

## Prepared Feeds Manufacturing Area Source NESHAP, Subpart 7D

October 15, 2014

### General Information

- Federal Rule Citation: 40 CFR 63.11619
- State Rule Citation: 567 IAC 23.1(4)“fd”
- Date of Original Final Rule: January 5, 2010
- Amendments Dates:
  - December 23, 2011 - removing the 95% efficiency requirement for existing cyclones and other technical corrections and clarifications
  - July 20, 2010 - Correction to Compliance Status Notification Information & Annual Report

### Applicability

Rule applies to each prepared feeds manufacturing facility that:

- Is primarily engaged<sup>1</sup> in the manufacture of animal feed<sup>2</sup>;
- Uses a material containing chromium<sup>3</sup> or manganese<sup>4</sup>; and
- Is an area source of HAP emissions.

The rule does **not** apply to:

- Research or laboratory facilities as defined in section 112(c)(7) of the Clean Air Act;
- Facilities primarily engaged in raising or feeding animals; or
- Facilities engaged in the growing of crops that are used in the manufacture of feed.

### Affected Source

The affected source is the collection of all equipment and activities necessary to produce animal feed from the point in the process where a material containing chromium or a material containing manganese is added, to the point where the finished animal feed product leaves the facility. This includes, but is not limited to, areas where materials containing chromium and manganese are stored, areas where materials containing chromium and manganese are temporarily stored prior to addition to the feed at the mixer, mixing and grinding processes, pelleting and pellet cooling processes, packing and bagging processes, crumblers and screens, bulk loading operations, and all conveyors and other equipment that transfer the feed materials throughout the manufacturing facility.

---

<sup>1</sup> A facility is *primarily engaged* in manufacturing animal feed if the production of animal feed comprises greater than 50 percent of the total production of the facility on an annual basis.

<sup>2</sup> Feed products produced for dogs and cats are not considered animal feed for the purposes of this subpart.

<sup>3</sup> *Material containing chromium* means a material that contains chromium (Cr) in amounts greater than or equal to 0.1 percent by weight.

<sup>4</sup> *Material containing manganese* means a material that contains manganese (Mn) in amounts greater than or equal to 1.0 percent by weight.

### **Compliance Dates**

- Existing Sources: by January 5, 2012
- New Sources (built after July 27, 2009): January 5, 2010 or upon startup, whichever is later
- Facilities that start using materials containing chromium or manganese after the compliance date: comply by the date facility starts using those materials
- Facilities that exceed the threshold triggering cyclone control requirements: comply by July 1 of the year following the calendar year in which the threshold was exceeded

### **General Standards**

- Perform housekeeping to minimize dust in areas of the facility where materials containing chromium or manganese are stored, used, or handled. Minimum requirements:
  - Use either industrial vacuum system or manual sweeping to reduce the amount of dust;
  - Remove dust from walls, ledges, and equipment using low pressure air or other means, then sweep the area at least once per month; and
  - Keep doors shut except during normal entry and exit. (This requirement does not apply to areas where finished product is stored in closed containers, and no other materials containing chromium or manganese are present.)
- Maintain and operate all process equipment that stores, processes, or contains materials containing chromium or manganese in accordance with manufacturers' specifications and in a manner to minimize dust creation.

### **Standards for Specific Process Areas**

- Storage Areas: all raw materials containing chromium or manganese must be stored in closed containers.
- Mixing Operations: materials containing chromium or manganese must be added to the mixer in a manner to reduce emissions, and the mixer must be covered at all times when mixing is occurring, except when materials are being added.

### **Bulk Loading Processes**

- Where prepared feeds products containing any chromium or manganese are loaded into trucks or railcars, lessen fugitive emissions by reducing the distance between the loadout spout and the vehicle being loaded by either:
  - Using a device of any kind at the bulk loadout spout that minimizes the distance to the vehicle being loaded, perform monthly inspections of these devices, and maintain records of the inspections and any corrective action taken; or
  - Using any other means to minimize the distance between the loadout spout and the vehicle being loaded.

### **Pelleting Operations at New Sources (built after July 27, 2009)**

*(These standards only apply to facilities with an average daily feed production level<sup>5</sup> exceeding 50 tons per day)*

- Route emissions from pelleting operations to a cyclone designed to reduce particulate matter emissions by at least 95 percent.
- Demonstrate that the cyclone is designed to achieve a 95 percent reduction in PM using one of the following, and keep records of this demonstration:
  - Manufacturer specifications,
  - Certification by a professional engineer or responsible official, or
  - A Method 5 performance test conducted in accordance with §63.11619.
- Establish a parameter range that indicates the cyclone is operating properly. Parameter ranges must be based on the same source of information used to demonstrate 95% control efficiency. This parameter can be:
  - Inlet flow rate,
  - Inlet velocity,
  - Pressure drop, or
  - Fan amperage.
- Monitor the selected cyclone operating parameter (inlet flow rate, inlet velocity, pressure drop, or fan amperage) at least once per day when the pelleting process is in operation. Record the results and any corrective action that was taken.
- Maintain and operate the cyclone in accordance with manufacturer's specifications. If none are available, develop and follow O&M procedures that ensure proper operation and maintenance of the cyclone.
- Perform quarterly inspection of each cyclone for corrosion, erosion or any other damage that could result in air in-leakage. Record the results of the inspection and any corrective action taken.

### **Pelleting Operations at Existing Sources (built on or before July 27, 2009):**

*(These standards only apply to facilities with an average daily feed production level<sup>6</sup> exceeding 50 tons per day)*

- Route emissions from pelleting operations to a cyclone.
- Maintain the cyclone in accordance with good air pollution control practices and manufacturer's specifications and operating instructions, if available.
- If manufacturer's specifications and operating instructions are not available, develop and follow O&M procedures that ensure proper operation and maintenance of the cyclone.
- Perform a weekly visual inspection of the operating cyclone to ensure it is operating consistent with good air pollution control practices.
- Perform quarterly inspection of each cyclone for corrosion, erosion or any other damage that could result in air in-leakage. Record the results of the inspection and any corrective action taken.

---

<sup>5</sup> Initial level is based on the design rate for new sources. Subsequent levels are determined annually based actual production during a calendar year and the number of days of operation.

<sup>6</sup> Initial level is based on the design rate for new sources. Subsequent levels are determined annually based actual production during a calendar year and the number of days of operation.

### **Monitoring**

- Perform monthly inspections of the devices used at the bulk loadout spout to minimize the distance to the vehicle being loaded.
- Perform quarterly inspection of each cyclone for corrosion, erosion or any other damage that could result in air in-leakage.
- For cyclones required at a new source, monitor the selected cyclone operating parameter (inlet flow rate, inlet velocity, pressure drop, or fan amperage) at least once per day when the pelleting process is in operation.
- For cyclones required at a existing source, perform a weekly visual inspection of the operating cyclone to ensure it is operating consistent with good air pollution control practices.

### **Recordkeeping**

- Keep a copy of each Initial Notification and Notification of Compliance Status, and all supporting documents.
- Keep a copy of each Annual Compliance Certification.
- If the average daily feed production level is 50 tons per day or less, maintain feed production records.
- Keep records of inspection and maintenance and any corrective action taken as noted above (bulk loadouts and cyclones).
- For cyclones required at a new sources:
  - Keep records demonstrating that any cyclone required at a new source is designed to achieve a 95 percent reduction in PM.
  - Keep records of the selected cyclone operating parameter.
  - The operation and maintenance procedures to ensure proper operation of the cyclone.
  - Keep records of the quarterly inspection of each cyclone and any corrective action taken
- For cyclones required at a existing sources:
  - Keep records of the weekly visual inspection.
  - Keep records of the quarterly inspection and any corrective action taken.
- Records must be kept for 5 years; onsite for at least 2 years.

### **Required Notifications**

- Initial Notification: Submit no later than May 5, 2010, or 120 days after becoming subject to the rule, whichever is later.
- Notification of Compliance Status:
  - Existing affected sources must submit on or before May 4, 2012.
  - New affected sources must submit by October 18, 2010, or within 120 days of initial startup, whichever is later.
  - Sources that start using materials containing chromium or manganese after the applicable compliance date must submit NOCS within 120 days.

- Annual Compliance Certification: prepare every year by March 1 for the previous calendar year. Submit this certification to DNR and EPA if there were any deviations from the NESHAP requirements.
- Facilities that no longer use materials that contain chromium or manganese after January 5, 2010, are no longer subject to the rule, and are required to submit a notification to that effect.

### Notes

- Animal feed” includes traditional feed products as well as feed ingredients, premixes, additives, concentrates, etc. “Animal feed” does not include dog and cat feed.
- A facility becomes an affected source once it starts using a material containing chromium or a material containing manganese. The source must achieve compliance with the applicable provisions of the subpart by the date it commences using a material containing manganese or a material containing chromium.
- An affected source is no longer subject to this subpart if the facility stops using materials containing chromium or manganese.
- A source that does not use materials containing chromium or manganese is not an affected source.
- The source does not need to perform management practices in areas where materials containing chromium or manganese are not used.
- If a facility is subject to the provision to operate a cyclone to control emissions from pelleting operations, but then during a subsequent calendar year does not exceed the threshold of an average daily feed production of 50 tons per day, such a facility no longer is required to comply with the cyclone requirements.

### Feed mills co-located with grain elevators

Below is an excerpt from an EPA Q&A document that addresses the “primarily engaged” concept at a feed mill with a co-located elevator. (Full document available at [http://www.epa.gov/ttn/atw/area/feedmfg\\_q\\_a.pdf](http://www.epa.gov/ttn/atw/area/feedmfg_q_a.pdf))

Q: In a related question, if a facility has grain elevators and prepared feed production, how would you determine if the facility is a “*prepared feeds manufacturing facility*”?

A: As noted above, a prepared feeds manufacturing facility is a facility where “*the production of animal feed comprises greater than 50 percent of the total production of the facility on an annual basis.*” We expect that many prepared feed manufacturing facilities have grain elevators on site. However, these elevators should be considered an auxiliary process to the production of a product. The determination of whether a facility is a prepared feeds manufacturing facility is based on the production at the site. Consider a facility that receives grain, which is transported by grain elevators and processed, and then used to make animal feed. This is clearly a prepared feeds manufacturing facility. If, however, the facility produces grain that is not used in the production of feed, a determination would be needed to determine if the facility is a prepared feeds manufacturing facility or a grain production facility. The 50 percent criterion would be used for this determination. *If the grain sold or otherwise transported from the facility made up more 50 percent of the total mass produced at the facility (total mass of grain plus the mass of the prepared feed), then the facility would be “primarily engaged” in producing grain, and it would not be a prepared feed manufacturing facility.*

## **Permitting and 7D**

### **Permitting Issues**

A number of facilities have used the small unit exemption for equipment that has NESHAP requirements. These sources will have to obtain a permit for this equipment. Currently we are estimating that 50-150 facilities may need permits, and three or four permits would be needed per site. There may also be a few facilities that have not obtained permits.

### **Which equipment will need a construction permit at a facility subject to the Prepared Feeds NESHAP?**

- Equipment that will likely need a construction permit:
  - Pellet cooler, if the facility's average daily feed production level exceeds 50 tons per day
  - Bulk loading that's done outside or exhausts directly outside
- Equipment that can use the small unit exemption, because no specific NESHAP requirements apply to this equipment:
  - Pellet cooler, if the facility's average daily feed production level does not exceed 50 tons per day
  - Corn/grain receiving areas, storage bins for grain, and hammermills for corn/grain
- Equipment that generally isn't required to either have a construction permit or be covered by the small unit exemption, even if specific NESHAP requirements apply:
  - Storage areas or mixing equipment that don't exhaust directly to the outside
  - Bulk loading that's done inside a building and not exhausted outside

The small unit exemption cannot be used if an emission unit has specific applicable NESHAP requirements. This means that some prepared feeds manufacturing facilities will need to apply for construction permits for equipment that has been covered under the small unit exemption in the past.

### **Other Information and Resources**

- Link to the information in Library:

<P:\con-perm\Library\Country Grain Elevator and Feed Mill\NESHAP 7D>

- Link to the Compliance Notification Spreadsheet:

[P:\Compliance\\_Shared\Air Toxics\Notifications](P:\Compliance_Shared\Air Toxics\Notifications):

- Link to the rule:

<http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=9d62bda299e0d6d5f67962a7c421791e&r=SUBPART&n=sp40.15.63.dddddd>

- Link to Area Source Rules:

<http://earth1.epa.gov/ttn/atw/area/arearules.html>

- Link to AP-42 Grain Elevators And Processes:

<http://www.epa.gov/ttn/chief/ap42/ch09/final/c9s0909-1.pdf>

**For more information**

EPA area source website: <http://www.epa.gov/ttn/atw/area/arearules.html>

EPA Contact for 7D:

Elizabeth Kramer

EPA Region 7

11201 Renner Blvd.

Lenexa, KS 66219

kramer.elizabeth@epa.gov

(913) 551-7186