

# PERMITTING PREREQUISITES

*Air emissions need to be factored into manufacturing facility construction projects.*

Mention air permitting or air quality standards, and the first image to come to mind might be a large power plant. It's important to know that those same standards and requirements can have implications for manufacturers and industrial facilities.

Well before launching any construction effort that could potentially change or introduce additional emissions — whether an expansion project or a new facility on a greenfield location — manufacturers need to examine air permitting requirements.

"If your project is going to be emitting or increasing emissions of criteria pollutants once the facility is operating, you may need a construction permit, depending on the amount of emissions, before you can construct those air emission sources," says Mary Hauner-Davis, manager of the Air and Noise Department at Burns & McDonnell.

Compliance could require designing more pollution controls, designing to minimize additional emissions, or facing more stringent permitting requirements and potentially needing to purchase emission credits. If the facility already has an operating permit, it might need modification. Whether it has one or not, it may need one of several levels of air construction permits, depending on the current and anticipated levels of emissions.

## BASICS ON THE BASIS

Air permitting requirements are based in the Clean Air Act (CAA) and its amendments. The legislation established the criteria pollutant emissions that are regulated.

The CAA required the Environmental Protection Agency to set and periodically adjust the National Ambient Air Quality Standards (NAAQS). Levels for each criteria pollutant are established to protect the health of sensitive populations.

Location matters. Regions are designated either attainment or nonattainment for each pollutant. Being in a nonattainment area means dealing with lower thresholds and more stringent requirements.

"For a lot of manufacturing plants, even some of the bigger ones, their emissions are low volume because they don't have a lot of combustion sources," Hauner-Davis says. "Many of those are considered minor emission sources. But just because they're minor doesn't mean they don't need an air permit."

## KNOW BEFORE YOU BUILD

Potential emission sources could be volatile air emissions from paint or solvents or the byproducts of combustion, such as the emissions from a new natural gas-burning boiler. If the project will result in particulate emissions, such as from sawing, grinding or a powder being used in production, the odds are that an air construction permit will be required.

Before the new or modified source is added, it is necessary to calculate the potential to emit from the project and determine whether it crosses regulatory thresholds. Having an accurate accounting of existing emissions, combined with calculations of potential new emissions, is critical to knowing what permits are needed.

## CRITERIA POLLUTANTS:

- Particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>)
- Ozone/volatile organic compounds (VOCs)
- Nitrogen oxides (NO<sub>x</sub>)
- Sulfur dioxide (SO<sub>2</sub>)
- Carbon monoxide (CO)
- Lead
- Greenhouse gases

"In the past, the EPA has focused on power plants and refineries," Hauner-Davis says. "Now they are paying more attention to the air emissions at smaller industries, too."

The project schedule should take the air permitting process into account. For most air construction permits, construction on emission sources cannot begin until an air permit is received. If an air construction permit is necessary, that process can take from several months to more than a year for a major permit.

"It's really important for your project schedule to make sure you've looked at your emissions upfront and know what level of permit you're going to need, so you know how long it's going to take," Hauner-Davis says.

Her advice? Being informed about where the facility stands and what actions need to be taken are the essential first steps.

"If you have an air permit," she says, "do you know what's in it, and is it up to date? If you're an existing facility, that's the first action you should take."

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Download our presentation on need-to-know air permitting basics at [burnsmcd.com/AirPermitting](http://burnsmcd.com/AirPermitting).