

***EPA's Development of  
New Emission Controls  
for Feed Mills – What's the Latest?***

Paul Luther

Land O'Lakes Purina Feed, LLC

NGFA Safety, Health and  
Environmental Quality Committee

# National Emission Standards for Hazardous Air Pollutants for Area Sources: Prepared Feeds Manufacturing

- In the July 27, 2009 *Federal Register*, EPA published a notice that proposed management practices and standards to minimize emissions of chromium compounds and manganese compounds from animal feed manufacturing facilities
  - Management Practices
  - Monitoring
  - Notification and Recordkeeping

The First Thing That Came  
To My Mind Was

HUH?

# *Kingsburg animal feed plant at center of conflicting studies on widespread pollution: Manganese Threats*

VISALIA TIMES-DELTA  
Times  
Advance-Register

*December 27, 2008*



*Kingsburg animal feed plant at center of conflicting studies on widespread pollution*

*Results show pollutants across large swath of region; local officials say findings are rough*

**BY BRETT WILKISON**

*[bwilkison@visalia.gannett.com](mailto:bwilkison@visalia.gannett.com)*

# Quoted from the article

USA TODAY used a computer program developed by the USEPA to identify a half-dozen local industrial facilities and a similar number of pollutants as likely sources of air pollution over Tulare County Schools.

Nutrius' emissions by far were the most widespread, according to the local model. They consisted of three metal compounds: manganese, copper and zinc. All are nutrients added in the production of animal feed and supplement.

**USA TODAY**

# **EPA finds manganese threat at 2 schools**

By [Blake Morrison](#) and [Brad Heath](#), October 28, 2009

“Regulators have found high levels of neurotoxic manganese in the air outside two schools in Ohio and West Virginia, the latest results of the U.S. Environmental Protection Agency's efforts to check for chemicals outside schools across the nation.”

# As Events Unfolded.....

- Notice of Proposed Rulemaking issued July 27, 2009
- EPA gave a very narrow 30 day window for public comments.
  - Comments were due by August 26, 2009
  - NGFA first requested an extension of the comment period
  - Having that request denied, comments were prepared and filed
- EPA presented a webinar on the NESHAP in August
  - Chemical Preparation Facilities also on agenda for Mn and Cr

# Prepared Feeds Manufacturing Area Source NESHAP

Jan King  
Regulatory Development and Policy Analysis Group  
Outreach and Information Division  
August 2009

# Introduction

- NAICS 31119
  - Prepared animal feeds manufacturing
    - (except dog and cat)
- Listed for regulation under section 112(k)
  - HAP: chromium compounds and manganese compounds

# Background

- 1,800 facilities
- NGFA stated number is closer to 6,300
- Most of these are considered small businesses
  - Small business definition is <500 employees
  - 98% have <100 employees
  - 43% have <10

# Emissions

- Baseline emissions
  - PM: 32,000 tons/year
  - PM<sub>2.5</sub>: 7,500 tons/year
  - Manganese compounds: 100 tons/year
  - Chromium compounds: 2 tons/year
- PM and PM<sub>2.5</sub> emissions were estimated from a 2002 NEI report citing 70 facilities.
  - Production levels, processes and products not identified
- Mn and Cr estimates were based on 2006 TRI data from 22 facilities
  - Only 1 facility reported Chromium release and 8 Manganese releases.
  - EPA then assumed all feed mills with emit the ‘average ‘ level of Cr and Mn

# Emissions

- Potential emitting processes
  - Pre-mix storage of chromium and manganese compounds
  - Mixing of milled grains with ingredients including Chromium and Manganese compounds
  - Pelleting and pellet cooling
  - Bagging
  - Bulk loading

# Proposed Sub-categorization

- Observed differences between facilities based on size
  - “Small” facilities: production rate of  $\leq 50$  tons per day
  - “Large” facilities: production rate of  $> 50$  tons per day
- NGFA objected to this sub-categorization of feed manufacturers
  - Cr and Mn emissions are based on usage, not size.
  - NGFA suggested a 25,000 lb annual usage threshold, similar to what is used in TRI reporting.

# Proposed GACT

*(Generally Available Control Technology)*

- Management practices and equipment standards for all new and existing facilities
  - General: minimizing dust containing HAP and equipment maintenance
  - Storage area: store raw materials containing HAP in closed containers
  - Mixing operations: materials containing HAP added in manner to reduce emissions; mixer covered at all times except when adding materials.
  - Bagging: General requirements
  - Bulk loading operations: filter drop socks must be used when loading product containing HAP into trucks or railcars  
(EPA stated every feed mill already has a 'drop sock')



# NGFA Response to GACT

- EPA's proposed housekeeping practices are overreaching.
- EPA implies that facilities have accumulations of Cr and Mn within the enclosed facility and that these are emitted to the atmosphere through opening of doors.
- Further, OSHA and FDA already regulate housekeeping in the feed industry
- Bulk ingredient mixers may not have lids

# Proposed GACT (cont.)

- Installation of cyclone with at least 95% efficiency for PM<sub>10</sub> at pelleting and pellet cooling operations for existing and new facilities with average daily feed production levels > 50 tons per day
- Cyclone manufacturer's have gone on record that high efficiency cyclones on pellet coolers will not meet this 95% removal standard.
- Older 'straight' cyclones have no chance

# Emissions Reductions

- From installation of cyclones
  - PM: 4,000 tons/yr
  - PM<sub>2.5</sub>: 900 tons/yr
  - Chromium and manganese compounds: 11 tons/yr
- NGFA believes the estimates are based on faulty data.

# Total Costs

- Management practices
  - Believe all facilities already implement
  - No additional costs anticipated
- Installation of cyclone at large facilities (estimate 32 facilities):
  - Nationwide capital costs: \$3 million
  - Nationwide annual costs: \$4 million
- 95% PM<sub>10</sub> removal would cost industry \$1.23 billion
  - Would a baghouse need to be added?

# Proposed Notification, Recordkeeping, and Reporting Requirements

- Initial Notification: basic information about facility and its operations (submitted 120 days after publication)
  - Notification of Compliance Status: Statement that source has complied with all relevant standards (submitted 120 days after compliance date)
- Records must be kept of all notifications, each cyclone or drop filter sock inspection, and each pressure drop monitoring event
  - Cyclone pressure drop to be recorded daily
  - Cyclones to be inspected quarterly
  - Drop socks to be inspected monthly
- Measuring pressure drop across cyclones is meaningless
- Not much to inspect on drop socks.

## Proposed Notification, Recordkeeping, and Reporting Requirements (cont.)

- Monthly certification that all management practices have been followed
  - Annual compliance certification to be maintained on site
  - If cyclone pressure drop outside proper operating range, report submitted to EPA (by March 15 of the same year) (NGFA disagrees with the need for this.)
  - Records to be kept for at least 5 years, the first 2 onsite

# Applicability Recommendations

- Exclude facilities that don't add chromium or manganese compounds during processing
- No HAP use or emissions, only initial notification
- NGFA suggests reporting at threshold levels equal to TRI reporting levels

# Contact Information

Jan King  
King.jan@epa.gov  
919.541.5665

Comments to Docket: ID No. EPA-HQ-OAR-2008-0080

[www.epa.gov/oar/docket.html](http://www.epa.gov/oar/docket.html).

Follow the instructions for submitting comments.

E-mail: [a-and-r-Docket@epa.gov](mailto:a-and-r-Docket@epa.gov).

Include Docket ID No. in the subject line.

Fax: (202) 566-9744,

Attention Docket ID No. EPA-HQOAR-2008-0080.

# What's Next

- There WILL BE a rule controlling Manganese and Chromium emissions from feed mills.
- EPA has been secretive on their review of comments.
- NGFA's comments are being "seriously considered"
- Rule has move through EPA and is on it's way to HQ for signature. Will be signed by Dec 16.
- Stay tuned!