

# Kansas Rock Crushers – Are you subject to air quality requirements?



## Introduction

Rock-crushing facilities have many operations that can affect the environment. The primary pollutant they generate is dust, also called particulate matter. Particulate matter with diameter less than or equal to 10 micrometers, called PM10, can cause lung damage. Kansas Department of Health and Environment (KDHE) and Environmental Protection Agency (EPA) air quality regulations explain what you must do to control air pollution.

What air quality requirements must rock crushers meet? To protect public health and the environment, your operations are required to take steps to protect air quality.

## Construction permits and approvals

If you want to construct, set up, or modify a rock-crusher facility, you may need an air construction permit or approval before you begin. The purpose of the construction permit program is to assure attainment and maintenance of the National Ambient Air Quality Standards, also known as NAAQS. These standards have been put into law to control six “criteria” pollutants: sulfur dioxide, oxides of nitrogen, carbon monoxide, ground-level ozone (regulated as volatile organic compound emissions), lead, and particulate matter with diameter less than or equal to 10 micrometers, called PM10.

Under the construction permit program, a permit is required before starting construction on proposed new or modified sources of air emissions, if potential emissions from the new construction or modification exceed certain levels. These include:

- 0.6 tons per year of lead or lead compounds
- 25 tons per year of particulate matter, or 15 tons per year of PM10
- 40 tons per year of sulfur dioxide
- 40 tons per year of volatile organic compounds (VOCs)
- 40 tons per year of oxides of nitrogen
- 100 tons per year of carbon monoxide

Potential to emit is calculated by assuming worst-case conditions (24-hour operation, 365 days per year; maximum capacity operation; and no pollution control devices). If you would like to learn more about to calculate your potential-to-emit (PTE), check out the SBEAP fact sheet *Here’s how to figure your Potential-to-Emit* at [www.sbeap.org](http://www.sbeap.org).

Even if you are not required to obtain a construction permit, you need to obtain construction approval from KDHE before you can begin new construction or modifications, if potential emissions equal or exceed certain levels. These include:

- 5 pounds per hour of particulate matter
- 2 pounds per hour of PM10
- 2 pounds per hour of sulfur dioxide
- 0.1 pound per hour of lead or lead compound
- 50 pounds per 24-hour period of VOCs
- 50 pounds per 24-hour period of oxides of nitrogen

Getting permits takes time. Consider the permitting timeframes when you bid on or contract for jobs, especially if it is a complex permit with public participation and a public hearing. It is important that you understand and follow the requirements that apply to your facility. Remember to plan ahead when bidding out a job that will require a permit.

## New Source Performance Standards (NSPS)

Industries subject to NSPS must meet certain general requirements, such as monitoring and recordkeeping. In addition, NSPS specify emission limits for selected pollutants, compliance requirements, monitoring requirements, and test methods and procedures. EPA has developed NSPS for rock crushers. Compliance with NSPS is required if you meet the following criteria:

- nonmetallic mineral processing plants with a rock crusher greater than 150 tons per hour; or
- fixed sand and gravel plant with a crushing capacity greater than 25 tons per hour; or
- common clay plant or pumice plant with a capacity greater than 10 tons per hour; AND
- facility began construction or was modified after August 31, 1983.

NSPS for rock crushers contain the following particulate matter emission limits:

- After the NSPS-required performance test, belt conveyors and stacks must not exceed 0.05 g/dscm (0.022 gr/dscf).
- Belt conveyors and stacks must not exceed 7 percent opacity, unless a wet-scrubbing control device is used.
- Sixty days after reaching maximum production rate, belt conveyor emissions and fugitive emissions must not exceed 10 percent (except that fugitive emissions from crushers must not exceed 15 percent, unless a capture system is used and fugitive emissions from truck dumping into screens, hoppers, and crushers is exempt).
- No visible emissions are allowed from wet-screening operations, bucket elevators, and belt conveyors that process saturated materials.

## Operating permits

Requirements of the Kansas operating permit program are found at the K.A.R. 28-19-500 series of regulations. Whether an operating permit is required depends upon the facility's potential to emit.

Your facility will need a Class I operating permit if your facility has the potential to emit of 100 tons per year or more of a regulated pollutant. Regulated pollutants include sulfur dioxide, oxides of nitrogen, carbon monoxide, volatile organic compounds, and particulate matter. You will need a Class I operating permit if your facility has the potential to emit 10 tons per year or more of a single hazardous air pollutant, or 25 tons per year or more of any combination of hazardous air pollutants. Most rock-crusher facilities qualify for a Class II operating permit.

If you would like to learn more about Class I or Class II operating permits, check out the SBEAP fact sheet *What is the Kansas Air Quality Act?* at [www.sbeap.org](http://www.sbeap.org).

If you believe your facility may qualify for the class II permit, contact KDHE or the Small Business Environmental Assistance Program at Kansas State University at 1-800-578-8898 for further assistance.

You can find Class I and Class II operating permit forms and instructions on KDHE's Web site at [www.kdheks.gov/air-permit/download.html](http://www.kdheks.gov/air-permit/download.html).



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## What other requirements must rock-crusher facilities meet?

Rock-crusher facilities can generate hazardous waste and, therefore, must comply with hazardous waste regulations administered by KDHE. The type and number of hazardous waste requirements that must be complied with depend on the quantity and type of hazardous waste generated.

Rock-crusher facilities have industrial activity subject to the KDHE storm water program. Rock crushers can also have an impact on Kansas surface waters and may be subject to National Pollutant Elimination Discharge System (NPDES) requirements if a facility discharges industrial or domestic wastewater on the ground surface. If you discharge industrial wastewater to a sanitary sewer, you may be subject to Kansas industrial wastewater pretreatment standards, your city's pretreatment standards, or both.

For more information on these topics, please visit the KDHE Web site at [www.kdheks.gov/environment/index.html](http://www.kdheks.gov/environment/index.html).

## Pollution prevention options

Preventing pollution instead of treating or disposing of it can save money, protect the environment, and reduce risk to people. Here are some suggestions:

- Use water sprays or chemical suppressants to keep materials and roads wet, but use only enough water to dampen the material.
- Avoid having water runoff.
- Limit drop heights of materials.
- Cover trucks.
- Enclose material at transfer points such as on conveyors and in screening operations.

## Where can I get more help?

The SBEAP operates a toll-free hotline you can call for additional technical assistance. SBEAP can also visit your facility to review current compliance needs and identify pollution prevention opportunities. Call SBEAP at 800-578-8898 or visit our Web site at [www.sbeap.org](http://www.sbeap.org) for confidential, free, technical assistance.

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