Air Quality

Odor, Dust and Gaseous Emissions

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Texas Agricultural Experiment Station
THE TEXAS A&M UNIVERSITY SYSTEM

Center for Agricultural Air Quality Engineering & Science

AGRICULTURAL AIR POLLUTION

FACT SHEET

What is air pollution?

Air Pollution – is defined as *(Cooper and Alley, 2002)* the presence in the outdoor atmosphere of any one or more substances or pollutants in quantities which:

- Are or may be harmful or injurious to human health or welfare, animal or plant life — (i.e. health effects standard); or
- Unreasonably interfere with the enjoyment of life or property, including outdoor recreation — (i.e. nuisance doctrine)

What classifies as Agricultural Air Pollution?

- Specifically regulated substances by National Ambient Air Quality Standards (NAAQS)
- Hazardous Air Pollutants (HAP)
- Ammonia and Hydrogen Sulfide (NH_3 and H_2S)
- Odors

What are the current National Ambient Air Quality Standards (NAAQS)?

Under the current federal law (40 CFR 50), NAAQS have been established for six criteria pollutants:

Particulate Matter — PM_{10} and $PM_{2.5}$
Carbon Monoxide (CO)
Sulfur Dioxide (SO_2)
Nitrogen Dioxide (NO_2)
Ozone (O_3)
Lead (Pb)

For more detailed information and industry applicable definitions, visit http://www.epa.gov/air/criteria.html .

What are the current Hazardous Air Pollutants (HAP)?

HAPs are substances, including certain volatile organic chemicals (VOCs), pesticides, herbicides and radionuclides, that present tangible hazards based on scientific studies of exposure to humans and other mammals defined as hazardous by the 1990 amendments of the Clean Air Act.

For a list of specific HAPs and their health effects, go to:
http://www.epa.gov/ttn/atw/hapindex.html

Ammonia (NH_3) is not currently a regulated pollutant under the Clean Air Act, but it is regarded as a precursor to $PM_{2.5}$ formation and may be regulated similarly to criteria pollutants.

Hydrogen Sulfide (H_2S) is included in Section 112(r) of the Clean Air Act and is subject to the accidental release provision.

Odors are not federally regulated by EPA with specific standards. Odors are typically regulated under common law nuisance doctrine. States may regulate odors directly via a specific rule or standard that prohibits the emission of an odor over some limit, or indirectly by requiring potential or actual odor problems to be minimized or reduced without specifically regulating odor emissions.

Reference:

Cooper, C. D., and F.C. Alley. 2002. Air Pollution Control: A Design Approach. Prospect Heights, Ill: Waveland Press Inc. 694 pp.