

AAQTF Meeting Summary and Decisions
22-23 June, 2005
Amarillo, TX

AAQTF Members in Attendance:

- Viney Aneja
- Janet Ashman
- Robert Avant
- Gary Baise
- Garth Boyd
- Nan Wankier Bunker
- Cynthia Cory
- Robert Flocchini
- Robert Jackman
- Steven Kirkhorn
- Bruce Knight (Chair, USDA-NRCS)
- Calvin Parnell
- Marc Pitchford
- Kevin Rogers
- Dave Roper
- Joseph Rudek
- William Schillinger
- Rita Sharma
- Annette Sharp
- Sally Shaver (EPA)
- Bryan Shaw
- Douglas Shelmidine
- Patrick Takasugi
- Philip Wakelyn

USDA Staff in Attendance:

- Molly Avila (NRCS)
- Larry Butler (NRCS)
- Diane Gelburd, DFO (NRCS)
- Elvis Graves, acting DFO (NRCS)
- Greg Johnson (NRCS)
- Ron Heavner (NRCS)
- Ray Knighton (CSREES)
- Sheryl Kunickis (NRCS)
- Al Riebau (USFS)
- Jeff Schmidt (NRCS)
- Roel Vining (NRCS)
- Margaret Walsh (NRCS)
- Robert Wright (ARS)

EPA Staff in Attendance:

- Linda Metcalf
- Beth Sauerhaft
- Jon Scholl

Summary of Day One

Acting Designated Federal Official (DFO) Elvis Graves called the meeting to order at 8:00 a.m. on June 22, 2005.

The minutes from the January 2005 AAQTF meeting in Washington, DC were approved by the Task Force.

Agency Updates

1. The Environmental Protection Agency's (EPA) Jon Scholl discussed
 - EPA's response to public comment for the consent agreement is online. The consent agreement itself is final. Deadline for sign up is July 29, 2005.
 - Concentrated Animal Feeding Operations (CAFO) rules.
 - Coarse Particulate Matter (PM).
 - Methyl Bromide.
 - Spill Prevention, Control and Countermeasures plans.

2. The USDA Natural Resources Conservation Service (NRCS) Technology Update given by Larry Clark, Deputy Chief for Science and Technology, included:
 - An update of AAQTF support staff at NRCS,
 - New and revised Conservation Practice Standards,
 - Biomass Research and Development Initiative Grant expenditures,
 - Environmental Quality Incentives Program cost share approved for air quality projects,
 - Conservation Innovation Grant funding,
 - Conservation security program air quality-related air quality-related activities.

3. Dr. Robert Wright gave the USDA Agricultural Research Service (ARS) Agency Update.
 - Air quality research has been expanded at eight ARS locations through funding increases and redirection of resources.
 - Beltsville, MD - Reactive volatile organic compounds from animal operations and pesticide application
 - Bowling Green, KY - Measurement and control of emissions from poultry and swine operations.
 - Bushland, TX – Emissions from beef cattle feedlots
 - Florence, SC – Treatment systems to reduce emissions from swine production
 - Lincoln, NE – Emissions from cattle feedlots and manure application
 - Lubbock, TX - Particulate matter emissions from cotton gins and agricultural operations.
 - Riverside, CA - Reactive volatile organic compound releases from pesticide application.
 - University Park, PA - Process modeling of emissions from dairy operations.

- A 30 location project (GRACEnet) is underway to measure and predict carbon sequestration and greenhouse gas emissions in agricultural systems.
 - The Wind Erosion Prediction System (WEPS) model has been transferred to NRCS to help control wind erosion on agricultural lands.
 - Research is being conducted on emission and transport of pathogens.
4. The USDA-Cooperative State, Research, Education, and Extension Service (CSREES) Agency Update, given by Dr. Ray Knighton, included
- The Agricultural Air Quality Workshop will be held in June, 2006 in Potomac, MD. www.esa.org/AirWorkshop; www.csrees.usda.gov/airquality.
 - The NRI Air Quality Program has committed \$5 million for research.
5. The USDA Forest Service (USFS) Agency Update was provided by Dr. Al Riebau. Current work includes:
- Critical nitrogen, sulfur, and ozone loads and levels are being investigated as causes of ecosystem change.
 - Tracking smoke plumes. Research is good at tracking general geographic progress, but not ground-level criteria pollutant concentrations.
6. The EPA Policy Update was provided by Sally Shaver.
- AFO Consent Agreement and Monitoring Protocol--The sign-up period for the livestock compliance agreement (CAFO) was extended. Over 700 individual comments had been received, with the vast majority against the agreement.
 - PM and ozone NAAQS—provided an overview of the review process and schedule. Highlighted draft paper recommendations for PM.
 - Exceptional/Natural Events Policy—Updated policy development.
 - New Source Performance Standards for Diesel Engines-Proposal overview - modeled after nonroad combustion ignition engines. Promulgation deadline June 2006.
 - Listing Hazardous Air Pollutants—Updated progress for diesel exhaust and hydrogen sulfide.
 - The National Clean Diesel Campaign--EPA will be seeking input from the agricultural sector as the overall campaign is designed.

AAQTF Committee Updates

7. The Policy Committee Report was given by Gary Baise. The policy committee would like to pursue the definition of a number of terms that are likely to become important in the application of the Clean Air Act to agriculture, including waste, farm, and facility. There is concern related to the ambiguous interpretation of these definitions due to inconsistencies in other legislation. A suggested definition for the term “farm” was proposed.
8. The Education and Outreach Committee Report was given by Annette Sharp. An online brochure has been developed for distribution, and is available online at

<http://wsdev.colostate.edu/cwis333/air/>. Comments were due to Annette Sharp by August 15, 2005.

9. The Emerging Issues Committee is investigating particulate matter, volatile organic compounds, and voluntary greenhouse gas emission reporting under 1605(b).

10. The Research Committee chair, Bob Avant, presented a motion that a single air quality office in USDA, encompassing related activities in ARS, CSREES, and NRCS be established, and that expenditures for air quality research be increased to two percent of the research budget.

Research and Technical Reports

11. Dr. Ed Skidmore (ARS) and his staff demonstrated the Wind Erosion Protection System (WEPS) model, which relates weather and management variables to windborne atmospheric particulate matter loads.

12. Dr. Ruihong Zhang (UC-Davis) presented a process model of ammonia emissions from swine, poultry, dairy, and beef feedlots. The model can produce hourly and daily emissions information based on energy and mass balance, solar radiation, temperature, and numerous other parameters.

13. Dr. Bret Schichtel discussed results of the National Park Service and other rural particulate matter and ammonia monitoring program. Geographic distributions based on source information were presented, as were temporal trends in concentrations. Among the information shown was a recently discovered region of high ammonium nitrate fine particulate during winter in the center of the country where ammonium emissions are also high, and an upward trend in ammonium levels in the same region.

Public Comments

14. Bob DeOtte (West Texas A&M University) discussed possible biosecurity threats to confined animal feeding operations from produced aerosols in the cattle-intensive area surrounding Amarillo, with potentially large economic and health impacts. He stressed the need for improved early detection.

15. Paul Martin (Western United Dairy) stressed the need for reliable emission factors and the consideration of economic feasibility in the regulatory process. Consistency and a focus on reactive volatile organic compounds (VOC) (rather than total VOC) in the reduction of atmospheric ozone concentrations was stressed.

16. Trisha Marsh-Johnson (Jones-Hamilton Company) discussed the need to distinguish between multi-age and single-age operations, as the applicability of emission factors can vary widely.

17. Jamie Borman (a resident of Hereford, TX) stressed the need for research to address local concerns, and emphasized that dust mitigation efforts in her region had been effective only after initial failures were followed by community collaboration.

Summary of Day Two

AAQTF Committee Follow-Up Reports

18. Research Committee motions to recommend to the Secretary that an atmospheric oversight group within USDA be created, and that the research budget be increased, were approved by the AAQTF. Specifically the recommendations were that an agricultural air quality program that has administrative and budget control over air quality research and policy within the USDA, and that funding levels be increased to \$40,000,000. Research priorities identified included

- developing emission inventories, emission factors and process-based models for PM_{2.5}, PM Coarse, NH₃, H₂S, odorous, and reactive VOCs;
- establishing the appropriateness of PM samplers used in monitoring for rural environments;
- developing accurate dispersion models;
- developing management plans and control technologies;
- evaluating the impact of the diesel regulation on agricultural operations;
- evaluating agricultural contributions to national air quality initiatives;
- assessing the role of agricultural NH₃ emissions in the formation of ammonium nitrate particulate matter; and
- evaluating pathogens and other constituents from AFO/CAFOs.

19. The Policy Committee withdrew its motion for AAQTF provisional acceptance of the draft of the definition of “farm” for resubmission at a later date. Related comments and suggestions should be submitted to Diane Gelburd by July 15, 2005.

20. The Policy Committee motion that the Secretary of Agriculture explicitly discuss multi-media regulation with EPA’s administrator was passed by the AAQTF.

21. Bob Avant reported on the application of the proposed PM_{10-2.5} standards to agriculture, set to be proposed in December 2005 and finalized in September 2006. Concerns include the inequivalency of the standard for rural areas, sampler bias, and sampling at the property boundary line rather than at population centers. The AAQTF carried the motion that these concerns be forwarded to the Secretary of Agriculture.

Research and Technical Reports

22. Dr. Peter Green discussed pesticide volatile organic compounds. Due to the sensitivity of their concentrations and activity as ozone precursors, the speaker indicated that numerous mitigation possibilities existed, relating the time of day for application and the type of pesticide to their environmental consequences.

23. Citing emission calculations that take into account seasonal ventilation rates and particle size distribution of particulate matter emitted from broiler production at Buckeye Farms, Dr. Bryan Shaw (Texas A&M University) presented information indicating that correct interpretation of the EPA contractor’s data indicates that the facility did not

exceed Title V or the PSD thresholds for its location in Ohio, 100 tons per year PM₁₀ and 250 tons per year PM₁₀, respectively. Therefore, failure to obtain Title V and PSD permits should not have been used as the basis for the consent decree requiring \$880,000 in civil penalties and \$1.4 million in controls.

24. Dr. Greg Johnson and Roel Vining (NRCS) demonstrated the application of the web-based COMET-VR model to voluntary 1605(b) reporting of greenhouse gas emissions from agricultural land based on climate, soil type, and management considerations. Members of the Task Force requested that more information be provided at future meetings in order to better understand the relationship and relative importance of the relationships between climate change and agricultural interests.

25. Dr. Mike Buser (ARS) gave a presentation on the evaluation of particulate matter emissions from various cotton production and processing operations, including a discussion of sampler bias which overestimates emissions from this source. The presentation included information on the relationship between sampler design and materials and collected on sample filters.

26. Reactive organic gas emissions from California dairy operations, including implied emission factors from both free stalls and lagoons, were presented by Dr. Charles Krauter (California State University). A range of emission factors were identified, and seasonal variability was not as large as was anticipated.

27. Dr. John Thorne (Capitolink), John Starkey (U.S. Poultry and Egg Association), and Dr. Joseph Rudek (Environmental Defense) each presented their organizations' viewpoint on the EPA's compliance agreement with producers and responded to Task Force questions and comments.

Public Comments

28. Richard Gossey (UC-Davis) suggested that the San Joaquin Valley be used as a case study for testing the environmental effects of pesticide VOCs. He additionally suggested that the Policy Committee consider aquaculture when drafting definitions with legal application, as a significant amount of nitrogen waste from chicken production is used in aquaculture, and may have atmospheric implications.

29. Trisha Marsh-Johnson (Jones-Hamilton Company) suggested that in the Buckeye Farms case discussed by Dr. Bryan Shaw, it was unnecessary to estimate building exhaust rates, as fan operations are quantified by operators, so exact flow rates are available.

Future Meeting Logistics and Topics

30. Dates for the September meeting in New York were suggested for the week of the 19th.

31. Future meetings in California, Hawaii, Washington, DC (in conjunction with the Agricultural Air Quality workshop in June 2006), and Utah were suggested.

Future agenda items of interest to the Task Force

- Pulmonary expert to relate the effects of PM to respiratory health.
- Smithfield agreement.
- Getting started on the next round of Task Force nominations.
- PM_{2.5} and PM_{10-2.5}
- NOAA-EPA Air Quality Forecasting.
- NRC report on air quality management, understanding the importance of climate variability, and implications to ozone and particulate matter.
- Farm Bill.
- Reactive Organic Compounds, ozone precursors.
- Agricultural responses to greenhouse gases and how voluntary greenhouse gas reporting will affect agriculture.

Decisions Reached

- Research committee programs passed.
- Policy committee to continue to develop definitions.
- Policy committee will draft a recommendation for the AAQTF to the Secretary regarding multi-media regulation.
- Policy committee withdrew proposal of draft “farm” definition. Comments will be accepted by Diane Gelburd through July 15, 2005, and the definition recomposed at that time.
- PM paper (research committee) will be submitted to Secretary for consideration.

32. Meeting was adjourned by DFO Dr. Diane Gelburd at 4:00 p.m. on Thursday June 23, 2005.