

Animal Feeding Operations (AFO) Subcommittee Report

USDA – Agricultural Air Quality Task Force
San Diego, CA
May 8-10, 2007

AFO Subcommittee Members

- Gary Baise
- Paul Martin
- Bob Pike
- Wendy Powers
- Doug Shelmidine
- Ben Weinheimer

NRCS staff liaison: Greg Zwicke

AFO Subcommittee Meetings

Conference Calls & Meetings --

- January 9, 2007
 - February 6, 2007
 - March 12, 2007
 - April 3, 2007
 - May 8, 2007
-
- Action Plan
 - Conference Call Notes

AFO Subcommittee Action Plan

GOAL: Prioritize list of issues to be addressed by animal agriculture. Can be recommendations for research or research-based policy decisions. What is impacting the industry the most.

- GROUP A = High Priority, Urgent Action
- GROUP B = High Priority, Action During AAQTF Term

AFO Subcommittee Action Plan

GROUP A

- Issue: Identify/evaluate CMPs; mitigating emissions; fate and transport
- Action Plan:
 - Review existing CMPs and identify new CMPs for AFOs.
 - Recommend USDA obtain data to evaluate existing and new CMPs.

AFO Subcommittee Action Plan

GROUP A

- Issue: Need for proper emission estimation methods, including NAEMS project. Numerous related questions.
- Action Plan:
 - NAEMS project representative invited to give presentation at May 2007 meeting (Al Heber)
 - Develop specific questions for NAEMS rep to address (included in AAQTF notebooks)

AFO Subcommittee Action Plan

GROUP A

- Issue: Bioenergy/biofuels and how they affect AFOs.
- Action Plan:
 - Coordinate with Internal Combustion Engines and Alternative Fuels Comm.
 - Develop a white paper (“briefing paper”)

AFO Subcommittee Action Plan

GROUP A -- Bioenergy/biofuels "briefing paper"

- Corn co-products **contain more N** than corn yet lysine is still limited resulting in the potential to **overfeed N** in order to meet amino acid requirements in swine and poultry. If corn co-products are fed much above a 10% inclusion dietary N content **may increase** to the extent that more **N** is excreted and subject to **volatilization**.
- In **ruminants**, corn co-products provide a **good source of ruminally-undegraded protein**, potentially alleviating concerns regarding increased N excretion if diets are formulated properly. However, **overheating of corn co-products** may result in **dietary N that is unavailable** to the animal causing dietary N content to increase with subsequent increases in excreted N.
- In addition to the potential to increase N emissions from livestock fed corn co-products is the **potential to increase S and possible VOC emissions**. Sulfur is added as part of the ethanol production process and this added S remains in the co-product. As a result, when the co-product is fed to livestock dietary S content is increased compared to a 'no co-product' diet, more S is excreted and current findings demonstrate that hydrogen sulfide emissions increase accordingly. Similarly, VOC emissions may change as a result of feeding a wet co-product feed that changes rumen or hindgut fermentation patterns. Limited data are available at this time but research needs to adequately address these issues.

AFO Subcommittee Action Plan

GROUP A

- Issue: CAA and CERCLA/EPCRA permitting and reporting applicability issues for AFOs.
- Action Plan:
 - Members believe this issue is being addressed.
 - Warrants continued monitoring by AAQTF.
 - Request that USDA staff keep AAQTF informed.

AFO Subcommittee Action Plan

GROUP A

- Issue: Questions with Consent Decrees/ Consent Agreements.
- Action Plan:
 - Lack of scientific basis/data for developing provisions of Consent Agreements.
 - Develop recommendations for the Secretary as it relates to the scientific basis and research needs brought into question by CAs.

AFO Subcommittee Action Plan

GROUP A

- Issue: All USDA agencies should present a unified research plan to AAQTF.
- Action Plan:
 - Discussed by previous AAQTF
 - Request that USDA representatives provide updates to AAQTF on how this issue is being addressed.

AFO Subcommittee Action Plan

GROUP A

- Issue: Need to identify/implement whole systems-based approaches to be used in conservation programs.
- Action Plan:
 - AFO Subcommittee will continue to review this issue and develop recommendations.

AFO Subcommittee Action Plan

GROUP A

- Issue: Concerns with potential regulation of CO2 and other greenhouse gases.
- Action Plan:
 - Coordinate with the Greenhouse Gases and VOC Subcommittee
 - Recommend that USDA legal counsel review this issue and provide interpretations at the next AAQTF

AFO Subcommittee Action Plan

GROUP B

Issue: Need to address issues associated with farm size and integrators and how to make various incentives (e.g., EQIP funding, tax incentives, etc.) available for all producers

Issue: Need to identify/clarify appropriate definitions for applicability of regulations to agricultural sources, including animal feeding operations.

Issue: Review the use of incentives (e.g., reduced regulation, etc.) for certification programs and market-based incentives (e.g., emissions reduction credits, etc.)

AFO Subcommittee Action Plan

OTHER ISSUES

Issue: Need for a regional technology review center to work with NRCS and incorporate new and proposed technologies into the USDA programs

Issue: Concern with hazardous air pollutant (HAP) issues, including: H₂S as potential HAP; Diesel PM as potential HAP

Issue: Concerns with the focus of nuisance and common law actions, including the focus on ammonia and H₂S.

Issue: Right-to-Farm--Started in 1964 with concerns of urbanization of agriculture. There is a need to monitor whether right-to-farm laws are keeping up with changing conditions.

AFO Subcommittee Action Plan

SPECIFIC REQUESTS FOR SUPPORT BY AAQTF MEMBERS:

1. USDA and/or its contractors – review existing conservation management practices (CMPs) research data, identify and evaluate new CMPs and report on progress at the next AAQTF meeting.
2. USDA work with EPA to appoint an AAQTF member as a liaison to the NAEMS research project.

AFO Subcommittee Action Plan

SPECIFIC REQUESTS FOR SUPPORT BY AAQTF MEMBERS:

3. USDA provide an update to the AAQTF at the next meeting on progress made toward developing a unified air research plan for all USDA agencies.
4. USDA legal counsel review the recent U.S. Supreme Court decision on greenhouse gases and provide an interpretation at the next AAQTF meeting to provide a basis for establishing research priorities.

AFO Subcommittee Action Plan

Thank you.

Questions?

AFO Subcommittee Action Plan

AAQTF – Comments from Members – 5/9/07

- Wakelyn – need EPA legal counsel to interpret GHG
- Aneja – need to maintain some focus on odor
- Hatfield – need strong emphasis on uncertainty
- Hughes – facilitate transition of CMPs into recognized practices
- Kirkhorn – focus on odor, including NAEMS project

AFO Subcommittee Action Plan

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AFO Subcommittee Action Plan

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4. ~~USDA~~ [EPA](#) legal counsel review the recent U.S. Supreme Court decision on greenhouse gases and provide an interpretation at the next AAQTF meeting to provide a basis for establishing research priorities.

AFO Subcommittee Action Plan

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SPECIFIC REQUESTS FOR SUPPORT BY AAQTF MEMBERS:

- 5. AFO Subcommittee will develop a summary document on AFO odor and report to the full AAQTF at the next meeting.**

AFO Subcommittee Action Plan

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AFO Subcommittee Action Plan

OTHER ISSUES

Issue: Need for a regional technology review center to work with NRCS and incorporate new and proposed technologies into the USDA programs. Need to make sure that there is quicker acceptance and approval of practice standards and CMPs.

Issue: Concern with hazardous air pollutant (HAP) issues, including: H₂S as potential HAP; Diesel PM as potential HAP

Issue: Concerns with the focus of nuisance and common law actions, including the focus on ammonia and H₂S.

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Example add-on project to NAEMS:

- “Odor Emissions and Chemical Analysis of Odorous Compounds from Animal Buildings,” Dr. Larry Jacobson, Biosystems and Agricultural Engineering, University of Minnesota. NRI Grant: \$482,496

AFO Subcommittee Action Plan

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1. USDA and/or its contractors – review existing conservation management practices (CMPs) research data, identify and evaluate new CMPs and report on progress at the next AAQTF meeting.
2. USDA requests that EPA ~~to appoint an AAQTF member as a liaison~~ provide updates to the AAQTF at each meeting in the future **in response to specific requests for information developed by AAQTF members regarding** the NAEMS research project, including steps to be taken after field data is collected.
3. USDA provide an update to the AAQTF at the next meeting on progress made toward developing a unified air research plan for all USDA agencies.
4. EPA legal counsel review the recent U.S. Supreme Court decision on greenhouse gases and provide an interpretation at the next AAQTF meeting to provide a basis for establishing research priorities.

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