems to which others have become desensitized.
- If you are aware that odors are present within or around your building(s), you can:
 - ◆ change materials used in your process
 - ◆ minimize exposure of odor-causing materials to open air when handling/processing
 - ◆ schedule work for odor-causing processes so their effect is minimized
- Cooperating with neighbors by minimizing odors will, in turn, minimize their opposition to expansions of your business during the permit process.



Examples of Success Stories

Here are some control measures that have been adopted to minimize or control odors:

- A cheese plant uses products like Ecosorb or Anotec, adsorbent solutions mixed with water and sprayed into the air around the perimeter of its wastewater treatment operations.
- One company tried ozonating the air, to oxidize volatile organic compounds (VOCs), with little success. Then it raised its stacks to the maximum allowed in the city (58 feet in that case) and solved the problem.
- *Best management practices* (BMP) should be followed on farms. A USDA (US Department of Agriculture) District Conservationist can be contacted for assistance with BMPs. To find a local conservationist in Wisconsin, call 608-662-4422 or visit <http://www.wi.nrcs.usda.gov/contact/> to find Natural Resources Conservation Service office locations in the state.

Other Sources of Odors

Odors may come from a private residence for various reasons. Perhaps the resident is burning prohibited materials like plastics or treated wood, which release chemicals that may cause odors. This is regulated under the open burning rule in the Wisconsin Administrative Code. Check DNR's web site on open burning, <https://dnr.wi.gov/topic/OpenBurning/>, for more information. DNR compliance inspectors can provide assistance if your own efforts to stop the open burning are unsuccessful.

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