

# Prepared Feeds Manufacturing Air Toxics Standards

## 40 Code of Federal Regulations Part 63, Subpart DDDDDDD (“7D Rule”)

April 2021

*This fact sheet has been prepared by the Iowa Department of Natural Resources (DNR) to assist facilities in complying with federal air toxics standards affecting prepared feed manufacturing. This document is intended solely as guidance, cannot be used to bind the DNR and is not a substitute for reading applicable statutes and regulations.*

### **Who Does the 7D Rule Apply To?**

Please refer to the full rule text of 40 Code of Federal Regulations (CFR) Part 63, Subpart DDDDDDD (available at the eCFR at [63 Subpart DDDDDDD](#)) to determine all applicable equipment requirements necessary to be in compliance with this rule.

**The 7D rule applies to a facility that manufactures prepared animal feed or additives for animal feed (sometimes known as a “feed mill”).**

To be subject to the 7D Rule, the facility must also meet **all** the following conditions:

- **Is primarily engaged in the manufacture of animal feed**
  - 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.
  - For facilities with both a grain elevator and a feed mill, *total production* means grain loaded out by the grain elevator and animal feed produced by the feed mill.
  - Feed products produced for dogs and cats are not considered animal feed for the purposes of this rule.
- **Uses a material (such as an additive or pre-mix) containing chromium or manganese;**
  - *Material containing chromium* means a material that contains chromium (Cr) in amounts greater than or equal to 0.1 percent by weight.
  - *Material containing manganese* means material that contains manganese (MN) in amounts greater than or equal to 1.0 percent by weight.
- **Is an area source of Hazardous Air Pollutant (HAP) emissions. An *area source* has potential emissions less than 10 tons per year of any individual HAP and less than 25 tons per year of any combination of HAP.**

Under the 7D Rule, 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 manganese is added, to the point where the finished animal feed product leaves the facility

### **The 7D 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
- Facilities engaged in the growing of crops that are used in the manufacture of feed
- Areas of the facility where materials containing chromium or manganese are not used or stored

### **What Equipment is Covered Under the 7D Rule?**

- 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
- All conveyors and other equipment that transfer the feed materials throughout the manufacturing facility

### **When Must a Facility Comply with the 7D Rule?**

- **Existing Source** (built on or before July 27, 2009): by January 5, 2012
- **New Source** (built after July 27, 2009): January 5, 2010 or upon startup, whichever is later
- **A source that starts using materials containing chromium or manganese after the compliance date:** comply by the date the source starts using those materials
- **A facility that exceeds the throughput threshold triggering the requirements for pelleting operations:** comply by July 1 of the year following the calendar year in which the threshold was exceeded (See table below for the requirements for pelleting operations.)

### **What are the Requirements for Each Facility Affected by the 7D Rule?**

- **Perform housekeeping to minimize dust where materials containing chromium or manganese are stored, used, or handled. Minimum requirements include:**
  - Use either an 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.)
- **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.**

### **What are the Requirements for Storage Areas and Mixing Operations?**

- **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.

### **What are the Requirements for Bulk Loading Processes?**

Where prepared feeds products containing any chromium or manganese are loaded into trucks or railcars, the facility must 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.**  
Additional requirements include:
  - Perform monthly inspections of these devices, and
  - Maintain records of the inspections and any corrective action taken.
- **Using any other means to minimize the distance between the loadout spout and the vehicle being loaded.**

## **What are the Requirements for Pelleting Operations?**

*Pelleting operations* means all operations that make pelleted animal feed, including but not limited to, steam conditioning, die-casting, drying, cooling, and crumbling, and granulation. The requirements below apply only to facilities with an average daily feed production level<sup>1</sup> exceeding 50 tons per day.

	<b>New Sources</b>	<b>Existing Sources</b>
<b>Source Type</b>	A new source is a prepared feeds manufacturing facility <u>that commenced construction or reconstruction<sup>2</sup> of the facility after July 27, 2009.</u>	An existing source is a prepared feeds manufacturing facility <u>that commenced construction or reconstruction of the facility on or before July 27, 2009.</u>
<b>Cyclone Requirements</b>	Route emissions from pelleting operations to a cyclone designed to reduce particulate matter (PM) emissions by at least 95 percent (95%). <ul style="list-style-type: none"> <li>• Demonstrate that the cyclone is designed to achieve a 95% reduction in PM using one of the following, and keep records of this demonstration: <ul style="list-style-type: none"> <li>○ Manufacturer specifications,</li> <li>○ Certification by a professional engineer or responsible official, or</li> <li>○ A Method 5 performance test conducted in accordance with §63.11623.</li> </ul> </li> <li>• 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: <ul style="list-style-type: none"> <li>○ Inlet flow rate,</li> <li>○ Inlet velocity,</li> <li>○ Pressure drop, or</li> <li>○ Fan amperage.</li> </ul> </li> </ul>	Route emissions from all pelleting operations to a cyclone.
<b>Cyclone Operations</b>	Maintain and operate the cyclone in accordance with manufacturer's specifications. <ul style="list-style-type: none"> <li>• If none are available, develop and follow facility Operating &amp; Maintenance procedures that ensure proper operation and maintenance of the cyclone.</li> </ul>	Maintain the cyclone in accordance with good air pollution control practices and manufacturer's specifications and operating instructions, if available. <ul style="list-style-type: none"> <li>• If none are available, develop and follow facility Operating &amp; Maintenance procedures that ensure proper operation and maintenance of the cyclone.</li> </ul>
<b>Monitoring</b>	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.	Perform a weekly visual inspection of the operating cyclone to ensure it is operating consistent with good air pollution control practices.
<b>Inspections</b>	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.	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>1</sup> **New Sources:** Initial average daily production level is based on the design rate; **Existing Sources:** Initial average daily production level is based on the actual production during the one-year period prior to the compliance date (i.e. January 5, 2011 - January 4, 2012). Subsequent levels are determined annually based on actual production during a calendar year and the number of days of operation.

<sup>2</sup> Definitions of "**commenced**," "**construction**," and "**reconstruction**" are specified in [40 CFR 63.2](#) (Subpart A – General Conditions).

## **What Notifications Must I Submit for the 7D Rule?**

Facilities must submit notifications to the Iowa Department of Natural Resources (DNR Air Quality Bureau, ATTN: NESHAP Coordinator, 502 E. 9<sup>th</sup> Street, Des Moines, IA 50319).

- **Initial Notification** (see [63.11624\(a\)\(1\)](#)):
  - o Submit no later than May 5, 2010, or 120 days after becoming subject to the rule, whichever is later.
  - o Initial notification is not required if a facility is in compliance and submits the Notification of Compliance Status (see below).
- **Notification of Compliance Status (NOCS)** (see [63.11624\(a\)\(2\)](#)):
  - o Existing affected facilities must submit the NOCS on or before May 4, 2012.
  - o New affected sources must submit the NOCS by October 18, 2010, or within 120 days of initial startup, whichever is later.
  - o Sources that start using materials containing chromium or manganese after the applicable compliance date must submit NOCS within 120 days.
- **Annual Compliance Certification** (see [63.11624\(b\)](#)): The certification must be submitted to the DNR if there were any deviations from the NESHAP requirements. The facility must prepare the certification every year by March 1 for the previous calendar year.
- **A facility that no longer uses materials that contain chromium or manganese after January 5, 2010:** The facility is no longer subject to the 7D rule, and must provide written notification to the DNR to that effect.

## **What Recordkeeping for the 7D Rule Must I Maintain at the Facility?**

Records must be maintained in a form suitable and readily available for expeditious review.

- **Copies of all notifications and reports, and supporting documentation**
- **Feed Production Records:** Required only if the average daily feed production level is 50 tons per day or less
- **Records of inspection and maintenance and any corrective action taken for bulk loadouts and cyclones**
- **For cyclones required at new sources**
  - o Keep records demonstrating that any cyclone required at a new source is designed to achieve a 95 percent reduction in PM
  - o Keep records of the selected cyclone operating parameters
  - o Keep records of the operation and maintenance procedures to ensure proper operation of the cyclone
  - o Keep records of the quarterly inspection of each cyclone and any corrective action taken
- **For cyclones required at existing sources**
  - o Keep records of the weekly visual inspection
  - o Keep records of the quarterly inspection and any corrective action taken
- **Records must be maintained for five years.** The first two years of records must be maintained on-site; older records may be maintained on or off site.

### **For more information or questions please contact:**

Iowa Air Emissions Assistance Program: **1-800-422-3109**

Iowa Department of Natural Resources: **1-877-AIR-IOWA**