

## FACT SHEET



### INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

## Grain Elevator Dust Prevention Best Practices

Office of Air Quality

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[www.idem.IN.gov](http://www.idem.IN.gov)

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### Description:

- This fact sheet explains how the Indiana Department of Environmental Management (IDEM) applies its fugitive dust rules to grain elevators and identifies best practices to minimize fugitive dust emissions from the various grain elevator operations.
- Grain elevators are facilities that receive, store, or distribute grain for direct use, process manufacturing, or export.
- Indiana rule (found in the Indiana Administrative Code under 326 IAC 6-4-1) defines fugitive dust as the generation of particulate matter to the extent that some portion of the material escapes beyond the property line or boundaries of the property, right-of-way, or easement on which the facility is located.
- Rule 326 IAC 6-4-2(4) states in part that a violation occurs when fugitive dust is visibly crossing the boundary or property line of the source. Visible violations of this part of the rule occur at or near ground level.
- All grain elevators are potential sources of fugitive dust and are subject to Indiana's fugitive dust rules. In addition to the general prohibition on fugitive dust, rules 326 IAC 6.5-1-2(d)(2) and 326 IAC 6.8-1-2(d)(2) require certain large grain elevators to implement housekeeping and maintenance practices to minimize fugitive dust.
- The best practices described below can be used by most grain elevators to minimize the opportunity for creating fugitive dust.

### Environmental Impacts:

- Grain elevator activities such as truck traffic on unpaved roads/lots, grain loading/unloading, and grain conveying and drying can generate fugitive dust emissions.
- These fugitive dust emissions are made of particulate matter (PM), including PM<sub>10</sub> (10 microns or less in width) and PM<sub>2.5</sub> (two- and one-half microns or less in width). PM<sub>10</sub> and PM<sub>2.5</sub> are easily inhaled and can be difficult for the human respiratory system to remove.
- Limiting fugitive dust from grain elevator activity reduces the likelihood of exposure to these inhalable particles.

### IDEM's Role:

- IDEM is responsible for protecting human health and the environment while providing for safe industrial, agricultural, commercial, and governmental operations vital to a prosperous economy.
- IDEM's Office of Air Quality regulates, permits, and monitors air emission sources, including sources of particulate matter and fugitive dust.
- IDEM responds to citizens' complaints about fugitive dust and other emissions.

### Grain Elevator Owner's Role:

- Grain elevator sources may implement the following best practices to reduce/prevent the likelihood of generating fugitive dust:
  - Use approved dust suppressants, such as calcium chloride, on unpaved drives and lots. A list of dust suppressants is available through a vendor list on IDEM's Dust Suppressants webpage at [www.idem.IN.gov/aircompliance/fugitive-dust/dust-suppressants/](http://www.idem.IN.gov/aircompliance/fugitive-dust/dust-suppressants/).
  - Limit truck speeds on the roadways and lots.
  - Pave roadway entry/exit paths as far as possible to minimize carrying dust to the paved public road/street. Sweep the property entry/exit to prevent dirt and dust from being carried onto the roadway.
  - Use mineral oil spray on grain at receiving stations.

- Unload grain from hopper trucks and rail hopper cars using choke flow practices.
- Close doors at any grain unloading/receiving and load out drive-through areas during receiving/loading activities.
- Position grain loading chutes as low as possible and use socks, dead boxes, aspiration, or other means, when possible, while loading trucks or rail cars with grain or when transferring grain to outside storage piles.
- Cover outside grain storage piles.
- Reduce grain dryer screen/mesh size as small as possible.
- Conduct preventive maintenance on any controls that are used, including, but not limited to, capture and collection systems, cyclones, fabric filters, and baffles in unloading pits. Clean out dust collectors and change filter bags at intervals recommended by the manufacturer. Clean out dust cyclone collector holding bins at scheduled intervals.
- Train employees on the prevention and minimization of fugitive dust emissions.
- Implementing the best practices does not guarantee compliance with Indiana's fugitive dust rules, but is a good start to reducing fugitive dust emissions.
- These best practices do not replace the housekeeping and maintenance requirements for grain elevators subject to rules 326 IAC 6.5-1-2(d)(2) and 326 IAC 6.8-1-2(d)(2).

### **More Information:**

- For pollution prevention information, contact IDEM's Office of Program Support and Technical Assistance at 317-232-8172 or 800-988-7901, or visit OPPTA's website at [www.idem.IN.gov/prevention/](http://www.idem.IN.gov/prevention/).
- For free, confidential compliance assistance, contact IDEM's Compliance and Technical Assistance Program (CTAP) at 317-232-8172 or 800-988-7901, or visit CTAP's website at [www.idem.IN.gov/ctap/index.htm](http://www.idem.IN.gov/ctap/index.htm).
- The rules referenced by this fact sheet can be found under Title 326 of Indiana's Administrative Code, available through the Indiana General Assembly website at [www.IN.gov/legislative/iac/](http://www.IN.gov/legislative/iac/)
- To speak with compliance staff in IDEM's Office of Air Quality about questions or concerns, please call 317-233-3861 or 800-451-6027, then press 4.