

May 8, 2007

**USDA Agricultural Air Quality Task Force
Summary Notes
May 8-10, 2007
San Diego, California**

AAQTF Members in Attendance:

Arlen Lancaster (NRCS Chief/AAQTF Chair)
Michael Blaser
Gary Baise
Steven Kirkhorn
Phillip Wakelyn
Bryan Shaw
Cynthia Cory
Sagar Krupa
Kristen Hughes
Wendy Powers
Trisha Johnson
Viney Aneja

Kevin Abernathy
Roger Isom
Sally Shaver
Annette Sharp
Douglas Shelmidine
Susanna Von Essen
Jerry Hatfield
Charles Rice
Paul Martin
Benjamin Weinheimer
Chris Peterson

USDA Staff in Attendance:

Michele Laur, DFO (NRCS)
Diane Gelburd (NRCS)
Ron Heaver (NRCS)
Ray Knighton (CSREES)
Greg Johnson (NRCS)
Myra Brown (NRCS)
Roel Vining (NRCS)
Jeff Schmidt (NRCS)

Sheryl Kunickis (NRCS)
Susan O'Neill (NRCS)
Charles Walthall (ARS)
Mike Arbaugh (USFS)
Ed Burton (NRCS)
Greg Zwicke (NRCS)
Joan Albertella (NRCS)

EPA Staff in Attendance:

Jon Scholl
Bill Schrock
Grant Nakayama

Beth Sauerhaft
Kerry Drake
Paul Argyropoulos

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Call to order: Michele Laur, USDA-NRCS, Designated Federal Official, called the meeting to order at approximately 8:05 a.m.

Opening Remarks: Chief Arlen Lancaster addressed the Task Force.

He thanked the California delegation for the Tour of the Imperial and Coachella Valleys on May 7, 2007.

He mentioned NRCS staff work on the review of regulations, work on new technology, training, etc.

He stated that Larry Clark has agreed to stay on for another year, and that Merlyn Carlson, Deputy Under Secretary, USDA, stepped down recently and that Gary Mast is now in that position. He noted Dr. Kevin Janni's work from the University of Minnesota, currently on sabbatical and working with the Air Quality and Atmospheric Change (AQAC) Team in Portland.

The Chief then introduced NRCS State Conservationist for California, Ed Burton.

Presentation by Ed Burton, State Conservationist, California:

Mr. Burton welcomed the Task Force to California. He stated that there is a \$34 billion Ag economy in California and that the state has many resources. It is a very diverse state, with air quality challenges. He mentioned "AIR" (Ag Improving Resources), noting participation by the California Farm Bureau, Nisei League, etc. NRCS provided the technical and informational leadership to AIR. Under the program, the first order of business was development of conservation management plans for PM₁₀. NRCS provided 4 staff years for this effort and also contributed \$5 million in EQIP funds for air quality in California. This program combined many other investments from other entities, including the completion of 6400 plans on 32 million acres, thereby removing tons of PM₁₀ and resulting in attainment in the San Joaquin Valley (SJV) last year. Mr. Burton stated the next focus will be PM_{2.5} plans for 2008.

Subcommittee Guest Speakers and Subcommittee Reports:

Presentation by Dr. Julia Lester on Ammonia: A PM Precursor

Ms. Laur introduced Dr. Julia Lester from Environ Corp. in Los Angeles. Dr. Lester gave a presentation entitled "Ammonia: A Particulate Matter Precursor," which was distributed in paper form to AAQTF members. Dr. Lester discussed ammonia emissions and the pollutant regulatory cycle, as well as source categories, notably livestock, fertilizer, mobile sources and native sources.

She noted the need for multi-component emission models for CAFO nitrogen sources including examples for dairy flush barns and swine lagoon systems. Dr. Lester gave a detailed example of fertilizer application, including emission factors. She looked at emission models and discussed the national map of Ag ammonia emissions and a grid view of ammonia emissions by modeling. Then Dr. Lester looked at the PM_{2.5} non-attainment map and highlighted the need for ammonia

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modeling work in relation to $PM_{2.5}$. She noted that just because you have ammonia doesn't mean you'll have $PM_{2.5}$.

She discussed the importance of nitric acid in the $PM_{2.5}$ reaction and gave an example of south coast $PM_{2.5}$. She contrasted that example with the SJV where the air is nitrate limited. Then she discussed ammonia regulations, including the South Coast, the SJVAPCD, and Idaho.

Dr. Lester then examined other regulatory drivers, including ammonia and ammonium aerosol deposition as well as visibility impairment, especially in Class I areas. She mentioned the emission reduction credit (ERC) issue - up to \$200,000/lb/day for PM_{10} in the South Coast now! Through a USDA/CEC PIER grant a feasibility analysis is now being done—with possible PM equivalency for ammonia reductions being examined. She closed with the recommendation that more field data is needed to verify models, along with model peer review and the transitioning from emission factors (EFs) to emission models.

Questions:

Dr. Aneja asked about the source of the county-by-county map of ammonia emissions. He also asked about the isopleth graph. She noted that those graphs can look quite different for different regions and that basin-by-basin analysis should be done. In response to his question about the deposition maps that she showed, she acknowledged that these maps represent just one opinion and that there were many assumptions made in the preparation of those maps.

Dr. Rice asked about ground-truthing of the 36 km grid map of ammonia emissions for the U.S. regional partnerships are now operating and examining surface monitoring data for verification of this map and others. These maps were prepared with EFs, seasonal data, and other land management data.

Annette Sharp noted that some ammonia emissions monitoring is on-going and being used as a modeling approach with Environ.

Dr. Jerry Hatfield asked about the visibility impairment map. She noted that this map was based on actual IMPROVE data for those sites.

Dr. Trisha Marsh-Johnson presented the report from the Emerging Issues Subcommittee.

The Whitepaper presented by the subcommittee is in the notebook for detailed review. She noted that ammonia is not a direct $PM_{2.5}$ precursor and that agricultural emissions are largely natural and biogenic. Ammonia emissions are largely a proxy for odor issues. In California, SB700 required controls for CAFOs. There is concern that natural emissions are not being considered appropriately. She discussed the 3 white paper recommendations shown below:

1. “There needs to be greater scientific clarity on the role that ammonia plays in gas to particle ($PM_{2.5}$) conversion. Specifically, the USDA Agricultural Air Quality Task Force recommends that USDA conduct additional research on ammonia from agricultural sources, both cropland and animal and the role it plays in the formation of $PM_{2.5}$ in a timely manner, so as to assist states in the development of their $PM_{2.5}$ SIPs that may regulate agricultural production.

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2. “There is a substantial need to better understand the issue of dry deposition of gaseous ammonia and ammonium aerosols. The number of measurement studies on bidirectional exchange of ammonia is limited. The physiological basis for the uptake and deposition of ammonia/ammonium aerosol needs to be developed. The dry deposition models for estimating total deposition fluxes for use in air quality modeling framework are poorly parameterized in the U.S.

3. “Development of a process-based model for ammonia emissions from agricultural sources is critical, particularly as to certain animal species. While much has been done to develop such a model for the dairy industry, no such model exists for the beef cattle, poultry or swine industry, nor does one exist for the application of ammonia-based fertilizers. In keeping with the National Research Council’s recommendations in “Air Emissions from Animal Feeding Operations,” USDA and other research dollars should be focused on developing process-based models as compared to emission factor research. Process-based models will be necessary in order to evaluate the efficacy of management changes and interventions in reducing ammonia emissions. It is the recommendation of the USDA Agricultural Air Quality Task Force that USDA establish process-based models for ammonia emissions for additional animal species that have not yet been addressed, and to conduct the necessary research for the development of the these models.”

Dr. Aneja presented the research portion of the White Paper. Ammonia is largely emitted from agriculturally-related sources, and the relationship to PM_{2.5} is becoming more important. Very few studies have been done in rural environments where the ammonia emissions are occurring. He discussed air mass issues, and their relationship to this issue. It often seems to involve the mix of rural and urban-source air masses. He highlighted the subcommittee’s 3 recommendations, noted above.

Mr. Baise asked about emissions from waste treatment. Dr. Aneja noted that these emissions seem to be relatively minor sources. Dr. Marsh-Johnson noted that where ammonia is being regulated that waste treatment plants are not subject to regulation. Dr. Shaw noted that waste treatment plants are not required under CERCLA/EPCRA to report. Mr. Blaser said that Iowa monitoring of 8 major facilities there found that ammonia emissions were rather large and could be coming naturally from vegetation effects, as well as from livestock facilities.

Dr. Shaw noted the difficulty of partitioning the livestock emissions from fertilizer-related emissions (as well as others). Ms. Sharp noted that at the Amarillo meeting a few years ago a presentation about an ammonia model was made that seemed rather complete. There is a need to examine more factors.

Dr. Marsh-Johnson noted that the ammonia model was for dairy, but it is not necessarily applicable to other livestock—much more research and development works needs to be done. Ms. Sally Shaver stated that much more research is needed as well as more model development. Kristen Hughes noted that efficiencies in farm production were needed to prevent significant

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ammonia emissions and economic losses for farmers. Dr. Aneja stated that an advisory board is supporting research to quantify nitrogen losses and what could be done to prevent it. Dr. Kirkhorn commented that the public perceives that agriculture is a significant contributor to ammonia, and asked about the sources. Dr. Aneja responded that we do have some general idea about ammonia emissions from crops vs. livestock, but that greater clarity is needed.

Dr. Wakelyn also asked about this ratio (i.e., crop vs. livestock). Dr. Aneja stated that the emissions are about 70% from animal agriculture.

Dr. Marsh-Johnson closed the discussion by going over the 3 subcommittee recommendations again. [See above.]

BREAK

Internal Combustion Engine/Alternate Fuels Subcommittee – Presentation by Paul Argyropoulos: The Future of Fuels

Ms. Shaver introduced Paul Argyropoulos, Senior Policy Advisor for EPA OTAQ, who spoke on emerging alternative fuel issues. Mr. Argyropoulos gave a presentation about the Future for Fuels. He looked at the existing and emerging issues that impact the fuel mix, stating that half of the nation's fuel is reformulated in some way for air quality purposes. He discussed harmonization vs. diversification issues in fuels—including EPA section 1509. He also showed attendees the maps for various fuel components: US 2006 gasoline requirements; boutique fuels from state SIPs, biofuels by state mandates, biodiesel production and sales; and the 2009 US scenario map of ethanol usage.

He discussed Federal roles, including R&D, regulatory, new policies, international activities, and communication. He noted OTAQ's biofuels responsibilities, stating that the goal has increased from the current 4 billion gallons of renewable fuel in 2007 to 7.5 billion gallons by 2012. He stated that the use of trading and banking provisions will help meet these goals. He examined various scenarios for corn ethanol usage in the U.S., and stated that the analyses generally show decreases in CO and benzene, increases in NO_x and VOCs, and slight increases in ozone from biofuel use, resulting in significant benefits in GHG emissions. In addition, there are some increases in farm income, as well as increased food costs to the U.S. consumer.

He discussed the 2007 State of the Union Address where the President committed to a 15% reduction in gasoline usage by 2017 through renewable plus alternative fuels. It will be very interesting to see where the emphases are placed in the future: GHGs vs. criteria pollutants.

Questions:

Mr. Shelmedine asked about the corn usage change in the graph of corn used in ethanol production—the largest component change by 2012. Dr. Johnson added a point about unintended consequences. She noted massive changes in corn usage in feed and the consequent changes in air quality—ammonia increases, etc. Previous scenarios and management were based on the assumption of cheap corn. Mr. Argyropoulos noted that there were many unintended consequences that we don't know about.

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Dr. Aneja noted that most scenarios presented for GHG reductions were based on CO₂, but that N₂O and CH₄ needed to be examined. Mr. Argyropoulos stated that more examination of agricultural production from all angles is needed, and granted that the results he presented were subject to revision, interpretation, and that some results may have large error bars associated with them. He was also asked about imports of foreign renewable fuels, to which he stated that some ethanol is coming from the Caribbean region.

Dr. Wakelyn asked about the potential for government coordination regarding energy policy versus air quality policy. Mr. Argyropoulos noted that they need to do better coordination. Dr. Wakelyn also noted the need for standards for biofuels, to which Mr. Argyropoulos said that they are working in that direction.

Ms. Cory asked about the biodiesel collaborative testing program. Mr. Argyropoulos said their goal is to finish in about 18 months, and that the makeup of the group is quite diversified.

Mr. Abernathy asked about corn percentages, especially with respect to net farm income. He questioned the assumptions and results in the presentation, noting that there were likely things left out that may not be nearly so positive to the producer. Mr. Petersen added that we need to take care of ourselves with regard to energy, rather than relying on imports and relying totally on corn ethanol.

Mr. Shelmedine asked about the need to separate out the net farm income and annual consumer food costs in the presentation graphs. Mr. Argyropoulos stated that they need to address this issue.

Annette Sharp presented the report for the Internal Combustion Engines and Alternative Fuels (ICEAF) Subcommittee. She discussed the Strategic Plan for the ICEAF subcommittee. She stated that the Subcommittee looked at environmental issues such as soil erosion, wildlife habitat, water use and quality, and air quality as they related to PM, VOCs, NO_x, hazardous air pollutants (HAPs), Odors, and mobile emissions. She stated they also looked at carbon issues, consumptive energy use, regulatory and logistical issues, reliable and reputable construction companies, as well as the issue of private profit dominating decision-making.

Questions:

Dr. Aneja asked about the subcommittee's deliberation with regard to GHG emissions. Ms. Sharp noted that they had not considered that yet due to GHGs largely not being regulated yet, but that they may in the near future. Dr. Rice added that the GHG subcommittee would be considering many of these issues. Ms. Hughes stated that the subcommittee would also be examining the permitting structure for these biofuels, which may be becoming an increasingly important issue.

Dr. Von Essen asked about the regulation of GHGs. Ms. Shaver stated that there are many internal discussions now taking place especially in light of the recent Supreme Court decision on CO₂ from vehicles. Mr. Petersen stated that there is a need to create local solutions.

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Dr. Wakelyn asked if there were subcommittee issues for the AAQTF to decide during this meeting, and Ms. Sharp noted there may be some specific recommendations for discussion tomorrow.

Dr. Johnson asked if the ICEAF white paper on the evaluation of air quality impacts from biofuels would consider nutrient management from livestock production as well as look at the full lifecycle.

Ms. Hughes made a motion for the subcommittees to choose liaisons from their membership to coordinate with other subcommittees on this issue. The motion passed.

Mr. Kirkhorn asked if efficiencies for corn ethanol production versus other biofuels would be considered by the subcommittee, to which Ms. Sharp stated that they would.

Mr. Baise asked about the \$0.54/gallon tariff on foreign ethanol and possible subcommittee recommendations therein.

Chief Lancaster stated that he hoped the AAQTF would focus on their specific areas of expertise and on the mission of the Task Force.

LUNCH BREAK

Call to order: Michele Laur, USDA-NRCS, Designated Federal Official, called the afternoon session of the meeting to order at approximately 1:05 p.m.

**Presentation by Dr. Robert Phalen, School of Medicine, University of California, Irvine
Particulate Air Pollution Update – (Presentation in Briefing Book)**

Dr. Phalen discussed particle deposition within the body. He looked at nasopharyngeal, tracheobronchial, and pulmonary deposition, noting that the 0.3 μg particle size stays undeposited longest for all three regions. He also discussed “associations” of health effects to changes in particle concentrations and the challenges to mid-1990s epidemiological findings. He listed PM characteristics that produce health effects and listed non-PM explanations for these same health effects. Dr. Phalen went on to state that variation in particle size exposure may be necessary to maintain normal defenses. He suggested that a holistic approach is needed and listed recommendations for researchers, regulators, legislators, the public, and industry.

Questions:

Mr. Kirkhorn had a question about being able to differentiate rural vs. urban sources.

Dr. Phalen responded there is a lot of research (Harvard, etc.) to fingerprint sources based on chemistry.

Mr. Kirkhorn asked if it is valuable to try to differentiate? Dr. Phalen stated he doesn't think so because you can't just look at anthropogenic sources. You need to look at the entire mix.

Dr. Krupa asked: Aren't reactivity, acidity, & toxicity of the particles just as important as mass?

Dr. Phalen responded absolutely – pH, reactivity, acidity, surface area, mass, etc. are all important.

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Dr. Wakelyn stated that EPA has spent a large sum to review PM by looking at particle size and the difference in where the particle originates. Should we look at both rural & urban sources and regulate them differently? Dr. Phalen stated we should have separate standards based on criteria.

Dr. Phillip Wakelyn presented the report from the Particulate Matter and Ozone Subcommittee:

He stated that the subcommittee will finalize its action plan after the meeting. He indicated that there was limited follow-up by the subcommittee until late April. Dr. Wakelyn provided updated documents that included a recommendation to remove TSP as a regulated pollutant since it is not an adequate surrogate for PM₁₀ from Ag operations.

With regard to the Ozone NAAQS review, he stated that the new deadlines for the Ozone NAAQS are June 20, 2007 for proposal and March 2008 for final promulgation. He further stated that the subcommittee plans to look at the proposal and develop recommendations. They may also develop a white paper/position paper.

Questions:

Kristen Hughes asked: “Will the subcommittee focus efforts on California (CA) PM regulatory requirements and what BMPs are effective and/or feasible?” Dr. Wakelyn responded that the subcommittee does recognize this need, but thinks that other subcommittees are already putting efforts to that end.

Mr. Abernathy stated it is difficult to differentiate federal issues from special California problems.

Presentation by Mike McCormick of the California Climate Change Registry on the California Climate Change Action Registry (CCAR) Activities.

He reviewed the role of the registry, noting its creation in 2000 by the California legislature to develop an accounting standard for carbon credits, inventory reports and reductions. He provided an overview of registry tools, including reporting, industry-specific certification protocols, GHG reduction protocols, and CARROT (on-line reporting tool). He also reviewed the cap-and-trade theory and the need for protocols. In addition, he reviewed principles for project protocols that included environmental integrity (measurability), transparency, consistency, and practicality. Finally, he discussed the Livestock Project Protocol, which includes the installation of a biogas control system to be eligible for measurable credits.

Questions:

Kristen Hughes stated that obviously there is need for a lot of data and asked: “Is there enough right now, or are there some areas where you don’t have enough?” Mr. McCormick responded that he thinks Ag will be a 1st tier sector in a cap-and-trade program (i.e., will be used for voluntary reductions to produce credits [i.e., won’t be required to reduce]). There will be issues with quantification. Soils CO₂ flux will need more work and the N₂O model enhancement will need to be completed.

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Gary Baise asked: “What about the \$28 million that European companies paid to developing countries to reduce methane emissions from hog farms?” Mr McCormick responded that it is a part of the Kyoto protocol and it has experienced some growing pains.

Dr. Shaw asked several questions: “How are baselines set? What if something already has been proven for more than just GHGs? Can you not use those? Who sets the standards and why are they so stringent to stifle some of the innovation?” Mr. McCormick responded that technologies could be reviewed for multiple pollutants; criterion are high because credits are used to offset emissions that have gone above the cap. Otherwise, there is no overall improvement from the cap mechanism.

Dr. Shaw stated that it seems more related to the uncertainty part of it. He asked: “Can you not still incentivize greater strides?” Mr. McCormick stated he agreed. The overall goal is to make sure the cap is not exceeded and to promote credits but you still need to cross the performance standard threshold before you can quantify.

Dr. Rice asked: “What is the value for registering non-CA credits?” Mr. McCormick responded that the registry is a U.S. registry, and it is in competition with other U.S. registries.

Dr. Rice asked “When you already have a forestry protocol, why can’t you develop a soil protocol?” Mr. McCormick stated that the development of a forestry protocol was required but they haven’t yet been required to develop a soil protocol.

Dr. Wakelyn asked: “How does this registry compare to other registries, or how does it interface?” Mr. McCormick – The European Union (EU) registry is a regulatory program with protocols. The California registry is only a registry. It creates currency (credits) based on standards and protocols but doesn’t bring buyers and sellers together.

Dr. Wakelyn stated (regarding soils) the EU doesn’t recognize a lot of Ag sequestration since it seems to think it’s not permanent. He asked: “What is CCAR’s position on Ag sources, like soils?” Mr. McCormick responded that CCAR wants to make sure that reductions are actually reductions with environmental integrity.

Mr. Shelmidine asked: “Once registered with CCAR, can you register with another registry?” Mr. McCormick stated that’s what CCAR asks, but they can’t enforce it because it is a voluntary system but it still wants to make sure you don’t get double credit for the same reduction.

Dr. Charles Rice presented the report from Greenhouse Gases and VOC Subcommittee.

Dr. Rice discussed the Ag summary in the recent (fourth assessment) IPCC Working Group III report that included discussions of mitigation technologies and practices, including biofuels. He also reviewed recommendations in the Action Plan (see Action Plan in the AAQTF meeting notebook). Included in the Action Plan were recommendations to establish a USDA GHG & VOC Information Resource Center that is tied to ARS, CSREES, NRCS, Rural Development, and universities. In addition, they recommended an examination of potential impacts of feedstock production for biofuels, including:

- Changes in land use, water needs, availability, & quality

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- Competition for grains, oilseed, biomass
- Lifecycle analysis
- Assess co-benefits

Questions:

With regard to mitigation techniques, Dr. Wakelyn stated that conservation tillage has lots of benefits, not just for GHGs. If you sell the credits, but then plow the land, you lose those credits or the ability to sell them. Dr. Rice responded that it is a valid comment. It's still a way to get things started until new technologies come on line. It's not a permanent solution, just something temporary.

Mr. Bauer asked for clarification about the subcommittee statement on field burning. He asked if burning does not provide the benefits of no-till? Can you clarify that statement in the Action Plan? Dr. Rice stated that you actually get enhanced soil quality and promote plant growth, but lose the crop residue, so it's a no net sum gain.

Mr. Abernathy stated that you may want to have regional or sub-regional standards because of local issues [Note: In California, you need to deep rip every few years to reduce compaction.]. Dr. Rice agreed.

Presentation by Steve Brisby, Manager of ARB Fuel Section: Bio-Fuels: California Regulatory Activity & Potential Implications

Mr. Brisby stated that California is considering low-carbon fuel standard to address its huge energy problems. They need to achieve increased efficiencies and the introduction of alternative fuels. These gains are needed because transportation in California consumes 11% of nation's gasoline supply & 20% of the ethanol production.

He also talked about the Alternative Fuels Incentives Program where they need to spend \$25 million in 10 months to incentivize alternative fuels by July 2007. In addition, Executive Order S-06-06 encourages the use of biofuels (particularly in-state production). The Bioenergy Action Plan includes the development of biofuel specifications. Also, Assembly Bill 1007 requires the preparation of state plans to increase the use of alternative fuels and requires a full fuel-cycle assessment. Finally, the Low Carbon Fuel Standard – Executive Order S-01-07 – creates an early action measure under AB32 to specify an implementation process, with full implementation by 2020, and a reduction in carbon intensity of CA fuel by 10%. These actions could result in:

- Displacement of 20% of the gasoline consumption.
- Larger renewable fuels standards
- Greater goals than just GHG reduction

Questions:

Dr. Wakelyn asked several questions: “Why is biodiesel not considered an acceptable alternative fuel? What about the burning of ethanol that emits more VOCs (formaldehyde)? How do they all play together with the GHG issues that focus on these fuel programs? What is carbon intensity?”

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Mr. Brisby responded: AB32 requirements clearly states that they can't cause a problem for other areas and can't have NO_x increases because of ozone and PM_{2.5} problems. It released a policy that biodiesel up to B20 is a CARB-approved fuel. We acknowledge that ethanol causes greater VOC emissions through soft pieces of fuel systems. Under AB32, we are proposing to update regulations to require offset of these emissions. Oxygenated gasoline reduces tailpipe VOC emissions. The requirements have VOC, NO_x, and toxic limits which must be met by refiners.

Dr. Aneja asked: "How do international trucks impact this plan? What strategies are in place?"

Mr. Brisby responded that the California Air Resources Board (ARB) has done a survey of Mexican trucks and found that because of tax issues, most trucks were actually buying California diesel. Mexican trucks aren't as bad as it seems because they have to keep up with the efficiencies of the American competitors' trucks.

Dr. Krupa asked: "What is California going to do about 30% less mileage for ethanol?"

Mr. Brisby stated that the market will take care of that. The prices of blends will account for the mileage reduction. It is also part of the life cycle analysis on the carbon side.

Kristen Hughes asked: "What biofuels crops will be produced in California that can also be sensitive to other California issues (salinity, etc.)?" She stated the need to work with NRCS and spoke of the other challenges with coordinating with various boards (Air Board, Water Board, etc.)

Mr. Brisby agreed. He stated doing business in California is mind-numbingly complicated. CalEPA should be doing all coordination with the various boards and the GHG group.

Wrap-up

- Michele Laur, the Designated Federal Official, made the following announcements:
 - The latest versions of documents will be provided to the subcommittees.
 - Please pick up your pictures taken with Secretary at the meeting last November.
 - Dinner is on your own tonight.
 - Tomorrow afternoon – subcommittees that presented today can present revised recommendations for vote and adoption.
 - Subcommittees should start deciding on liaisons to other subcommittees –meeting rooms will be available tonight.
 - The meeting will begin at 8:00 tomorrow morning,
- Chief Lancaster thanked the subcommittees for their efforts.

The meeting was adjourned at 5:10 p.m.

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Call to order: Michele Laur, USDA-NRCS, Designated Federal Official, called the meeting to order at approximately 8:05 a.m.

Presentation by Dr. Al Heber from Purdue University: National Air Emissions Measurement Study (NAEMS)

Dr. Heber stated the objective of the study is to determine if livestock farms will exceed NAAQS/CERCLA regulatory requirements. He said that the study costs \$14.6 million and will consist of 2 years continuous monitoring. Site setup is underway and includes the setting up and testing of instruments and the mobile lab, and the training of personnel. The study includes 20 farms and 38 barns. The study also includes contracting with approximately 7 universities.

Dr Heber gave a detailed overview of each of the NAEMS study sites showing schematics, instrument location, and ventilation. [Note: Additional information is available at www.AgAirQuality.com .] Finally, he suggested that future work/studies should include GHG gas mitigation tests, odor mitigation studies, atmospheric dispersion studies, and emission model development.

Questions:

A list of questions was prepared by the AAQTF members and provided to Dr. Heber prior to the meeting to facilitate development of his responses. The questions and his answers are listed below:

- What about the scalability of NAEMS results? It depends on the site.
- What model parameters will result from this study? We will characterize sites for validation of models.
- What is being monitored at each site? TEOM at all barns with H2S instrument. NH₃ and CO₂ at all sites. Some VOC specific sites and 2 “super VOC” sites.
- What about PM Over-sampling? The methods do not acknowledge the difference between regulated PM10 and true PM10.
- Will TSP measurements be taken too? No.
- Is the Duration of PM measurements adequate for dispersion modeling? PM_{2.5} will be measured for 4 weeks. PM_{2.5} of layer PM is about 10% of PM10. PM10 is 25% of TSP. We expect add-on proposals to do dispersion modeling.
- What is the fate and transport of the pollutants? NAEMS is not measuring it.
- Are conservation practices being measured? No, they are beyond the scope of study.
- Are you tracking changes & management practices in feed through the study? Dr. Heber said “yes.” That data (e.g., diet information, manure removed, etc.) are part of the agreement with the owner.
- When will the study end? Dr. Heber said late summer 2009.
- Do you have any plans to have results peer reviewed by the National Academy of Sciences? Dr. Heber responded that the data will be validated and submitted to EPA. However, each PI is very eager to publish data in peer-reviewed journal articles.
- Will the data be published by July 2009? Dr. Heber responded no, only the methodology. Emission data can not be published until after the review period.
- Can the AAQTF visit the sites? Yes, but the task force needs permission from the producer. How do you estimate emissions from naturally ventilated barns?

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Dr. Heber responded that he tried to stay away from such barns.

- Concern was expressed that there is only one broiler site and it is in California. California does not reflect the rest of the broiler industry. Dr. Heber stated that there are two broiler barns in Kentucky being studied. The broiler industry as a whole chose not to participate.
- The concept of model farms is flawed. Is there any mass balance data being collected? Dr. Heber said yes. N content in manure, feed, milk, eggs is being measured.
- Are add-on data (VOC's etc) being reported to EPA? Dr. Heber said no.
- What if EPA changes the way they regulate PM? He recommended TSP measurements as part of NAEMS. He was concerned about scaling results of the study. He also was concerned that scalability is not being incorporated into the study to make sure all appropriate measurements are being made. Need to understand production practices. Dr. Heber stated that they are measuring a lot of meta/auxiliary data (e.g., mass balance as best we can, manure sampling, animal weight, mortality, motion detectors of animal activity, etc).

Presentation by Grant Nakayama, EPA Assistant Administrator for Enforcement and Compliance: The Future of Enforcement

Mr. Nakayama gave an overview of enforcement activities. He stated that the Enforcement Office at EPA is involved in 20% of the agency enforcement cases. In addition, they have 14 Ag Compliance Assistance centers focusing on achievement of environmental results.

He gave attendees specific examples of past enforcement actions. As part of that discussion, he reviewed the Ohio Fresh Egg (former Buckeye) facility case. In addition, he discussed the ethanol settlements with 28 companies and the sugar beet industry case. Finally, he talked about the publication of the CERCLA/EPCRA FR Notice in the fall 2007 in which the preferred EPA option and potential alternatives are discussed.

He indicated that EPA wants to continue working with the Ag industry. However, they will take enforcement action where needed.

Questions:

Dr. Wakelyn asked: Why doesn't the media specific standard take precedence? Mr. Nakayama stated they have to take all statutes and enforce them. One does not excuse the other. The separate statutes have different goals.

Dr. Wakelyn stated that the Midwest scaling factor is referred to as "voluntary". Mr. Nakayama responded that NSR applies to all mass emitted, but if you have a measurement of carbon only, then that's not good enough. Archer Daniels Midland helped develop the scaling factor. One needs the factor to get total VOCs. Facilities are not required to use it and it is really only an ethanol only factor. If people want to create their own factors then that is okay.

Dr. Wakelyn asked Mr. Nakayama if he ever thought of putting the factor in the FR to get an evaluation? He responded that it is not required.

Dr. Johnson was concerned about calculations done on Buckeye Egg. It was assumed that fans operated 24x7 even though that is not the standard operating procedure. What can we do to have the actual way the ventilation system is operated not the max taken into account with title V

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& enforcement? Mr. Nakayama responded that some regulations are based on “potential to emit”; others on “actual emissions”. This is an issue for many industries. We would be glad to work with you on this issue. EPA recognizes physical limitations in the “potential to emit” concept and it sounds like Dr. Johnson’s example may fall under this situation. Dr. Johnson asked that EPA look at the physical limitations of the animals, not the building.

Dr. Shaw stated he is glad to hear EPA wants to work with Ag, but there has also been the message “they can do it because they can.” The Buckeye Egg issues set a precedent of mistrust. Enforcement drove the NAEMS process and he is concerned that due to pressures it may not be scientifically complete enough. Mr. Nakayama responded, stating he supports the NAEMS study and it needs to move forward. Yes, we can always do more. Let’s figure out where to go next.

Mr. Kirkhorn asked: If EPA uses freedom to farm and zoning when determining enforcement or does EPA just look at things in terms of emissions? Mr. Nakayama responded: Land use, planning, and zoning is not taken into account by EPA. EPA, from a regulatory view, is looking at emissions, toxicity etc.

Mr. Kirkhorn asked: Do you see that approach as a potential complementary strategy? Mr. Nakayama responded that he is not sure if his office has a role to play – he needs to think about it.

Mr. Baise stated that he is concerned about the lack of science used in Buckeye Egg. Mr. Nakayama stated he appreciated the input and that he wants to hear about the problems. Remember that there is not an Ag exemption. This is a fact of life. Let’s move forward and address the environmental footprint.

Presentation by Seyed Sadredin, San Joaquin A.P.C. D., on California Ozone Report and Ramifications of EPA Regulations

Mr. Sadredin talked about the 3.2 million people in San Joaquin Valley (SJV) and the topography that plays a large role in the SJV. Studies show that the SJV air has to be cleaner than other places because other areas with higher pollution densities do not experience a higher AQ degradation.

Since 1990, the SJV has experienced great growth but still has reduced pollution at a greater rate than Los Angeles. To date the pollutants of concern are O₃ and PM. For example, Arvin, Southeast of Bakersfield is the most challenging area to meet the O₃ standard. For the SJV, the fastest path to attainment is to reduce NO_x. VOCs will not bring SJV into attainment, so removing dairies will not help. Since heavy duty trucks are the largest contributor to NO_x, the engine change-out program goes a long way to achieve the needed reductions.

He also discussed the 2007 Ozone (O₃) Plan, due by June 15, 2007. Prior to 2003, Ag operations were exempt from most AQ regulations in California except for things like Ag burning. SB700 lifted the exemptions, thus requiring Ag sources to get air permits for major source farms, dust controls, and VOC control. He closed with a discussion of research recommendations that included:

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- Need commitment to sound science and work on quantifying the effectiveness of management practices.
- Quantification of land application emissions, lagoon emissions, effect of feed changes, and PM10 emission factors and controls.

Questions:

Mr. Kirkhorn had a question about the bar chart. He asked: How do you decide what falls under local jurisdiction? Mr. Sadredin responded that for stationary sources the local air district has control over it. Farm equipment are off-road mobile sources that fall under the state jurisdiction.

Mr. Kirkhorn asked: How will you address bio-diesel NO_x? Mr. Sadredin stated that was a good question. Need to look at it as a community/state/nation issue and establish priorities (pros/cons).

Mr. Isom asked: What advice do you have for other Ag areas without that isopleth as to what they should do with the new O₃ standard? Mr. Sadredin stated that hopefully California's work can help, but his advice is to use good sound science. One needs to understand the state of AQ in the region. For example, reducing NH₃ will not help reduce PM_{2.5}. You need to go after NO_x.

Mr. Isom pointed out that California has a difficult job. Tier 4 is backing up. There are no tier 4 models on the bench. He asked: "Can we come into attainment without tier 4?" Mr. Sadredin responded: No. There is discussion about no-farm and no-travel days if the technology cannot meet the goals. We will get there through funding research and by writing tech-forcing regulations.

Mr. Isom asked: "Do you see a change with ERC (emission reduction credits)?" Mr. Sadredin stated that ERC are an issue in California. If we have an energy crisis, lights will go out in the valley. He would like to see ERC go away. All reductions have been made – air is not going to get cleaner so it is more a paper exercise where someone gets rich.

Dr. Johnson stated she was concerned about the "no work days" comment and liked the comment about controlling ammonia would not get the valley into PM attainment. She asked: "Why is it added to California's list of pollutants?" Mr. Sadredin stated that the comment he made is specific to the valley, and doesn't necessarily apply to other areas. Ammonia is harmful on its own and we need to control it. The board wants to focus on technology and does not have no-farm/construction days in the plan.

Chief Lancaster welcomed George Gomes, California Under Secretary of Agriculture

Secretary Gomes stated that LA county used to be the largest Ag producing county in the state (and nation). A growth rate of 600K people per year has played a role in the air quality of the area and in the changes in agriculture.

There is a need for sound science. The California Department of Agriculture is coordinating a management process to develop dairy treatment options. In addition, we are collaborating on biomass research with Jenkins (UC Davis) and working with the Climate Action Team on soil carbon sequestration and the reducing of ruminant emissions. The bottom line is that we need a

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healthy agriculture to be healthy. Food safety and national security are linked. We don't want a dependence on outside food supplies.

Animal Feeding Operations Subcommittee – Action Plan and Deliberation

The AFO subcommittee presented its action plan. The plan consisted of two groups of actions. Group A actions were high priority, urgent actions. Group B actions were lower priority, non-urgent actions. The Group A actions included:

- Identify/evaluate CMPs; mitigating emissions; fate and transport
- Need for proper emission estimation estimates (NAEMS etc).
- Bioenergy/biofuels and how they affect AFOs.
- CAA and CERCLA/EPCRA permitting and reporting applicability issues for AFOs
- Questions with consent decrees/consent agreements
- All USDA agencies should present a unified research plan to AAQTF
- Need to identify/implement whole systems-based approaches
- Concerned with potential regulation of CO₂ and other greenhouse gases.

Group B actions included:

- Need to address issues associated with farm size and integrators and how to make various incentives available to all producers.
- Need to identify/clarify appropriate definitions for applicability of regulations to Ag sources, including animal operations
- Review the use of incentives for certification programs and mark-based incentives

Based on the action plan, the subcommittee had four recommendations/requests:

- USDA should review existing conservation management practices (CMPs) research data
- USDA should work with EPA on appointing an AAQTF member as a liaison to the NAEMS research project
- USDA should provide an update to AAQTF at the next meeting on progress made toward developing a unified air research plan for all USDA agencies
- USDA legal counsel should review the recent US supreme court decisions on greenhouse gases and provide an interpretation at the next AAQTF meeting to provide a basis for establishing research priorities.

Dr. Wakelyn requested clarification on the 4th issue. In response, the subcommittee stated that it wanted legal counsel interpretation to know whether we should be concerned or not. Is there any need for the AFO subcommittee to spend any time on this? Dr. Wakelyn stated that wouldn't it be better to have someone from EPA provide the information. The subcommittee agreed.

Dr. Aneja suggested that the subcommittee also consider the issue of odor since animal operations are the target of public concerns of odor and the scientific community, doesn't fully understand how odor is formed. In response, Mr. Kirkhorn seconded Dr. Aneja's odor point.

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Dr. Hatfield raised the issue of uncertainty with regard to data from the NAEMS study. Specifically, he is concerned about the variability in the emission factors and how this information will be scaled to other places and sized operations.

Ms. Hughes suggested the subcommittee consider technology review centers and CMP reviews for their recommendation. She asked: How do we help make the process faster for getting NRCS practices in place?

LUNCH BREAK

Call to order: Michele Laur, USDA_NRCS, Designated Federal Official, called the meeting to order at approximately 1:05 p.m.

Michele Laur introduced Cindy Tuck, California EPA Assistant Secretary for Policy

Secretary Tuck said she would discuss California's Climate Change Initiative. She stated that the Governor has indicated that the time for debate on climate change is over. In response to the issue, targets have been set by the 2005 Executive Order. The targets/actions are being driven by the anticipated impacts of climate change to California.

In addition to the 2005 Executive Order, Assembly Bill 32 is now state law (AB 32). AB32 is also known as the Global Warming Solutions Act of 2006. Key provisions of AB32 include mandatory green house reporting and the setting of priorities to work on the greatest emissions first then move down to lesser emissions.

As part of the overall effort, advisory committees have been created, including a Market Advisory Team and an Environmental Justice Team. The effort includes market based programs and elements to avoid leakage (i.e., driving industry emission sources out of California emitting the same GHGs somewhere else). Next steps include Ag since it has a small part of the pie. There could be economic benefits to Ag. Questions being asked include:

- What project protocols could be developed to reduce Ag emissions and provide extra income?
- Can Ag help determine in how we plan for the future.

Questions:

Roger Isom stated that he does not think there is any good news with this legislation. He thinks this is a disaster in the making. Look at the current market program and see what the problems are now – i.e. ERCs. While I am benefiting from this now, I will be on the other end in the future. What about the nitrogen fertilizer issue? Ag impacts - will pay more for power and transportation. Other states are laughing at us and don't think southern states will act anytime in the future. If we could move from California – we would. Talk about unintended consequences – rice has to now flood rice fields so they will not burn – but this creates methane. Are these permits going to be permanent for carbon sequestration? For example: Can we never dig up land again.

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Secretary Tuck responded: To your point about emission markets with ERCs, it would be good for us to meet with Dan Slobak to talk about the issues. I can help you with that meeting. I am not sure about the nitrogen issue. Regarding unintended consequences, California EPA will have to look at these issues. If you know of some issues, please let us know. Regarding carbon sequestration – not sure about it now – again you can help us.

Dr. Aneja asked: When you say climate change emissions – are you referring to CO₂ or other GHG? Ms. Tuck stated AB32 covers Kyoto pollutants (six GHGs)

Dr. Aneja asked how does the Governor intend on affecting India and China? Ms. Tuck said that Secretary Adams was asked to speak at a council that advises China on how to reduce GHGs. The Secretary talked about California's experiences and let China know that it is in their economic interest to reduce GHGs as it would provide opportunities for China. Dr. Aneja said "so you are only encouraging them to participate in mitigating GHGs." Ms. Tuck responded: "Correct."

Kristen Hughes stated that she would like to build on Mr. Isom's comments with a positive spin and that she is glad that you are looking at the leakage issue. Ms. Hughes wanted to point out on the positive side – the CAFO committee brought up the Supreme Court case and she thinks it is good for us to discuss how agriculture can be involved in these conversations. There are many ways the farmer could be involved in this - like feed management/conversion, efficient nitrogen, and energy production. Incentives are key – if not, we will have leakage. Ms Tuck noted that many in the cabinet have a strong appreciation for the Ag sector. This is a unique point in time that a whole host of leaders are working on this issue. I hope that more people think like you do (i.e., that this can be a benefit to the Ag sector).

Cindy Cory requested some clarification. N₂O was first considered as a possibility that could be involved in AB32 – it was an open ended question. Will there be a follow-up working group to the March California climate change symposium? No one is talking about N₂O regulation. As part of the AB32 Economic Committee, I am working on this for the next 9months. I have the agriculture seat. I am trying to facilitate input to identify research, research gaps, other issues (i.e. digesters and NO_x issue). We want absolutely the best report. Ms. Cory stated further that she is willing to bet in 2 years that we will have a national GHG policy. Ms. Tuck responded "yes" and the national program will be largely based on the California program.

Mr. Abernathy stated that AB32 is nothing more than election politics at its best and hoped that Ms Cory is right. Do you know how many countries are in the Kyoto Protocol and which ones are in compliance. Ms. Tuck said she did not. Mr. Abernathy said he didn't know either. He is concerned with the transportation issues because China is not involved and does not have to comply. The economic impact should be looked at first – before setting timelines. Ms. Tuck stated that they did do an economic analysis.

Mr. Kirkhorn asked: What is the role of green spaces offsets – i.e., fallow lands? Ms. Tuck said green spaces and land use planning are all topics the legislature is looking at.

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Dr. Shaw asked in regards to the leakage issue as to where the funds are coming from? Also, in regard to balancing GHG offsets and maintaining compliance to criteria pollutants – has an analysis been done for leakage? It's already happening and it will be a large issue.

Ms. Tuck stated that under a market system the source could take a cost effective way to reduce GHGs. We need to do this in the most efficient way possible. Regarding criteria pollutants –we continue to look at this issue closely.

Dr. Wakelyn stated that over 100 countries are in the Kyoto Agreement but most are lagging behind. We are already talking about phase II for the Kyoto Agreement. What do you do under these circumstances? The problem (i.e., lack of progress) is the complicated part – prudent action should be taken – but what kind of prudent action should be taken. Ms. Tuck said that there will be a national action plan. We need an integrated process – criteria pollutants, GHG, energy policy and health concerns.

Ms. Tuck stated they have had meetings regarding a multi-state registry. The three main objectives for this year are: (1) Governor's low carbon fuel standard, (2) Reduction of emissions from air conditioning, and (3) reduce emissions from landfills. Next year they will look at two Ag issues: (1) manure management digesters and (2) engines. She agreed that there needs to be a cohesive look at these issues.

Dr. Rice stated it was interesting that you went to the EU to look at markets since they don't consider Ag offsets. He said they should look at Canada because they are using offsets. Should these offsets be permanent? Ag is important for offsets and can provide some additional income. Will Ag in CA be regulated under AB32? Ms. Tuck stated that Ag is not now being regulated – but it is not exempt – so it could possibly be regulated in the future.

Dr. Shaw asked how real are the credits and will California allow the purchase of U.S. credits by other countries or will the credits stay within this nation? Ms. Tuck responded that they would like the market to be as broad as possible, but want it to also be a solid program.

Kristen Hughes wanted to make Ms. Tuck aware of water board regulations from region 5 – requiring high level lining so putting a digester in would not be affordable. Mandating a digester on a site would probably not be economically feasible. Could be up to \$2 million for a facility. Ms. Tuck stated that she will take the comment back to her board.

Mr. Petersen – wanted to clear up Kristen's comments. The water board issue is a tier II issue – that won't be effective. He has been working with Pamela (of the water board) and she has said that there would be continued conversations.

Mr. Abernathy stated that when you look at economics of putting in a digester, it is not economically feasible without 50 percent cost-shares. Need to note – because of EQIP caps for digesters, most farmers don't have the funds to build a digester.

Subcommittee Action Plan Recommendations and Adoption Vote for Emerging Issues, ICEAF, GHGs, and PM&O₃

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The ICEAF, GHG and PM/O3 subcommittees represented their recommendations from the previous day. The discussion included the following points:

Dr. Wakelyn asked if we should have one committee that brings together all the research suggestions.

Dr. Rice raised the previous recommendation from Cindy Cory in which she suggested that the subcommittee chairs communicate once a month instead of liaisons from each committee. He stated that it would be more efficient. Perhaps a record of the research could be kept for the Chief.

Dr. Shaw asked why not just pass on minutes from the meetings to other committees.

Chief Lancaster stated that they are not taking full advantage of the other USDA committees for research issues. The task force needs to consult with ARS, CREES and FS more on research and needs to have the chairman communicate to the other committees.

Ms. Laur then stated that it is time to move to approve action plans

Emerging Issues Subcommittee:

Mr. Isom represented his subcommittee's three recommendations.

A move to approve was made and seconded.

Chief Lancaster asked: All in favor – ayes have it. Three recommendations have been adopted.

Internal Combustion Engine/Alternate Fuels Subcommittee:

Ms. Sharp stated they were not prepared to move forward on recommendations – but have developed a list of ranked priorities which you see before you. They will probably have to work closely with the GHG Subcommittee. She requested a loan of a part-time librarian to research and evaluate the impacts from increased biofuel production, after which the subcommittee would be able to provide recommendations to the Secretary. She requested approval of the plan placed before the task force.

Dr. Rice asked if it would be more efficient to use a graduate student or intern?

Dr. Isom stated he would like to see a recommendation out of today's meeting for the May- July 2008 meeting on the biofuels issue.

Dr. Aneja recommended adding graduate students to the research librarian recommendation.

Ms. Sharp and Dr. Shaw stated that they just need the work done and don't care how it is done.

Dr. Hatfield had a comment on recommendation three: Should add limited water use and alternative crop usage – add "natural resources."

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Ms. Sharp stated that the first two items were intended for the subcommittee to work on – and then develop recommendations for the Secretary once we are clear on the recommendations.

Chief Lancaster stated that we need clarification if a FACA committee can use USDA staff part time.

Dr. Knight said perhaps the task force could make a recommendation to the Secretary to provide all the information USDA has on the science of the biofuel and waste-to-energy production.

Ms. Sharp stated that she would like to discuss the revisions with her subcommittee and bring them to the task force at the meeting tomorrow.

PM and Ozone Subcommittee:

Dr. Wakelyn stated there are two documents before you. The first one discusses what is an appropriate metric for TSP threshold? He stated that it needs a short cover letter from the Secretary or the NRCS Chief. He stated that TSP should no longer be used for determining PM. EPA has asked for this document and he would like a motion to approve.

A motion was made and seconded.

Chief Lancaster: All in favor – ayes have it. The recommendation was approved with Kristen Hughes abstaining from the vote.

Dr. Wakelyn stated that the second document contains a recommendation regarding NAAQS. It deals with coarse material and monitoring and other issues regarding PM.

Chief Lancaster: Motion to recommend the subcommittee document containing recommendations to the EPA on the PM NAAQS monitoring issue – all in favor – ayes have it.

Dr. Wakelyn concluded his presentation with a discussion of recommendations for USDA research on VOC, PM, and NOx monitoring.

Ms. Hughes stated she was not real sure about this issue since she is a new member.

Dr. Shaw: In the preamble of the NAAQS there is a discussion about monitoring systems. The monitoring systems are not being used properly. This recommendation does not consider exceptions from schools and populated areas.

Ms. Hughes: What is the difference between performance standard and design standards?

Dr. Shaw: Discussed differences between design standards and performance standards.

Mr. Bauer stated: We do not want to exclude modeling issue.

Dr. Shaw: I think some wordsmithing is needed – modeling was not intended to be left out.

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Chief Lancaster: Motion to approve the technical changes – the ayes have it.

Dr. Wakelyn stated that we need to consider the VOC recommendations tomorrow, after the ICEAF recommendations are presented. I would like Dr. Krupa to take some time to talk about the secondary ozone standard for plants.

Dr. Krupa said that there is agreement in the scientific community that there should be a secondary standard for ozone – but should it be much different than human health ozone is still a question. EPA has not researched the issue – but tasked with making the decision - recommend carefully wording of the document.

GHG Subcommittee:

Dr. Rice represented his recommendations.

Chief Lancaster called for approval of the first recommendation – approved

Dr. Rice followed up with a recommendation to establish a GHG and VOC information resource center. In response Dr. Wakelyn asked if it should be handled by Bill Hohenstein's group. Should this task be handled by NRCS?

Dr. Rice responded that Hohenstein's group is more of a task force – this should be set up to be easily available to the end-users.

Dr. Knighton – I am not clear who the audience is for the Center.

Dr. Rice indicated that he felt there is a disconnect between research and the end-user.

Mr. Isom said he had reservations about having this center in another agency other than USDA.

Mr Weinheimer asked about making a one-stop website for GHGs.

In response, Dr. Rice stated that perhaps they could change the recommendation to an evaluation of the need for this Center followed by a report out at the next meeting.

Chief Lancaster called for a vote on the second recommendation – approved.

Dr. Rice discussed the recommendation for the examination of the impacts from the feedstock production for biofuels.

Ms. Sharp proposed taking this off the table for now until the ICEAF subcommittee discusses their suggestions tomorrow because they will take care of this.

Chief Lancaster: OK – taken off.

Public Comment:

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Karla Raettig – Environmental Integrity Group – I am an attorney at the group. I am working with a coalition that is interested in the Task Force activities and supports a productive agriculture sector. We support the science research supported by the Task Force but are concerned with what the Task Force does with uncertainty. We do agree on some issues and we also have concerns regarding the monitoring issues. There are also concerns that this Task Force is going outside its mandate. Although there is expertise on the committee, there is not a diverse legal expertise.

Chief Lancaster stated that we support public comments and said thank you to Ms. Raettig for her efforts.

Ms. Laur stated that Dr. Kevin Janni also had some comments.

Dr. Janni stated that he wanted to talk about an NRI project. My name is Kevin Janni. I am a Professor at the Department of Bioproducts and Biosystems Engineering, University of Minnesota. Currently I am on a sabbatical with the USDA-NRCS Air Quality and Atmospheric Change in Portland, Oregon. I wanted to let the AAQTF know about a new USDA NRI grant project that began in early 2007 related to air quality education. I am part of the leadership team, which is led by Rick Stowell at the University of Nebraska and includes Dr. Ron E. Sheffield, University of Idaho; Dr. Eileen Wheeler, Pennsylvania State University; and Dr. Dennis Schulte, University of Nebraska. The project is a multi-state effort and is titled the Air Quality Extension and Education: Enhanced Learning Opportunities for Addressing Air Quality Issues in Animal Agriculture. The purposes of this three year integrated extension-education project are to provide targeted information and training on agricultural air quality to professionals that interact with livestock and poultry producers and, in a coordinated effort, develop learning modules for use in teaching college students and pre-professionals. The goal is to have well-prepared professionals help equip producers and other decision makers make well-informed decisions based upon the best-available research.

John Thorn was to do public comment but was not present at this time. There was no other public comment so the public comment period was closed.

The meeting was adjourned at 5:10 p.m.

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Call to order: Chief Lancaster opened the meeting at approximately 8:00 a.m.

Subcommittees Action Plan Recommendations.

AFO Subcommittee:

Ben Weinheimer presented the changes recommended from yesterday's meeting (i.e., change recommendation #4 to "EPA" from "USDA" and develop a summary document on AFO odor to present at next meeting). In addition, Mr. Weinheimer presented the following recommendations:

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.

Approved.

2. USDA requests that EPA 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.

Approved.

3. USDA provide an update to the AAQTF at the next meeting on progress made toward coordinating (note: "coordinating" replaced "developing") a (note: unified deleted) air research plan for all USDA agencies.

Approved.

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.

Approved.

Action # 5 does not need full committee support (Ben Weinheimer). No vote was taken on action #5.

Regarding #2 and #4, Sally Shaver said she will commit on behalf of EPA to update AAQTF on the NAEMS study periodically and on the U.S. Supreme Court decision on greenhouse gases.

Dr. Knighton stated that USDA has a research report system and can provide a presentation on it. It is being updated to be more user-friendly.

Internal Combustion Engines and Alternative Fuels (ICEAP) Committee.

Annette Sharp presented recommendations for her subcommittee. The recommendations included the following:

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1. Request USDA Secretary to convene a multi-media (air, water, waste) multi-disciplinary (policy and technical) meeting

Approved.

2. USDA provide to the AAQTF (changed from ICEAF Committee) the available information on the state-of-the-science for biofuel and waste-to-energy production and process emission; and, information on evaluation of impacts of increased biofuel production by July 31, 2007.

Approved.

PM and Ozone Committee

Phil Wakelyn presented the recommendations for his subcommittee. These recommendations included adding clarification to the recommendation that the USDA AAQTF recommend that the NAAQS should not be used as a “concentration not to be exceeded” at the property line for permitting and enforcement of PM emissions from agricultural sources.

In addition, he recommended that further research be conducted to understand the role of VOCs in the development of PM_{2.5} and ozone and the interaction with SO_x, NO_x and ammonia. Furthermore, this research should clarify the validity of adjustment to VOC measurements such as the Midwest Scaling Method. Evaluate and quantify the Ozone forming potential of specific agricultural VOC emission and evaluate potential efficiencies associated with reactivity based on regulatory approach.

Approved.

Mr. Abernathy recommended inviting Dr. Green from UC Davis to discuss this issue at the next task force meeting.

Agency Overviews:

Mr. Larry Clark (NRCS)

Mr. Clark reviewed program accomplishments in reducing air emissions. The accomplishments included Conservation Technical Assistance, Environmental Quality Incentives Program, Conservation Innovation Grants (CIG) and Conservation Security Program. He also discussed the technology and training efforts that included new tools such as COMET-VR 1.1 which estimates carbon sequestration, Simple NRCS Air Quality Planning (SNAP) tool and more comprehensive training for field employees. Finally, he talked about the Conservation Effects Assessment Project (CEAP) for cropland.

Dr. Trisha Johnson requested AAQTF review of the NRCS training, particularly related to AFO's. Mr. Clark said yes.

Dr. Charlie Walthall (ARS)

Dr. Walthall reviewed ARS Air Quality Program components and agreed to bring more information on the Bioenergy Program to next meeting. He talked about recent activities

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including the 4th Greenhouse gas conference held in February, several customer workshops, and an accomplishment report data call to all scientists in program. He noted the redirection of 4 scientists to full time on air quality research including dry deposition research and an additional 2 positions which have increased their air quality research responsibilities. Finally, he reviewed the Dairy Air Quality Experiment, Kimberly, Idaho, objectives and research process to develop a process model.

Chief Lancaster expressed appreciation for the identification of gaps in the research.

Mr. Kirkhorn requested that ARS coordinate with a health research organization to gain a better understanding of rural health issues. Dr. Walthall responded that they have received interest from the National Institute of Environmental Health.

Dr. Ray Knighton (CSREES):

Not much of an update since last meeting.

Budget situation – challenges with continuing resolution exist. It will mean that some states will get more money and others will lose. Approximately, \$5million is allocated for the AQ program in 2007 (expected same in 2008). He has been listening to AAQTF research needs.

Farm Bill – Research Title proposal to merge ARS & CSREES – will definitely impact USDA research programs and may help to unify the research plan. There is a significant bioenergy research piece and specialty crop research piece. Other planning issues include work by the air quality research subcommittee in the Office of Science and Technology Policy (out of White House). It has produced a federal coordinated particulate matter research plan. The subcommittee recently conducted a review of atmospheric nitrogen effects on aquatic systems. The performance management plan includes a program review of soil, air and water and can provide the document to the AAQTF. The review is updated each year. Current research also includes looking at fate and transport of agricultural emissions and mitigation practices for each of the emissions. The long term goal is to come up with reduction targets.

Dr. Wakelyn and Dr. Kirkhorn both expressed concerns over the need for research on health effects on agricultural workers

Dr. Mike Arbaugh (FS)

Mr. Arbaugh discussed greenhouse emissions issues in California. Potential sources of reduction include 1/3 on Forest land. He also discussed what forestry can contribute to carbon sequestration and noted that the Forest Service is studying climate change effects on forests. California climate change policy is seen as an opportunity for Forest Service.

Ms. Sally Shaver (EPA)

She discussed the National Ambient Air Quality Standards (NAAQS) status. She noted that the Ozone NAAQS proposal is expected by June 20 with 90-day review. The final rule is expected by March 12, 2008. The ozone standard is expected to change. Data indicates a need to address the secondary standard as well.

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Ms. Shaver also provided a timeline for PM 2.5. NAAQS implementation. She discussed pollutants that must be addressed in attainment plans, the Exceptional Event rule, Ozone 8 hour implementation court ruling, Total Suspended Particulate matter (TSP) as a regulated pollutant, the listing of diesel particulate matter as a hazardous air pollutant (may have an advance notice of rule-making) including stationary engines, and the Regional Haze rule implementation.

Next meeting:

Possibly the first week of October but recognize there are some conflicts. Potential locations include Purdue University, Lafayette, Indiana and Denver, CO.

The meeting adjourned at 11:00 am.

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Research Recommendations from the Minutes:

- 1. Specifically, the USDA Agricultural Air Quality Task Force recommends that USDA conduct additional research on ammonia from agricultural sources, both cropland and animal and the role it plays in the formation of PM_{2.5} in a timely manner, so as to assist states in the development of their PM_{2.5} SIPs that may regulate agricultural production.**
- 2. In keeping with the National Research Council's recommendations in "Air Emissions from Animal Feeding Operations," USDA and other research dollars should be focused on developing process-based models as compared to emission factor research.**
- 3. It is the recommendation of the USDA Agricultural Air Quality Task Force that USDA establish process-based models for ammonia emissions for additional animal species that have not yet been addressed, and to conduct the necessary research for the development of these models."**
- 4. Develop recommendations for the Secretary as it relates to the scientific basis and research needs brought into question in the consent agreement. Focus on filling research need.**
- 5. All USDA agencies should present a unified research plan to AAQTF.**
- 6. Specific requests for support by full AAQTF**
 - USDA review existing CMPs research data**
 - USDA work with EPA on appointing an AAQTF member as a liaison to the NEAMS research project**
 - USDA provide an update to AAQTF at the next meeting on progress made toward developing a unified air research plan for all USDA agencies**
 - USDA legal counsel review the recent US Supreme Court decisions on greenhouse gases and provide an interpretation at the next AAQTF meeting to provide a basis for establishing research priorities.**