



National Grain and Feed Association

# Plant Operations Bulletin

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## EPA Issues Final Rule on Emission Controls for Feed Manufacturers Handling Materials Containing Chromium and Manganese

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The Environmental Protection Agency (EPA) on Jan. 5 issued its final regulations under the Clean Air Act governing emissions of chromium and manganese from feed and feed ingredient manufacturers.

EPA issued the regulations to comply with the Clean Air Act (CAA), which requires EPA to identify at least 30 hazardous air pollutants that pose the greatest threat to public health in the largest

number of urban areas. The CAA further requires EPA to identify and implement standards for all industry source categories that account for 90 percent of the emissions of the 30 identified hazardous air pollutants. In response, EPA has identified chromium and manganese as hazardous air pollutants. Further, it has determined that feed and feed ingredient manufacturers, based upon the agency's reporting records, represent an industry source category that contributes to 90 percent of the emissions of chromium and manganese.

### Facilities Covered by EPA's Final Rule

EPA's final regulations apply to facilities classified with a North American Industry Classification System (NAICS) code of 311119 (facilities primarily engaged in manufacturing animal feed), provided such facilities use a material containing 0.1 percent or more of chromium or 1 percent or more of manganese by weight and animal feed production represents more than 50 percent of total annual production at the facility. The 311119 NAICS code does not include facilities that primarily manufacture dog or cat food. Therefore, such pet food manufacturers are not covered by the rule.

EPA's final rule also expressly states that facilities "primarily engaged in raising or feeding animals are not considered prepared feeds manufacturing facilities." [*Emphasis added.*] As an aside, integrated livestock and poultry operations may be classified under different NAICS codes (e.g., 112112 for hog and pig farming, or 112111 for beef cattle ranching and farming). Importantly, NAICS

codes are assigned on an establishment (facility) basis. NAICS defines an establishment as "generally a single physical location where business is conducted or where services or industrial operations are performed (e.g., factory, mill, store, hotel, movie theater, mine, farm, airline terminal, sales office, warehouse, or central administrative office). An enterprise, on the other hand, may consist of more than one location performing the same or different types of economic activities. Each establishment of that enterprise is assigned a NAICS code based upon its own primary business activity."

Therefore, facilities at different locations that are operated by a single enterprise or business may have varying NAICS codes.

Facilities covered by the EPA final rule are to be in compliance with the applicable regulations by no later than January 5, 2012.

## Standards, Monitoring and Inspection Requirements

EPA's final regulations contain the following standards, monitoring and inspection requirements:

▶ **Management and Housekeeping:** The final rule requires facilities to implement management and housekeeping practices to minimize excessive dust that could contain chromium or manganese. Housekeeping measures specified in the rule apply only to those areas of the facility where materials containing chromium or manganese are stored, used or handled, and include:

- Using an industrial vacuum system or manual sweeping to reduce the amount of dust.
- Removing dust from walls, ledges and equipment at least monthly using low-pressure air or by other means, and then sweeping or vacuuming the area.
- Keeping doors to the facility shut, except during normal entry and exit.

Management practices specified in the rule include:

- Storing all raw materials containing chromium or manganese in closed containers.
- Adding materials containing chromium and manganese to the mixer in a manner that minimizes emissions and covering the mixer at all times when mixing is occurring, except when the materials are being added to the mixer.

▶ **Control Measures:** The final rule requires that covered facilities comply with the following control measures:

- Using a "device" during the loadout of bulk feed or feed ingredients that reduces the distance between the "loading arm" and the truck or railcar to reduce fugitive emissions of chromium and manganese. Examples of such devices cited by EPA within the rule include drop socks, flexible spouts and any device that reduces the distance between the loading arm and the truck or railcar "to a degree that avoids dust." EPA does not define "loading arm" in the rule, and the NGFA likely will seek clarification on how this requirement is to be applied.
- At facilities with a daily production rate of all animal feed exceeding 50 tons per day:
  - Capturing emissions from pelleting operations

and routing them to a pellet cyclone designed to reduce emissions of particulate matter by at least 95 percent. Covered facilities are to demonstrate that the cyclone is designed to reduce emissions of particulate matter by 95 percent or more by one of the following methods: 1) documented specifications provided by the cyclone manufacturer; 2) certification by a professional engineer or responsible individual; or 3) results obtained by an EPA-recognized Method 5 performance test.

- Establishing an inlet air-flow rate, inlet air velocity, pressure drop or fan amperage range that represents proper operation of the pellet cyclone. Facilities may determine such parameters from information obtained from: 1) the cyclone's manufacturer; 2) the professional engineer involved with certifying the efficiency of the cyclone; or 3) documenting the conditions present when conducting the Method 5 performance test.

To clarify the scope of the requirements that pertain to pelleting operations, EPA provides the following definitions within the final rule:

- **Cyclone:** A mechanically aided collector that uses inertia to separate particulate matter from the gas stream as it spirals through the cyclone.
- **Pelleting Operations:** All operations that make pelleted animal feed, including but not limited to, steam conditioning, die-casting, drying, cooling and crumbling, and granulation.
- **Average Daily Feed Production Level:** The average amount of animal feed products produced each day over an annual period. The initial determination of the average daily feed production level is based upon the one-year period prior to the compliance date (January 5, 2012) for existing facilities, or the design rate for new facilities. The subsequent average daily feed production levels are determined annually and are based upon the amount of animal feed products produced in a calendar year divided by the number of days in which the production processes were in operation.

If a facility does not exceed the threshold of an average daily feed production level of 50 tons, but during a subsequent calendar year does exceed the threshold, the final

rule requires such a facility to capture emissions from its pelleting operations and route them to a cyclone designed to reduce emissions of particulate matter by at least 95 percent and to comply with all applicable operating requirements for the cyclone by July 1 of the year following the calendar year in which the threshold was exceeded.

By contrast, 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.

► **Inspection and Monitoring:** EPA's final rule requires covered facilities to inspect and monitor the following equipment to ensure it is functioning properly:

- The device(s) used during bulk loadout to minimize fugitive emissions of chromium and manganese is to be inspected monthly.
- At facilities with a daily production rate of all animal feed exceeding 50 tons per day:

- Pellet cyclones are to be maintained and operated in accordance with manufacturer's specifications. If manufacturer's specifications are not available, the facility is to develop and follow standard maintenance and operating procedures that ensure the proper operation of the cyclone.
- Pellet cyclones are to be inspected quarterly for corrosion, erosion or other damage that could result in air leakage.
- The pellet cyclone's inlet flow rate, inlet velocity, pressure drop or fan amperage is to be monitored on each day that the pelleting process is operating.

Facilities are to establish records for all required inspection and monitoring activities that indicate: 1) the date, place, and time of the activity; 2) person(s) performing the inspection or monitoring; and 3) results of the activity, including the date, time, and duration of any corrective action period necessary from the time the inspection or monitoring indicated a problem to the time that the device was replaced or restored to proper operation.

## Notification, Reporting and Recordkeeping Requirements

The final rule requires that covered facilities comply with the following notification, reporting and recordkeeping requirements:

► **Initial Notification:** Facilities are required by May 5, 2010 to provide initial notification to EPA that they handle chromium and manganese at levels equal to or exceeding the threshold level, and hence are subject to the regulations. The initial notification is to include: 1) the name, address, phone number and email address of the owner and operator; 2) the address (physical location) of the facility; 3) an identification of the air emission regulation for which notification is being provided; and 4) a brief description of the facility's operation.

If a facility ceases to use materials that contain manganese or chromium after Jan. 5, 2010, the facility is to submit a notification to EPA that includes: 1) the company's name and address; and 2) a statement by a responsible company official indicating that the facility no longer uses materials that contain chromium or manganese. This statement also should include the date when the facility ceased to use materials that contain chromium or manganese, and the responsible company official's name, title, phone number, email address and signature.

► **Notification of Compliance Status:** Existing facilities are required to submit a "notification of compliance status" to EPA on or before May 4, 2012. Newly constructed facilities subject to the regulations are to submit such notification within 120 days of initial startup, or by May 4, 2012, whichever is later. The notification of compliance status is to include: 1) the company name and address; 2) a statement by a responsible company official – accompanied by that official's name, title, phone number, email address and signature – certifying the truth, accuracy and completeness of the notification and a statement of whether the facility has complied with all the applicable requirements of the rule; 3) if the facility is required to operate a cyclone to control emissions from pelleting operations, the inlet flow rate, inlet velocity, pressure drop or fan amperage range that constitutes proper operation of the cyclone; and 4) if the facility is not subject to the requirement to operate a cyclone to control emissions from pelleting operations because its average daily feed production level was 50 tons per day or less, records to demonstrate the facility's daily feed production level.

► **Annual Compliance Certification:** After providing the initial notification of compliance status, every March 1

thereafter, covered facilities are required to submit to EPA annual compliance certification reports for the previous calendar year. The annual compliance certification is to include: 1) the company name and address; 2) a statement by a responsible company official – accompanied by that official’s name, title, phone number, email address and signature – certifying the truth, accuracy and completeness of the notification, as well as a statement of whether the source has complied with all the applicable requirements of the rule; 3) if the facility is not in compliance, a description of deviations from the applicable requirements, the time periods during which the deviations occurred and corrective actions taken; 4) as applicable, identification of any time periods when the daily inlet flow rate, inlet velocity, pressure drop or fan amperage was outside the range that constitutes proper operation of the cyclone, as well as corrective actions taken; 5) if the facility is not required to operate a cyclone to control emissions from pelleting operations because the facility’s average daily feed production level was 50

tons per day or less, notification as to whether the facility’s average daily feed production level for the previous year exceeded 50 tons per day; and 6) if the facility was subject to the requirement to operate a cyclone to control emissions from pelleting operations, notification as to whether the facility’s average daily feed production level for the previous year was 50 tons per day or less, and that the facility no longer is complying with the cyclone requirements.

▶ **Records:** The final rule mandates that required records, notifications and reports be retained for at least five years after they are created. Facilities are to keep such documents onsite for at least two years, and then may store them offsite for the remaining three years. Facilities also are required to maintain records in a suitable form so that they are readily available for EPA review, and may maintain such records on microfilm, on a computer, on computer floppy disks, on magnetic tape disks or on microfiche.

## Conclusion

The NGFA’s Safety, Health and Environmental Quality Committee will be evaluating the EPA final rule further during its upcoming meeting in February. The NGFA anticipates providing additional compliance-assistance information as the effective date nears.