



Nebraska Department of Environmental Quality

ENVIRONMENTAL FACT SHEET

02-125

October 2002

Fugitive Dust – Frequently Asked Questions

What regulations does the Nebraska Department of Environmental Quality (NDEQ) have pertaining to dust?

The regulations pertaining to the control of dust are found in Title 129 - Nebraska Air Quality Regulations, Chapter 32 - Dust; Duty to Prevent Escape. This chapter is sometimes referred to as the ‘fugitive dust regulation.’

Chapter 32 applies to all individuals and businesses in Nebraska. There are additional regulations that apply only to facilities subject to air quality permitting requirements. These regulations require facilities applying for air quality permits to control their dust emissions, which are most commonly referred to as fugitive dust emissions. For instance, when a facility is requesting an air quality construction permit, they must demonstrate that the visible and non-visible fugitive dust emissions that leave their property will not exceed the air quality standards established by the U.S. Environmental Protection Agency (EPA) designed to protect the public health, welfare, and the environment. The regulations pertaining to dust control through air quality permitting requirements will not be discussed in this fact sheet; the following information will focus mainly on the regulations found in Chapter 32 of Title 129. Title 129 can be found on the NDEQ website at www.deq.state.ne.us under Rules and Regulations. You can also request a copy by calling the Air Quality Division at (402) 471-2189.

What does the fugitive dust regulation say?

Title 129, Chapter 32, Section 001 requires sources to handle, transport, and store material in such a way to prevent particulate matter (commonly referred to as dust) from visibly crossing property boundaries.

Section 002 of Chapter 32 is similar to Section 001, but it applies to construction, use, repair and demolition of buildings, roads, driveways or other open areas. This section provides examples of reasonable measures that may be taken to prevent dust from visibly crossing property boundaries.

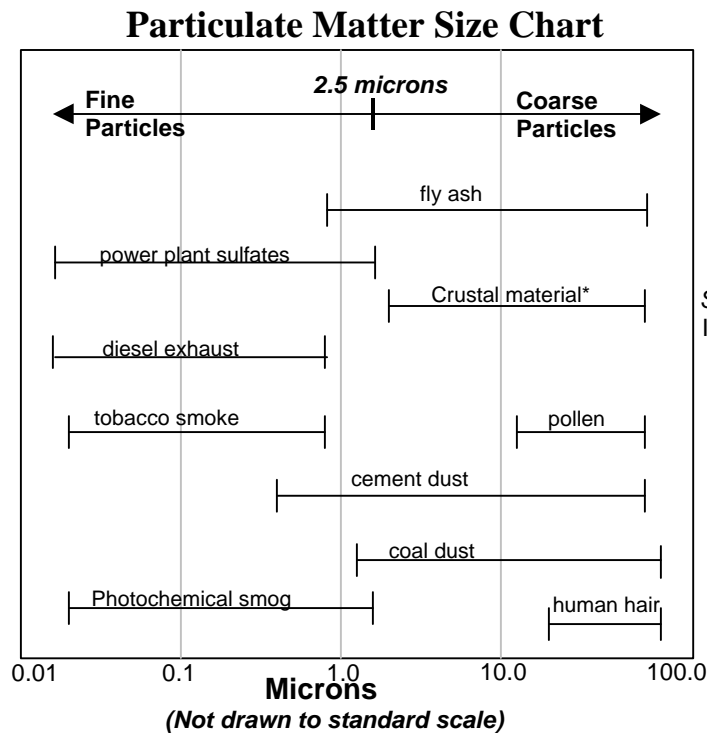
Section 003 of Chapter 32 provides a limited exemption to this regulation for normal farming practices, on-farm crop drying and handling, and animal feeding activities. Sections 002 and 003 do not require that the listed activities and sources completely prevent dust from leaving their property, as long as reasonable and practical measures to limit the dust are utilized.

Are dust and particulate matter the same thing?

The air quality regulations do not use the familiar term ‘dust’ except in the title of Chapter 32; instead the term ‘particulate matter’ is used. While the terms are very similar, their definitions differ slightly. Webster’s II New Riverside University Dictionary (1994) defines dust as “fine, dry particles of matter.” The air quality regulations use a more specific definition to define particulate matter. Title 129, Chapter 1, Section 066 defines particulate matter as “any airborne finely divided solid or liquid material with an aerodynamic diameter smaller than 100 micrometers (microns).” Although dust and particulate

matter are used interchangeably, the definition in Title 129 is used when implementing and enforcing the air quality regulations.

The following chart illustrates and provides examples of materials with varying aerodynamic diameters.



Source: Regional Approaches to Improving Air Quality, May 1997, US Environmental Protection Agency.

*Crustal material results from the crushing and grinding of larger, earth-born material, which originates from road traffic, agricultural operations, and construction activities.

Why should the public be concerned about particulate matter?

National air quality standards have been developed by the EPA to protect public health, welfare, and the environment from the potential effects of particulate matter less than 10 microns in size (PM₁₀) and particulate matter less than 2.5 microns in size (PM_{2.5}).

PM₁₀ and PM_{2.5} can carry heavy metals and cancer causing organic compounds into the deepest and most susceptible part of the lungs. The smaller the size of particulate matter the farther it can travel into the lungs. PM_{2.5} is small enough that it bypasses the body's natural defenses and gets trapped in the air sacs of the lungs, causing an inflammatory response increasing the potential for a heart attack. When inhaled with other pollutants, PM₁₀ and PM_{2.5} can increase the incidence and severity of respiratory diseases. Children, the elderly, and people suffering from heart or lung disease (like asthma) are especially at risk. Particulate matter of any size can also impair visibility, contaminate materials and buildings, and corrode metals.

There is an unpaved county road in front of my house. Can NDEQ do anything about the dust?

NDEQ does not regulate general public use of county roads. County government has the primary authority regarding the reasonable care and maintenance of its roads. NDEQ has, in the past, provided county governments information on methods that may minimize dust from county roads.

There is dust from the feedlot across the road. What are they required to do about it?

Section 003 of Chapter 32 states that the dust emissions from animal feeding activities shall not be regulated, provided "reasonable and practical measures" are taken to limit the dust from those activities.

Some reasonable measures may include applying water to the facility roads and feedlot, applying chemical surfactants, oiling, windbreaks, and removal of excess manure.

What are “reasonable and practical” measures?

Reasonable and practical measures mean the owners and operators of facilities and businesses that generate dust are required to use sound and useful techniques to assure that dust doesn't leave their property. Reasonable and practical measures depend on many factors such as the activity or source generating dust, location, and current weather conditions. For instance, it may not be reasonable or practical to apply water to a field while it is being plowed or to apply water to control dust from a road when the temperature is below freezing. Some reasonable measures to control dust may include applying water or chemical surfactants to the facility roads or to a feedlot, paving the roads, and planting and maintaining vegetative ground cover.

There is a lot of corn chaff (also known as bee's wings) flying around from the trucks loading and unloading grain at the elevator in town. Is this regulated?

The fugitive dust regulation does not regulate particulate matter that is greater than 100 microns in diameter. Corn chaff is greater than 100 microns in size. The NDEQ is most concerned with the smaller particles that can enter the lungs and create a health risk. Usually, the quickest way to address the problem is to contact the elevator or your local government officials.

A construction crew is tearing up a road or clearing land for development and a lot of dust is being created. What can be done?

Section 002 of Chapter 32 states that no person may cause or permit a road being constructed or repaired without applying reasonable measures to prevent particulate matter from becoming airborne and remaining visible beyond the premises where it originates. The same rule applies to construction in open areas. Some of the reasonable measures that may be taken include sweeping/vacuuming paved roads, driveways, and parking lots, applying chemical surfactants or water to roadways, and planting and maintaining vegetative ground cover. The problem can often be solved quickly by contacting the construction crew and explaining your concerns. If this doesn't work, contact the NDEQ Air Quality Division at (402) 471-2189. If the construction area is located in Lancaster County, contact the Lincoln-Lancaster County Health Department at (402) 444-8021. If the area is located within the city limits of Omaha, contact Omaha Air Quality Control at (402) 441-6015.

What about dust that is coming from roads on the property of an industrial facility?

As stated in the example above, Section 002 of Chapter 32 states that no person may cause or permit a road to be used without applying all such reasonable measures to prevent particulate matter from leaving the property boundaries. NDEQ requires larger facilities to pave their roads, control traffic speed on their property, vacuum or sweep their roads, and apply water or chemical surfactants to keep the road dust to a minimum.

What can I do if I have concerns about fugitive dust from a facility?

If you have concerns regarding dust from a facility, call the NDEQ Air Quality Division at (402) 471-2189 to report the problem. If the area of concern is located in Lancaster County or Omaha, contact the appropriate authority at the phone numbers listed above.