

# Proposed Amendments to NSPS for Grain Elevators

EPA Region 7 Ag Stakeholders  
October 30, 2014

# Outline

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- ▶ Background
- ▶ NSPS Review
- ▶ Proposal
- ▶ Schedule



# Background

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- ▶ Approximately 900 grain elevators subject to current regulation
- ▶ Nationwide  $PM_{10}$  emissions
  - ▶ 25,000 tpy PM (controlled)
- ▶ Existing regulation controls PM emissions from loading/unloading sources, grain handling, and grain dryers
- ▶ Rule applicability is triggered by storage capacity
  - ▶ 1,000,000 bushels for elevators at processing facilities
  - ▶ 2,500,000 bushels for other elevators
  - ▶ CAA was amended in 1977 with these triggers

# Background (cont'd)

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- ▶ Original NSPS for Grain Elevators promulgated in 1978 and reviewed in 1984
  - ▶ No changes made in 1984
- ▶ November 2007: OECA issued letter indicating temporary storage should be counted toward storage capacity for applicability purposes
- ▶ May 2010: Industry petitioned OECA to reconsider and rescind November 2007 determination on temporary storage
- ▶ January 2011: Industry requested EPA review Grain Elevator NSPS as part of EO 13563 Lookback Exercise
  - ▶ EPA committed to review NSPS
- ▶ Review will also:
  - ▶ Fulfill CAA requirement for review of NSPS every 8 years
  - ▶ Address temporary storage issue industry has raised
- ▶ February 2012: Industry petitioned EPA to delist source category and repeal Grain Elevator NSPS
  - ▶ Addressed in proposed rulemaking
- ▶ October 2012: Industry reactivated May 2010 request to rescind November 2007 OECA letter on temporary storage facilities

# NSPS Review

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- ▶ Proposal published in the Federal Register on July 9, 2014
- ▶ Clarify definitions and provisions in current rule (DD)
- ▶ Create new subpart (DDa) that would apply to facilities that commence construction, modification or reconstruction after date of proposal
  - ▶ Establish new method for determining applicability
  - ▶ Set new emission limits for certain affected facilities
  - ▶ Revise testing, monitoring, recordkeeping and reporting requirements
  - ▶ Revise requirements for periods of startup, shutdown and malfunction
  - ▶ Estimated cost impacts

# Proposed Clarification to Existing Definitions

- ▶ Proposed clarifications are intended to keep meaning and intent of the original definitions as promulgated

| <b>Current Subpart DD Provision (Subpart DD citation)</b>   | <b>Proposed Revision to Subpart DD for Affected Facilities that Have Commenced Construction, Modification, or Reconstruction after August 3, 1978</b>   |
|---|---|
| <p>“Grain unloading station” is defined to be that portion of a grain elevator where the grain is transferred from a truck, railcar, barge or ship to a receiving hopper. (§60.301(j))</p>  | <p>“Grain unloading station” is that portion of a grain elevator where the grain is transferred from a truck, railcar, barge or ship to a receiving hopper or to the grain handling equipment that connects the unloading station to the rest of the grain elevator, including all of the equipment, support structures and associated dust control equipment and aspiration systems connected to or required to operate the grain unloading station.</p>                                       |
| <p>“Grain loading station” is defined to mean that portion of a grain elevator where the grain is transferred from the elevator to a truck, railcar, barge or ship.( §60.301(k))</p>  | <p>“Grain loading station” is that portion of a grain elevator where the grain is transferred from the elevator to a truck, railcar, barge or ship, including all of the equipment, support structures and associated dust control equipment and aspiration systems connected to or required to operate the grain loading station.</p>  |
| <p>For affected barge or ship unloading stations, the unloading leg is required to be enclosed from the top (including the receiving hopper) to the center line of the bottom pulley and ventilation to a control device is required to be maintained on both sides of the leg and the grain receiving hopper. (§60.302 (d)(1))</p> | <p>For affected barge or ship unloading stations, the requirements in §60.302 (d)(1) remain the same except that a new provision is proposed to be added to clarify that where aspiration of the casing provides dust control at the boot of the conveyor and a receiving hopper is not used, the unloading leg is required to be enclosed from the top to the center line of the bottom pulley, and ventilation to a control device is required to be maintained on both sides of the leg.</p> |

# Proposed New Method for Calculating Storage Capacity

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- ▶ Proposing to fractionally count temporary storage capacity toward applicability

- ▶ Proposing two different methods for calculating capacity

- Method 1 is for facilities that have historical throughput information

$$C_{tp} = C_p + (C_p / T_p * C_t)$$

- Method 2 is for facilities that are new or don't have historical throughput information

$$C_{tp} = C_p + (.34 * C_t)$$

- ▶ Definition for temporary storage facilities is proposed to be defined as any grain storage bin that: (1) Uses an asphalt, concrete or other improved base material; (2) uses rigid, self-supporting sidewalls; (3) provides aeration; and (4) provides a covering or tarp.
- ▶ OECA's letter of November 2007 concerning treatment of temporary storage has been rescinded

# Proposed New Emission Limits for Certain Affected Facilities

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- ▶ We are proposing the following actions regarding the PM standards:
  - ▶ Maintain the subpart DD standards for “rack dryers” and “column dryers” and add a provision that “wire screen column dryers” are prohibited from discharging into the atmosphere any gases that exhibit greater than 10-percent opacity.
  - ▶ Add an opacity limit of 10 percent for all affected facilities at barge and ship unloading stations that unload grain using en-masse drag conveyors.
  - ▶ Add a requirement that unloading facilities and grain handling operations at TSFs meet the subpart DD requirements for PM (0.01 gr/dscf) and opacity (5 percent for truck unloading and 0 percent for grain handling) if portable equipment is not used.
  - ▶ Add a requirement that the standards of subpart DDa apply at all times including periods of SSM.

# Proposed Revised Testing/monitoring/recordkeeping Requirements

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- ▶ We are proposing the following actions to test methods and procedures:
  - ▶ Annual opacity testing be conducted for each applicable opacity limit for each affected facility (using Method 9).
  - ▶ PM testing be conducted every 60 months for each applicable PM limit for each affected facility (using Method 5 or 17). Add an opacity limit of 10 percent for all affected facilities at barge and ship unloading stations that unload grain using en-masse drag conveyors.
- ▶ We are proposing the following new monitoring requirements:
  - ▶ Fabric filter/baghouse inspections every 6 months.
  - ▶ Weekly visible emissions checks of affected facilities.
- ▶ We are proposing the following new records:
  - ▶ Total storage capacity (bushels) for each building, bin (excluding TSFs), and silo used to store grain.
  - ▶ Storage capacity for each TSF.
  - ▶ Calculations documenting the emissions quantification for excess emission events.
  - ▶ Results of fabric filter/baghouse inspections and any corrective action taken maintained on-site.
  - ▶ Results of weekly visible emission checks, including any corrective action taken. Records maintained on site for a minimum of 36 months.
  - ▶ Results of the annual opacity tests.
  - ▶ The type of grain processed during performance tests at the affected facility.

# Estimated Costs of Proposed Revisions

| Requirement  | Capital Cost<br>(\$ thousand) | Annual Cost<br>(\$ thousand/yr) | Emission Reductions<br>(tons PM10/yr) |
|--|-------------------------------|---------------------------------|---------------------------------------|
| PM control   | 1,087                         | 350                             | 31                                    |
| Emissions testing and monitoring/reporting and recordkeeping | 0                             | 849                             | 0                                     |
|  |                               |                                 |                                       |
| Total nationwide   | 1,087                         | 1,199                           | 31                                    |

- ▶ Projecting 3 new greenfield elevators, 30 new expanded elevators (newly subject) and 88 modified affected facilities in 5-year period

# How to Comment

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- ▶ Comments, identified by Docket ID No. EPA-HQ-OAR-2010-0706, may be submitted by one of the following methods:
  - ▶ [www.regulations.gov](http://www.regulations.gov): follow the on-line instructions for submitting comments.
  - ▶ Email: Comments may be sent by electronic mail (email) to:  
a-and-r-Docket@epa.gov.
  - ▶ Fax: Fax your comments to: (202) 566-9744.
  - ▶ Mail: Send your comments to: Air and Radiation Docket and Information Center, Environmental Protection Agency, Mail Code: 2822T, 1200 Pennsylvania Ave., NW, Washington, DC 20460.
  - ▶ Hand Delivery or Courier: Deliver your comments to: Air and Radiation Docket and Information Center, 1301 Constitution Ave., NW, Room 3334, Washington, DC 20004. Such deliveries are only accepted during the Docket's normal hours of operation and special arrangements should be made for deliveries of boxed information.

# Next Steps

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- ▶ Comment period ends November 6, 2014
- ▶ Expect final rule out summer 2015

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QUESTIONS?