



Indiana Department of Environmental Management
Protecting Hoosiers and Our Environment Since 1986

Office of Air Quality



Air Compliance Requirements Grain Elevators

Daniel Roos

IDEM Office of Air Quality



Presentation Topics

- New source performance standards – subpart DD.
 - Background and requirements.
- Compliance inspections.
 - What to expect.
 - Requirements specific to Permit by Rule (PBR) and SSOA.
 - Common compliance issues.
 - Top 10 inspection tips.
- Citizen’s complaints about fugitive dust.
- Controlling fugitive dust.
- U.S. EPA and IDEM resources.



New Source Performance Standards (NSPS) - Subpart DD





NSPS 40 CFR 60, Subpart DD

- Standards of performance for grain elevators.
 - The NSPS is applicable to facilities with a grain terminal elevator or grain storage elevator which was constructed, modified, or reconstructed after Aug. 3, 1978.
 - The Clean Air Act exempts country grain elevators with less than 2.5 million bushels of grain storage capacity.



NSPS – Subpart DD

Relevant definitions:

- **Grain elevator** – any plant or installation at which grain is unloaded, handled, cleaned, dried, stored, or loaded.
- **Grain unloading station** – portion of the grain elevator where the grain is transferred from a truck, railcar, barge, or ship to receiving hopper.
- **Grain loading station** – portion of the grain elevator where the grain is transferred from the elevator to a truck, railcar, barge, or ship.



NSPS – Subpart DD

- Opacity limits:
 - Individual truck unloading, railcar unloading, or railcar loading station – 5% opacity limit.
 - Grain handling operation – 0% opacity limit.
 - Truck loading station – 10% opacity limit.
 - Barge and ship loading station – 20% opacity limit.

0% Opacity	25% Opacity	50% Opacity	75% Opacity	100% Opacity



NSPS – Subpart DD

- Performance testing is required.
 - Within 60 days after the affected facility reaches the maximum production rate at which it will be operated, but not later than 180 days after the initial start-up of the facility, the owner or operator must conduct one time performance testing.
 - Testing requirements under this standard are in Appendix A, 40 CFR 60.303. Also refer to 40 CFR 60.11, compliance with standards and maintenance requirements.
 - Method 2 – Determination of stack gas velocity and volumetric flow rate.
 - Method 5 – Determination of particulate matter from stationary sources.
 - Method 9 – Visual determination of the opacity of emissions from stationary sources.
 - Affected facilities that have conducted performance testing should not have repeat testing. Affected facilities that have not conducted the required performance tests should do them as soon as possible.



Compliance Inspections





What to Expect During Compliance Inspections

- Compliance inspections are conducted unannounced.
- Routine inspections normally occur during the operating season or when the processes are normally operating.
- Inspections also may be conducted in response to complaints.
- Inspectors generally conduct surveillance prior to entering the property to observe fugitive dust and equipment in operation.
- The inspector will conduct an opening meeting with the source contact upon entering the property.



What to Expect During Compliance Inspections

Compliance inspections:

- The inspector will conduct a site inspection escorted by the contact and observe equipment and controls present at the site. If the equipment and controls are operating, the inspector will observe opacity at applicable points, readings on monitoring equipment, etc.
 - Inspections focus on more than just permit conditions and include evaluation of operations potentially not listed in the permit and may include evaluation of media besides air such as storm water.



What to Expect During Compliance Inspections

Compliance inspections:

- The inspector will conduct a records review. This includes review of grain throughput, maintenance records, monitoring, visible emission records and reports not located in IDEM's files.
- The inspector will conduct a closing meeting with the source contact to go over the results of the inspection, including steps for resolving any outstanding issues, identification of upcoming compliance dates, identification of any violations discovered, and to discuss any questions the source has.



Compliance Inspections of Grain Elevator SSOA

- During an inspection, an inspector will look for the following:
 - Annual throughput.
 - Application of mineral oil or soybean oil to all grain after it is received at an application rate of 0.03% by weight or greater.
 - Monthly records of the following:
 - Type and amount of grain received and shipped.
 - Amount of mineral oil or soybean oil used and the rate of application.
 - Purchase orders and invoices for mineral oil or soybean oil.
- Maintain records on site for five years.



Compliance Inspections of Grain Elevator PBR

- During an inspection, an inspector will look for the following:
 - Annual throughput records covering the previous 12 months.
 - The source has 30 days after receipt of a written request by the department or the U.S EPA to demonstrate the source follows the annual limits.
 - Records indicating the air pollution control devices are properly maintained and operated.
 - That the source follows generally accepted industry work practices to minimize emissions of regulated air pollutants.
 - Assurance that a public nuisance is not being created by the discharge of air pollutants.



Common Compliance Issues

1. Failure to submit an annual notification.
2. Failure to conduct performance tests.
3. Gasoline tanks on site - NESHAP 40 CFR 63, Subpart CCCCCC.
 - A gasketed seal is needed on the tank opening.

Monthly Throughput ²	Requirements:	Reporting
< 10,000 gallons	<ol style="list-style-type: none">1. Minimize spills.2. Clean up spills expeditiously.3. Cover gasoline containers & storage tank fill pipes with gasketed seal.4. Minimize gasoline sent to open collection systems.	None, however must be able to demonstrate, within 24 hours of request, throughput is below 10,000 gallons per month.

4. Stationary engines (generators) - NESHAP 40 CFR 63, Subpart ZZZZ or NSPS 40 CFR 60, Subpart IIII/40 CFR 60, Subpart JJJJ.



Top 10 Inspection Tips

1. Review and understand your permit terms.
2. Call your inspector, permit writer, or Compliance and Technical Assistance Program (CTAP) staff member with questions.
3. Request a compliance assistance visit from CTAP before you have an inspection.
4. Have backup personnel available for inspections.
5. Know where environmental records and plans are maintained and make them easily accessible to appropriate personnel.



Top 10 Inspection Tips

6. Be aware of permitted emission unit and control device descriptions and locations. If you notice something is not in your permit, request a modification ASAP to get it added.
7. Understand stack testing requirements, timelines, and applicability.
8. Know which federal regulations apply to your facility and comply with them.
9. Have a plan in place for when problems occur.
10. Submit reports by applicable due dates.



Citizen Complaints About Fugitive Dust





Complaint Process

- IDEM occasionally receives complaints of fugitive dust from grain elevators. IDEM's response includes:
 - Gathering info from the complainant.
 - Looking through records for any previous complaints.
 - Conducting surveillance of the facility (multiple inspections may be conducted).
 - Contacting the source representative to discuss details of the complaint, compliance determination from inspection(s), and means of resolving any issues.
 - If there is no response from the source representative, the corporate office is usually contacted.
 - Follow-up discussion with complainant regarding the response to the complaint and resolution of the matter.

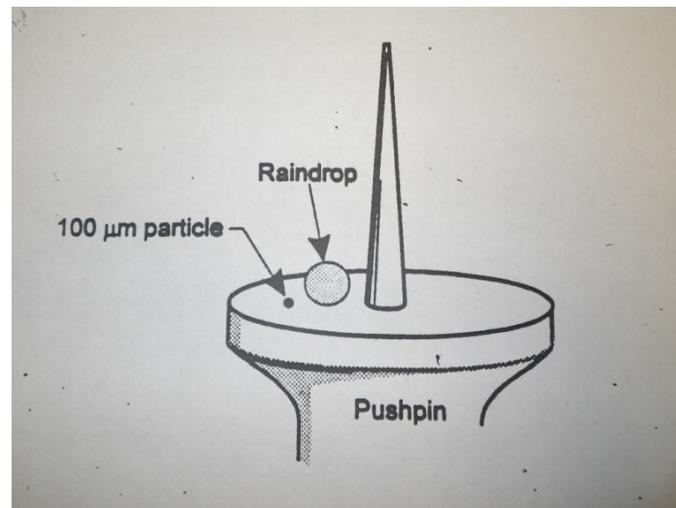


Environmental Rule Definitions

Fugitive Dust (326 IAC 6-4-1) – 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 source is located.

Particulate Matter – any airborne finely divided solid or liquid material, excluding uncombined water, with an aerodynamic diameter smaller than one hundred (100) micrometers (μm).

Beeswings should be controlled as much as possible but are not considered fugitive dust.





Controlling Fugitive Dust

Emissions from **transferring material** may be controlled by the following measures:

- Minimizing distance between the transfer points.
- Enclosing the transfer points and, if needed, exhausting emissions to control equipment when operating the transferring system.
- Application of water or suitable and effective chemical dust suppressant as needed to minimize visible emissions.

Emissions from **material handling operations** may be controlled by:

- Enclosure of emission source with venting of emissions to a fabric filter.





Controlling Fugitive Dust

Emissions from **loading** and **unloading operations** may be controlled by the following measures:

- Enclosure of the material loading/unloading area.
- Total or partial enclosure of the facility and exhausting of emissions to particulate collection equipment.
- Reduction of free fall distance.





Controlling Fugitive Dust

Emissions from **paved roads, unpaved roads, and parking lots** may be controlled by the following measures:

- Paved roads and parking lots:
 - Cleaning by vacuum sweeping, flushing, or an alternate measure.
- Unpaved roads and parking lots:
 - Paving with a material such as asphalt, chip and seal, or concrete.
 - Treating with a suitable and effective oil or chemical dust suppressant approved by IDEM's commissioner.
 - Spraying with water.
- Operation of a wheel wash to prevent tracking.





U.S. EPA and IDEM Resources





U.S. EPA Resources

- Federal regulations:
 - Code of federal regulations - 40 CFR 60, Subpart DD
<https://www.ecfr.gov/cgi-bin/text-idx?SID=a8b568ea0cd3f017f7fbd3009d1f2982&mc=true&node=sp40.7.60.dd&rgn=div6>.
- New source performance standards for grain elevators:
 - Rule summary, rule history, additional resources, and compliance
<https://www.epa.gov/stationary-sources-air-pollution/grain-elevators-new-source-performance-standards-nsps>.
- U.S. EPA applicability determination index cfpub.epa.gov/adi.





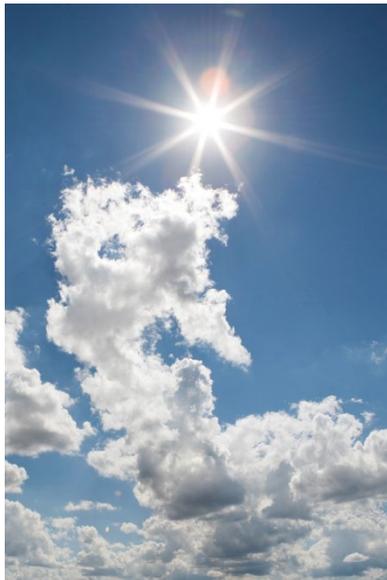
IDEM Resources

- Grain Elevator Fugitive Dust Prevention Best Practices Fact Sheet:
https://www.in.gov/idem/files/factsheet_oaq_compliance_grain_elevator_bmps.pdf
- Air quality permit status search:
www.in.gov/ai/appfiles/idem-caats.
- Air permitting resources:
<https://www.in.gov/idem/airquality/2356.htm>.
- Stack test forms and guidance:
idem.IN.gov/airquality/2410.htm.
- IDEM staff members:
 - Office of Air Quality – *Air Compliance and Enforcement*
idem.IN.gov/airquality/2418.htm.
 - Regional staff and inspectors
idem.IN.gov/pages/inspectors.



Free, Confidential Compliance and Technical Assistance

IDEM's non-regulatory Compliance and Technical Program (CTAP) is a one-stop shop for environmental regulatory compliance needs.



- Website:
idem.IN.gov/ctap/index.htm
- Phone:
800-988-7901 (toll free in-state only)
317-232-8172



Questions?





Contact Information



Office of Air Quality
Compliance and Enforcement Branch

Daniel Roos

812-582-0614

DRoos@idem.IN.gov