

US EPA ARCHIVE DOCUMENT

**U.S. EPA Environmental Technology Verification Program
Advanced Monitoring Systems (AMS) Center**

Air Stakeholder Committee Teleconference

Wednesday, September 27, 2006

1:00 pm – 2:30 pm Eastern

Teleconference Meeting Minutes

AGENDA

Welcome, Agenda, and Meeting Objectives	Gretchen Hund, Battelle
Stakeholder Homework Question: <i>Sustainability, what does it mean to you?</i>	Rachel Sell/ Stakeholders
Program Updates ▪ ETV Program Funding & Future Directions ▪ AMS Center Completed and Ongoing Verifications	Amy Dindal, Battelle
Update on Technology Categories ▪ Personal Cascade Impactor Sampler (PCIS) ▪ Mercury Monitors	Tom Kelly, Battelle
Potential Technology Categories ▪ Semi-Conductor Industry Emission Monitoring – Applied Materials ▪ Particulate Monitoring	Tom Kelly
Hot Topics	Gretchen Hund
Next Meeting and Action Items	Rachel Sell
Adjourn	

ATTENDEES

Stakeholder Committee Members:

Ernest Bouffard, Connecticut Department of Environmental Protection
Jeff Cook, California Air Resources Board (CARB)
Rudy Eden, South Coast Air Quality Management District
Cliff Glowacki, TECHNIKON
Jerry Hatfield, USDA National Soil Tilth Laboratory
Roy Owens, Owens Corning
Lindene Patton, Zurich North America
Joann Rice, EPA/OAQPS
Donald Stedman, University of Denver

ETV AMS Center Staff:

Amy Dindal, Battelle
Bob Fuerst, EPA/RTP
Gretchen Hund, Battelle
Tom Kelly, Battelle
Rachel Sell, Battelle

Participants:

Kevin Cleary, California Air Resources Board
Philip Fine, South Coast Air Quality Management District

Welcome, Agenda, and Meeting Objectives

Gretchen Hund welcomed the committee stakeholders to the third AMS Center Air Stakeholder Committee teleconference of 2006. She then proceeded with an overview of the agenda and took roll call of those stakeholders participating in the Live Meeting teleconference.

Ms. Hund introduced a participant, Kevin Cleary, Program Manager of CARB's Innovative Clean Air Technologies (ICAT) program. ICAT is a grant program that co-funds field demonstrations of innovative emission control technologies that can reduce air pollution. Field demonstrations have been expanded to include monitoring and measurement technologies. Its purpose is to advance such technologies toward commercial application, thereby reducing emissions and helping the economy of California. Following this introduction, there was a brief discussion of the possibility of collaboration between ICAT and the AMS Center in technology evaluations of mutual interest to both programs, including the technology from Applied Materials (described under "Potential Technology Categories"). Rachel Sell provided a stakeholder update. Geri Hart, CEVP Branch Chief, Environmental Management Division at Tinker Air Force Base is no longer able to serve on the stakeholder committee; however recommended Dr. Freddie Hall, also from Tinker Air Force Base, to serve as her replacement. Dr. Hall was unable to participate in this teleconference; however welcomed the opportunity to participate in the next ETV Air Stakeholder Committee meeting.

Stakeholder Homework Question

Ms. Sell introduced a new topic on the agenda, a “homework question”, which was sent out via email prior to the teleconference. Stakeholders were asked to consider the topic of sustainability and answer the questions: 1) what does sustainability mean to you or your organization, 2) how can we make sustainability a part of ETV testing? Ms. Sell stated that sustainability is not only a part of EPA’s philosophy, but part of industry’s as well.

Bob Fuerst, EPA Project Officer for the AMS Center, noted that EPA lists a formal definition on their website and that sustainability seems like a balancing act of the growing economy and the protection of human health and the environment, while not overlooking the next generation. Stakeholders then provided input on what sustainability meant to them.

Stakeholders questioned if a technology could be compared against an industry metric, such as the cost of the technology or the cost of labor in the field and stressed the importance of thinking broadly when defining sustainable metrics. Amy Dindal, Battelle AMS Center, said that vendors currently report to ETV how they are achieving sustainability, but asked if there was a way to include sustainable type metrics into verification tests (e.g., report the volume of hazardous waste, the battery life, etc.). These metrics would not be independently tested and verified (due to resource and time constraints), but could be listed in their verification report. In response, stakeholders indicated that other examples of sustainability criteria might include a description of servicing intervals and types of power supplies used by the technology. Jerry Hatfield said that from an agricultural perspective it would be nice to replace full time staff with remote sensing or cell phone technology that reports back to a central location to provide service only on an as needed basis.

Program Updates

Ms. Dindal provided an update on the ETV Program and AMS Center. Ms. Dindal and Mr. Fuerst attended an ETV team meeting in Cincinnati, Ohio in early September. She said that during the meeting, Sally Gutierrez, Director of EPA’s National Risk Management Research Laboratory (NRMRL), within the Office of Research and Development (ORD), said that technology is one of the centerpieces of ORD’s multi-year strategy and views the ETV Program as a core competency within the technology area. The multi-year plan is located at <http://www.epa.gov/sustainability/releasepubcommt.html>.

Ms. Dindal provided an update on the availability of the recently published ETV Program Case Studies document available on the ETV web site. This document is the second volume in a collection of case studies that document outcomes and benefits of the ETV Program. The first volume was published in January 2006 and includes a case study on the ambient ammonia verification test, while volume two includes a case study on the continuous emission monitors (CEMs) for mercury verification test and immunoassay test kits for atrazine in water verification test.

Regarding the AMS Center, Ms. Dindal summarized recent air, water, and water security verifications that have either been completed or are in-progress. So far in FY06, verification

reports have been completed for 18 technologies. Several verification reports will be completed in FY07. Finally, Ms. Dindal noted that 15 verifications have been completed for rapid toxicity testing of water, but none in soil. EPA's Office of Solid Waste and Emergency Response (OSWER) is interested in this type of testing. Development of a generic protocol for a soil rapid toxicity technology verification will begin soon. Following up on a question from Dr. Hatfield, Ms. Dindal explained that the test is a rapid toxicity screen, based on live organisms, to indicate the presence of toxicity in a sample. Toxicity in the sample is indicated by a color change or a change in intensity; the screen does not report a quantitative measure or concentration of the sample's toxicity. There were several positive comments from the stakeholders about pursuing testing in the soil area.

Update on Technology Categories

Tom Kelly provided an update on technology categories currently in the verification process using slides from a PowerPoint presentation available as part of the Live Meeting webcast. He reviewed details of the verification test of **Mercury Monitors** at an Indiana facility this past summer. Participating vendors included two CEM vendors, Thermo Electron and Tekran, and two sorbent-based systems, Environmental Supply Company and Apex Instruments. Responding to stakeholder questions, Dr. Kelly said that sample lines for the CEM technologies were completely separate because the vendors performed their tests in two separate ways. Dr. Kelly said that each CEM technology uses its own internal mercury vapor standard. Comparisons of those standards against the NIST standard were not conducted. Dr. Kelly also discussed the reference sampling that was conducted at the facility.

He then reviewed slides detailing the verification test of a **Personal Cascade Impactor Sampler (PCIS)** for collection of ambient particulate matter (PM). In response to a question, Dr. Kelly said that the PCIS flow testing simulated an unloaded (i.e., unrestricted) impactor, but also said that each pump operated with a flow restrictor to mimic actual operation. Flow restrictions were imposed to determine flow performance under a range of pressure drop conditions.

Potential Technology Categories

Dr. Kelly provided an update on the status of two potential technology categories. Applied Materials is a vendor interested in the AMS Center verifying their technology for characterizing air emissions using a Fourier Transform Infrared/Mass Spectrometer (FTIR/MS) instrument that is incorporated into a mobile laboratory. Their main application is **Semi-Conductor Industry Emission Monitoring**. Applied Materials is a California company; their technology could potentially serve as a potential candidate for both an ICAT demonstration as well as an AMS Center verification. Stakeholders reconfirmed their concurrence with this technology category which had been discussed during the last stakeholder conference call.

Dr. Kelly said that he was approached by MSI Mechanical Systems, a **Continuous Particulate Emission Monitor** vendor interested in verification. Dr. Kelly said the MSI instrument measures particulate emissions from a variety of sources under various conditions, including stacks with changing particulate conditions and varying operating parameters. In addition, Thermo Electron recently contacted the AMS Center to inquire about the possibility of a **Coarse PM Monitor**

verification. Joann Rice mentioned that the new National Core Network (NCore) may include a coarse PM sampling network. Following the teleconference, Battelle distributed an EPA press release to all stakeholders on the new PM standards (fine and coarse). Stakeholder concurrence for proceeding with these technology categories was received.

Hot Topics

Ms. Hund asked the stakeholders if they were aware of any new opportunities that the ETV/AMS Center should be exploring, and when making a recommendation, to try to indicate the level of importance or priority the technology category exhibits. She recognized that the AMS Center could review earlier lists of technology categories recommended by the stakeholder committee, but noted the importance of keeping an eye on future potential opportunities.

The stakeholder committee said to keep looking for soil vendors. Ms. Dindal noted the upcoming verification for rapid toxicity in soil is a new verification in the soil area. **Vapor intrusion** was discussed as a technology category of interest, as it has been raised at many previous meetings, but Ms. Dindal explained that availability of vendor technologies remains to be an issue.

Dr. Kelly said that in instances where technologies have evolved or new technologies have become commercially available, additional rounds of technology verification testing have been conducted. An example of this is the mercury monitors test.

The stakeholder committee indicated that speciation monitoring was **still a priority area** of interest and to look for interested vendors and partners. Dr. Kelly noted there had been a lot of development in that area.

Next Meeting and Action Items

Ms. Sell said that one year had passed since the last in-person meeting in San Francisco, California and that it was time to discuss a venue and date for the next in-person meeting. Ms. Sell noted that Sacramento was ideal because it was close to several of the air stakeholders, CARB, and EPA Region 9, making it convenient to obtain speakers and additional attendees. Jeff Cook suggested the possibility of having the meeting or a tour at CARB. Stakeholders were amenable to the idea of having the meeting in Sacramento. Ms. Sell suggested sending an email to stakeholders to determine their availability for a meeting in the November – February timeframe.

Ms. Sell reviewed the action items brought forth on the call:

1. Ms. Sell will send out an email to stakeholders to determine their availability for the next in-person meeting. (Action completed after teleconference.)

Adjourn

Ms. Sell thanked all of the stakeholders for attending the meeting and contributing so much to ETV. The call adjourned at 2:50 pm *Eastern*.