

AAQTF Meeting Summary and Decisions
February 28 through March 2, 2006
Bethesda, MD

AAQTF Members in Attendance:

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

USDA Staff in Attendance:

- Tom Crowe (USFS)
- Meredith Dahl (OGC)
- Diane Gelburd, DFO (NRCS)
- Ron Heavner (NRCS)
- Ray Knighton (CSREES)
- Greg Johnson (NRCS)
- Sheryl Kunickis (NRCS)
- Terrence Lynch (ARS)
- Susan O'Neill (NRCS)
- Marc Ribaud (ERS)
- Jeff Schmidt (NRCS)
- Roel Vining (NRCS)
- Margaret Walsh (NRCS)
- Robert Wright (ARS)
- Greg Zwicke (NRCS)

EPA Staff in Attendance:

- Robin Dunkins
- Linda Metcalf
- Beth Sauerhaft
- Jon Scholl

Day One

February 28, 2006

Designated Federal Official (DFO) Dr. Diane Gelburd called the meeting to order at 9:30 a.m.

Minutes

The minutes from the November AAQTF meeting in Maui, HI, were opened for review.

Agency Updates

EPA — Jon Scholl

- Twenty air consent agreements have been approved by EPA's Environmental Appeals Board.
- The final Rule regarding the NPDEES permits and FIFRA is being worked on.
- EPA's Pesticide Policy Dialogue Committee has determined that further study is required to address chemical drift. Policy recommendations are anticipated in the next year.
- EPA is looking into the issue of reporting for livestock operations under EPCRA and CERCLA. Currently the Agency is seeking input about emissions and determining how information collected under EPCRA is being used.
- The National Clean Diesel Summit was held in December in Washington DC. Expenditures include a total of \$5 million, \$500k of which is intended for agriculture and \$500k for clean fuels.

CSREES — Ray Knighton

CSREES' NRI Air Quality Program budget has been reduced to \$4.97 million as a result of a 1% budget rescission. Proposals for NRI Air Quality Program grants (\$500k for 2-4 year projects) are due by June 15. All funded projects will be represented at the Agricultural Air Quality Workshop to be held from June 5-8, and several special issue publications are anticipated. CSREES will ensure that the AAQTF not in attendance will receive Workshop materials.

No ammonia wet deposition monitors will be closed this year, although reduced federal budgets and the expense of upgrading older equipment are important issues. The U.S. Fish and Wildlife Service is investigating animal agriculture sources as a possible source for deposited nitrogen.

US Forest Service — Tom Crowe

A passive sampling system for NO_x, SO₂, NH₃, N₂O and O₃ was discussed which could help evaluate BlueSyRAINS smoke predictions from forest and slash burning. USFS is looking into the critical loads for nitrogen and sulfur in forested systems and those stressed by drought. USFS is losing capacity relating to air quality, and is therefore looking at forming centers of excellence.

ARS — Bob Wright

Nine scientists have been added to ARS staff across the country, and the air quality and global change programs have been combined. ARS is seeking a Program Leader in air quality and requested an AAQTF representative serve on the search committee (Viney Aneja received a nomination for this service). The proposed budget for FY07 would reduce funding from \$1.12 billion in FY 06 to \$1 billion in FY07, and six laboratories performing air quality research would be impacted. Research using Lidar to measure agricultural PM emissions has been initiated, and discussion focused on concerns regarding laboratory closures and Lidar's accuracy in atmospheric concentration measurement.

Subcommittee Reports

The Policy Subcommittee recommended the adoption of five proposed definitions relating to agricultural air quality. The proposed definitions reflect current judicial confusion over what constitutes an agricultural facility, the suggestion that natural substances not be regulated, and that if reclaimed, agricultural materials are then not waste. Chairman Chief Knight noted that a Federal (USDA and EPA) working group is being formed to investigate common agricultural air quality definitions.

The Education and Outreach Subcommittee suggested that, while current education and outreach efforts are directed at adults, those efforts be redirected to focus on schools and students, who would then educate their parents through efforts such as "Ag in the Classroom." It was decided that the recommendation would be forwarded to CSREES.

The Emerging Issues Subcommittee submitted a white paper on climate change for consideration by the AAQTF. Recommendations included a suggestion that greenhouse gas trading become part of the 2007 Farm Bill and that informational gaps be investigated by the AAQTF's Research Subcommittee.

Technical Presentations

Dr. William Schillinger gave a presentation concerning the impact of EPA's proposal to reduce the NAAQS coarse particulate threshold from 150 to 70 $\mu\text{g}/\text{m}^3$ per 24-hour time period and to exempt agricultural dust sources. In the Tri-Cities, WA, coarse PM exceedences will increase from the present three per year to 15 per year under the new standard. Dr. Schillinger stated that agriculture is part of the problem and, therefore, should be part of the solution. Dr. Schillinger recommended that agriculture continue to be held accountable, not exempted, for dust emissions, and that the NAAQS standard for these events remain at the current PM_{10} concentration of 150 $\mu\text{g}/\text{m}^3$.

Dr. Marc Pitchford presented comparative data from the IMPROVE network, illustrating the geographic pattern of coarse particulate matter concentrations and demonstrating that the EPA proposed $\text{PM}_{\text{coarse}}$ standard for urban areas would not be exceeded at any of the over 150 rural IMPROVE monitoring locations nation-wide.

Mr. Peter Tsirigotsis, Director of the Sector Policies and Programs Division of EPA OAQPS, stated his goal to consider economics and flexible approaches when monitoring differing economic sectors.

Mr. William Hohenstein presented an overview of current issues in climate change as it relates to agriculture, including voluntary greenhouse gas emissions reporting via the Department of Energy's 1605(b) program. COMET-VR is a tool available for use by producers to report to this program.

Dr. Kelsi Bracmort discussed implementation of the Methane to markets program for carbon trading, focusing on the capture of methane for energy production from anaerobic digestors.

Ms. Robin Dunkins of EPA OAQPS provided an update regarding the number of CAFO consent agreements which EPA has received and approved. A request was made that when the science advisor for the monitoring study is officially appointed, that s/he provide routine study updates to the AAQTF. The data presented relate to the process EPA will use once the data are collected (rather than the process for the monitoring protocol). EPA is still finalizing and awaiting final approval of the CAFO monitoring protocol, as well as for the individual monitoring plans for specific farms.

Decisions

The full AAQTF voted to have the Emerging Issues subcommittee review the 1999 AAQTF recommendations on agricultural burning to see if updates are needed. Specifically, the review needs to consider recent proposed changes in the PM_{2.5} and PM_{Coarse} NAAQS, the proposed exceptional events policy, and Section 319 of the SAFE-TEA legislation.

The AAQTF also voted to have the Emerging Issues subcommittee review the 1999 Voluntary Incentives Policy to see if revisions are needed in view of the recent proposed changes in the PM_{2.5} and PM_{Coarse} NAAQS.

The meeting was adjourned at 5:00 p.m.

Summary of Day Two March 1, 2006

The meeting was convened at 7:15 a.m.

Introductions and Opening Statements

U.S. Department of Agriculture Secretary Mike Johanns announced his intent to recharter the AAQTF, as well as the formation of an interagency working group to examine agricultural air quality definitions as they relate to the Clean Air Act. Secretary Johanns went on to announce twelve CSREES National Research Initiative grantees at eleven institutions, including \$5.3 million directed specifically to agricultural air quality issues.

During subsequent discussion with the AAQTF, Secretary Johanns indicated that he would look into potentially appointing a USDA position for environmental affairs, parallel to Jon Scholl's position for agriculture at EPA, and/or an air quality "czar" at the Department-level, similar to Bill Hohenstein's role for the Department's climate-related issues. Secretary Johanns responded to concerns relating to reduced funds for agricultural research, particularly in the irrigated west, as well as potential closures of ARS's Lubbock and Las Cruces laboratory facilities. Secretary Johanns emphasized the excellent working relationship USDA has with EPA on agricultural air quality issues.

Administrator Steve Johnson of the U.S. Environmental Protection Agency also noted the good working relationship between the agency and USDA, and welcomed input from the AAQTF and other members of the public in making science-based policy decisions. Administrator Johnson spoke on the 7000 farms enrolled in the CAFO Consent Agreement program, encouraged AAQTF input regarding the proposed PM_{2.5} standard as had been communicated in the case of the PM_{Coarse} proposal, and stated an Agency focus on ethanol and biodiesel production for energy applications. Administrator Johnson indicated that there is a place for both voluntary and regulatory compliance programs in environmental administration, and that he prefers collaborative approaches over legal channels.

Subsequent discussion included a request from the AAQTF that EPA consider agriculture separately from "smokestack" industries in constructing the PM_{Coarse} standard, and indications from Administrator Johnson that he would consider making additional funds available for agricultural air quality research as well as promote interactions between EPA and diesel groups on the topic of legacy diesel engines.

U.S. EPA Assistant Administrator Bill Wehrum spoke about his philosophy about agriculture and commented on some of the current issues for the Office of Air and Radiation. He stressed the importance of a "common-sense" approach to a sector as unique as agriculture. Mr. Wehrum discussed some of the issues in making decisions regarding the PM_{Coarse}. He briefly touched on the sampler bias issue which the AAQTF has raised and also the questions about equivalence of the proposed standard with the existing standard. He stated that the particulate matter proposal was out for

comment and that the science supported the approach to agricultural sources. He also noted the difficulty of attribution related to the Exceptional and Natural Event policy, and noted EPA is seeking comment on this policy. He noted that the Critical Use policy, particularly with respect to methyl bromide applications, is currently under discussion. Mr. Wehrum stated that data resulting from the CAFO Consent Agreement would be used in refining any Agency air policies on CAFOs.

Mr. Wehrum noted the complications involved for agricultural air quality interests in the application of media-specific standards which may sometimes lead to conflicting requirements. He said that EPA is having productive discussions to treat agriculture appropriately under CERCLA and EPCRA, which were primarily intended to address specific events rather than ongoing operations more reflective of agricultural activities. The AAQTF informed Mr. Wehrum of their concern during the discussion regarding the review and quality of models being applied to the regulatory process at the state level where implementation occurs. Mr. Wehrum stated his support for efforts to better define air quality terms for agricultural sources to help clarify applicability of Clean Air Act provisions to these sources.

Technical Presentations

Mr. Paul Machiele, Director of the Fuels Center of EPA's Office of Transportation and Air Quality (OTAQ), discussed the Renewable Fuels Standard, which promotes the use of renewable fuels. The default rule went into effect in February 2006 and includes the practice of active stakeholder input while under development. This interaction includes USDA throughout rulemaking. Significant reductions in energy consumption and reductions in carbon emissions are anticipated under the program. Mr. Machiele noted that NO_x emissions from biofuels are ambiguous, some studies showing slight increases, others demonstrating decreases. Concern was raised regarding biodiesel equipment and the regulation of stationary vs. mobile sources within this context.

Mr. John Bachmann, Associate Director for Science, Policy, and New Programs at EPA Office of Air Quality Planning and Standards (OAQPS) discussed the proposed fine particulate (PM) matter National Ambient Air Quality Standards (NAAQS), for which the final rule is anticipated on September 27, 2006. The proposal would reduce the primary and secondary PM_{2.5} 24-hour standard to 35µg/m³ and leave the annual standard at 15µg/m³, though lower values are under consideration, reflecting the strong scientific consensus regarding the detrimental health effects of fine atmospheric particulates. Two analyses presented by Mr. Bachmann conflicted in their prediction of non-attainment resulting from the proposed rule change—one analysis predicted an increase in the number of counties in non-attainment, the other predicted a decrease. The interim Regulatory Impact Analysis indicated that ammonia control may be more effective than NO_x control for PM_{2.5} attainment in the Midwest (where carbon species are believed to also be important contributors), but the opposite would hold true in other parts of the country, implying differing control strategies are required in different regions. Mr. Bachman noted the use of a monitoring system employing the sharpest cut point possible.

Monitor placement is to reflect significant regional issues, not boundaries, and the focus is not on smaller biofuel production facilities.

Mr. John Bachman went on to give a presentation on the proposed PM_{Coarse} NAAQS. He described EPA's historical struggles with the form of PM to regulate, the details of the current proposal, the lack of health effects associated with rural PM, the potential implementation timeline of the standard, and the lack of evidence necessary for making a decision related to a secondary standard. Discussion included specific considerations in the designation of nonattainment areas, the effect the proposal would have on current projects and research, the urban vs. rural distinction in the rule, speciation considerations, property line regulation of sources, and modeling.

Mr. Tom Curran, Director of the Air Quality Assessment Division of OAQPS, and Mr. Tim Hanley of EPA OAQPS discussed the PM NAAQS Monitoring Proposal, including how the proposed standards and monitoring work together, approved monitoring methods for both $PM_{2.5}$ and PM_{Coarse} , and monitor siting criteria. Discussion included monitor network design, correction of measured concentrations to the standard temperature and pressure, and sampling the liquid and solid $PM_{2.5}$ fractions.

Mr. William MacDowell and Mr. Kevin Vuilleumier of EPA Region 5 discussed emissions from Buckeye Farms. Mr. MacDowell and Mr. Vuilleumier presented EPA's grounds for an enforcement action, including the data and information used in support of the action, such as results from a Northern European emission factor study, direct measurement, mobile monitoring, and modeling. Discussion included whether the use of TSP or PM_{10} was more appropriate to regulation, the specific emission calculation and modeling methodologies, the appropriateness of restricting ammonia emissions in the settlement, concerns regarding EPA's overall enforcement techniques, the appropriateness of applying European emission factors to U.S. farms, the use of the imminent and substantial endangerment clause for enforcement action, and the effect of particle size distribution on enforcement efforts.

Mr. Tom Curran and Mr. Gary McAlister of EPA OAQPS discussed the Midwest Scaling Method and its application to monitoring Volatile Organic Compounds (VOCs). Mr. Curran and Mr. McAlister provided an overview of the Midwest Scaling Protocol and presented alternate scaling methods. The regulation of VOC emissions are required to be mass-based. According to EPA Methods 25 and 25A, scaling methods can be used in conjunction with approved VOC measurement methods (if speciation of the emission stream is known). Discussion included the review of scaling methods prior to their application to enforcement actions, inclusion of reactivity into a scaling method analysis, problems with using a scaling method if speciation of the VOC emission stream is unknown, and concerns about EPA's enforcement techniques.

Mr. Kerry Drake of EPA Region 9 discussed EPA's budget for the clean diesel initiative, mentioned that a national summit for Clean Diesel issues in Kansas City was going to be held, and requested AAQTF input regarding how to best allocate clean diesel funding, particularly within the agricultural portion of the program.

The meeting was adjourned at 6:00 p.m.

DRAFT

Summary of Day Three March 2, 2006

The meeting was convened at 8:00 a.m.

The minutes from the November AAQTF meeting in Maui, HI, were approved as written.

Technical Presentation

Dr. Marc Schenker, M.D. of the UC Davis Department of Public Health Sciences presented the AAQTF with information on the pulmonary effects of agricultural exposure to inorganic dust. Topics included silicate exposure, morbidity and mortality, interstitial lung disease, idiopathic pulmonary fibrosis, chronic obstructive pulmonary disease, and prevention. Discussion included specifying study methodologies and populations, the lower rates of smoking among farmers and rural residents compared with urban populations, the commercialization of farming activities and resulting demographic shifts, behavioral changes within an aging farming population, and similar studies performed by the cotton industry which distinguished different types of agricultural workers and reached different conclusions based on those designations.

Agency Updates

ERS—Marc Ribaldo

Dr. Marc Ribaldo indicated that ERS had no new reports. Discussion focused on the use of models in calculating pesticide-related atmospheric emissions. One AAQTF member noted his desire for an economic review of consent agreements and an environmental cost benefit analysis by ERS.

NRCS—Greg Johnson

Dr. Greg Johnson discussed NRCS's air-related resource concerns and programmatic initiatives. Biomass and energy issues are being managed primarily by Rural Development at USDA at this time, and the website is being better organized to facilitate information sharing.

Committee Reports and Actions

The definitions proposed by the Policy Subcommittee were approved by the full AAQTF for submission to the interagency definitions working group. Individual recommendations included ensuring that the Department of Interior be included in the interagency working group.

The video and suggestions by the Education and Outreach Subcommittee regarding agricultural education of school-aged children will be pursued by CSREES and the Farm Bureau, independently of the AAQTF.

The Policy Subcommittee was tasked with developing a recommendation to include environmental credit trading in the next Farm Bill based on the initial investigations performed by the Emerging Issues Subcommittee. The Research Subcommittee was tasked with providing review and prioritization in support of that recommendation.

The Research Subcommittee was tasked with drafting recommendations to include nitrous oxide (N₂O), methane (CH₄), and forestry in COMET-VR, which will require additional human capital for the effort. Additionally, the Research Subcommittee was tasked with investigating IPCC reports to ensure US consistency with calculation methodologies, and to identify the ways in which improved N-use efficiency can reduce N₂O emissions from agriculture.

The AAQTF forwarded recommendations regarding application of the Midwest Scaling Protocol in EPA monitoring. Questions regarding what compounds are included in the emission calculations (e.g., total, reactive, highly reactive, CO₂), and what portions of the effluent stream were necessarily subtracted out versus optionally subtracted were raised.

The AAQTF recommended that a joint USDA-EPA extramural research program be founded. Suggestions regarding the inclusion of health research and technology transfer should be part of that program.

The AAQTF recommended that good engineering practice be used in determining annual PM₁₀ emissions from agricultural sources for requiring Title V and PSD permits.

Next Meeting

The AAQTF concluded that a one-day meeting following the Agricultural Air Quality Workshop would be insufficient to accomplish its goals, and requested a three day meeting with a field trip prior to the charter's expiration.

The meeting was adjourned at 12:17 p.m.