



Air Quality and Agriculture: Updates

12 December 2017

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Overview

- ▶ PM_{2.5} Precursors
- ▶ National Air Emissions Monitoring Study
- ▶ Agricultural Air Quality Conservation Measures: Reference Guide for Poultry and Livestock Production Systems
- ▶ CERCLA/EPCRA Update on Air Releases from Agricultural Sources

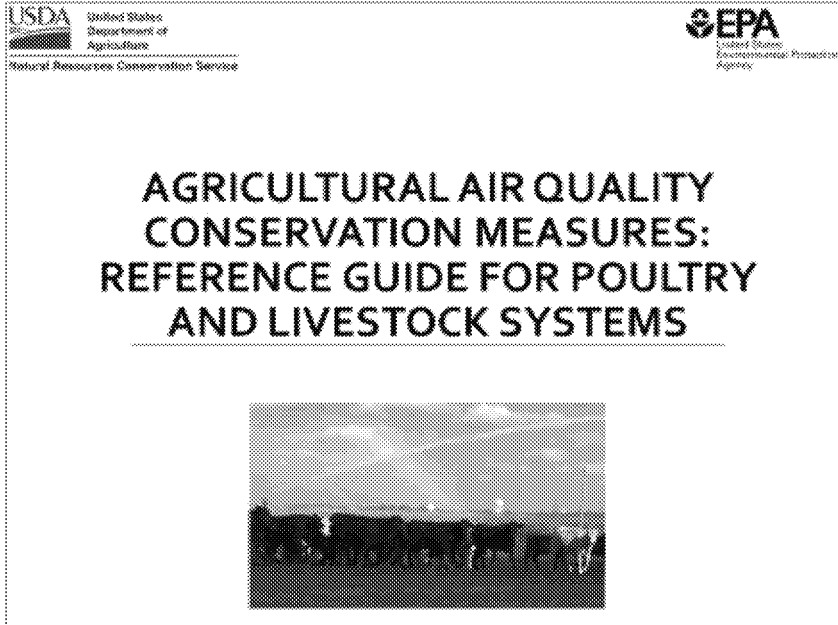
- ▶ After the first PM_{2.5} NAAQS were finalized in 1997, EPA's implementation rules initially:
 - ▶ Implemented the PM_{2.5} NAAQS under CAA subpart 1 (general nonattainment provisions)
 - ▶ Required nonattainment areas to address only two PM_{2.5} precursors (SO₂ and NO_x)
- ▶ January 2013 – US Court of Appeals for the DC Circuit decision remanded the 2007 PM_{2.5} implementation rule and 2008 NSR rule for PM_{2.5} and held that:
 - ▶ EPA must implement PM_{2.5} NAAQS under both CAA subpart 1 and subpart 4 (particulate matter nonattainment provisions)
 - ▶ States are presumptively required to address all PM_{2.5} precursors (SO₂, NO_x, VOC, ammonia) in SIPs
- ▶ Published in August 2016, the replacement PM_{2.5} SIP Requirements Rule outlines the attainment planning requirements for all existing and future PM_{2.5} NAAQS

- ▶ Rule allows states to submit *optional* precursor demonstrations to show that emissions of a particular precursor do “not contribute significantly to PM_{2.5} levels which exceed the standard in the area”
 - ▶ Consistent with CAA section 189(e)
 - ▶ If EPA approves a precursor demonstration for a particular nonattainment area, the attainment plan and/or NNSR program may exclude the precursor from certain control requirements, depending on the type of demonstration provided
- ▶ EPA released a public draft version of the “PM_{2.5} Precursor Demonstration Guidance” in November 2016
 - ▶ To assist air agencies who prefer to submit *optional* precursor demonstrations
 - ▶ The guidance contains recommended procedures for completing a precursor demonstrations as provided for in the final rule

- ▶ Industry-funded study to monitor on-farm emissions
- ▶ Coordinated by Purdue University with EPA oversight
- ▶ Established as part of a voluntary consent agreement between the EPA and the animal feeding operation (AFO) industry
- ▶ Goal: Develop methodologies that could be used to estimate emissions for use with reporting requirements under CERCLA, EPCRA and the Clean Air Act

- ▶ Two years of on-farm measurements of particulate matter (PM), ammonia, hydrogen sulfide and volatile organic compounds
 - ▶ 2007-2010: Monitored 24 sites in 9 states
 - ▶ 2012: Draft emission estimating methodologies (EEMs) released
- ▶ 2013: EPA Science Advisory Board reviewed draft EEMs
 - ▶ Final report recommended gathering more data and developing more rigorous methodologies

- ▶ Gathered additional data and conducted further analysis
- ▶ Developing Quality Assurance Plan for evaluating the data
- ▶ Determining which emission estimating methodologies can be completed with available data
- ▶ By July 2018, plan to publish timeline for completion of methodologies on EPA's website
 - ▶ In accordance with September 2017 report by EPA's Office of Inspector General



Reference Guide: Summary

- ▶ Collaboration with USDA Natural Resources Conservation Service
 - ▶ Companion to 2012 Guide for Cropping Systems and General Land Management
- ▶ Describes conservation measures that reduce air emissions on livestock and poultry farms
 - ▶ Criteria for inclusion: successfully demonstrated at least once
- ▶ Pollutants targeted:
 - ▶ Ammonia
 - ▶ Hydrogen sulfide
 - ▶ Particulate matter
 - ▶ Volatile organic compounds
 - ▶ *Greenhouse gases*

Reference Guide: Topics Covered

- ▶ Nutrition and feed management
- ▶ Animal confinement
- ▶ Manure management
- ▶ Land application
- ▶ Pasture and range management
- ▶ Other supplemental practices
 - ▶ Mortality management
 - ▶ Unpaved roadways and other areas
 - ▶ Equipment modifications

- ▶ Designed to be a “first step”
 - ▶ Narrow potential options
 - ▶ Provide resources for more information
- ▶ Emphasizes importance of site-specific factors
- ▶ Provides ranges of potential emissions reductions
- ▶ Does not provide specific cost information
- ▶ Additional assistance may be available from USDA and EPA

<https://www.epa.gov/afos-air/agricultural-air-quality-conservation-measures-reference-guide-poultry-and-livestock>

<https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/air/quality/>

The screenshot shows the EPA website page for 'Air Monitoring at Agricultural Operations'. The page includes a navigation bar with 'Home', 'About EPA', 'Programs', and 'Contact Us'. The main content area is divided into several sections:

- Best Practices:** Includes a sub-section for 'Animal Feeding Operations' with a list of links: 'Conservation measures to reduce air emissions from animal feeding operations', 'Conservation measures to reduce air emissions from livestock operations', and 'Additional resources for AFOs'.
- Animal Feeding Operations:** Includes a sub-section for 'Farm Equipment Standards' with a list of links: 'Learn about the Air Quality Standards for Farm Equipment', and 'Learn more about farm equipment emissions'.
- Air Quality Standards:** Includes a sub-section for 'Partnership with USDA' with a list of links: 'EPA and USDA's partnership to reduce air emissions from agriculture', and 'EPA and USDA's partnership to reduce air emissions from agriculture'.

At the bottom of the page, there is a small box with the number '11'.

Agriculture Air Quality
<https://www.epa.gov/afos-air>

EPA's National Agriculture Center
<https://www.epa.gov/agriculture>

- ▶ **What changed?**
 - ▶ December 2008 - EPA exempted most farms from certain release reporting requirements in CERCLA and EPCRA
 - ▶ April 11, 2017 - the DC Circuit Court struck down the 2008 final rule
- ▶ **Who is affected?**
 - ▶ Farms releasing hazardous substances (ammonia and/or hydrogen sulfide above a reportable quantity, or RQ) from animal waste
- ▶ **When?**
 - ▶ Reporting requirements go into affect once court issues mandate
 - ▶ Expected January 22, 2018

- ▶ Developed guidance to assist farmers to understand the CERCLA and EPCRA reporting requirements
 - ▶ Requested comments on the guidance to identify areas for improvement
 - ▶ As FAQs are identified, EPA is adding these to the website
 - ▶ Guidance primarily focuses on CERCLA continuous release reporting requirements
- ▶ EPA interprets the statute to exclude farms that use substances in “routine agricultural operations” from reporting under EPCRA section 304
 - ▶ Expect to complete a rulemaking to clarify the interpretation as it pertains to EPCRA reporting requirements

- ▶ EPA developed a streamlined reporting form for farmers
 - ▶ A *Federal Register* notice was published December 5, 2017, for a 10 day comment period which will close on December 15, 2017
 - ▶ Docket # EPA-HQ-SFUND-2007-0469
- ▶ Information Center is available to answer farmers' questions
 - ▶ 800-424-9346 or 703-348-5070 in the Washington, DC area
 - ▶ Hours of Operation:
Monday - Friday: 10:00 AM - 5:00 PM EST

CERCLA/EPCRA: EPA's Next Steps

- ▶ Reviewing the comments on the online guidance
- ▶ Continuing to work with the National Response Center (NRC) to ensure that they are able to manage call volumes while maintaining readiness
 - ▶ Established an email address for farmers to make the initial notification: NRC-CERCLA-EPCRA-REPORT@uscg.mil

EPA and the NRC expect to simplify email address soon

- ▶ Working with the NRC to better communicate next steps for farmers after an initial continuous release notification is completed
- ▶ Exploring options for continued stakeholder outreach



For More Information

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