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Meeting Summary – October 10, 2006

Air Pollution Control Technology Center
Stakeholder Conference Call

Attendees
Drew Trenholm, RTI International
Michael Kosusko, U.S. EPA, Air Pollution Prevention and Control Division
Robert Bessette, Council of Industrial Boiler Owners
Vic Engleman, Engleman Associates, representing AWMA
David Foerter, Institute of Clean Air Companies
Dennis Johnson, U.S. EPA, Office of Transportation and Air Quality
Gene Praschan, representing ASTM
Maureen Avakian, MDB, Inc.
Jenni Elion, RTI International
Randy Evans, Infineum USA LP
Debbie Franke, RTI International
Paul Groff, U.S. EPA
John McKenna, ETS
Le Pham, South Coast Air Quality Management District
Minh Pham, South Coast Air Quality Management District
Jeff Portzer, RTI International
Michael Starr, Southwest Research Institute
Christine Vincent, RTI International
Kate Williams, Texas Commission on Environmental Quality

Overview
Before the conference call, Drew Trenholm e-mailed an agenda and an update for the Air Pollution Control Technology (APCT) Center. These PDF files are included for reference.

The APCT Center has been part of ETV for almost 10 years. Over that time period, the center has verified several technology types. Currently, there are three active areas: indoor air products, baghouse filter products, and mobile sources/diesel engine retrofit controls. Verification is most successful when the technology area is related to state and federal environmental programs (generally volunteer programs).

The center receives funding from three sources: EPA through the ETV cooperative agreement, fees charged to verification applicants, and partners for specific areas. The center hasn't received any ETV funds since FY05 and does not expect to receive FY07 funds until next spring or summer. Verification fees charged to vendors cover the actual cost of conducting and reporting the tests; however, these fees do not cover stakeholder activities, outreach, and other general program activities.

Indoor Air Products
In 1995, RTI began the Indoor Air Products ETV pilot program, which continued until 2002. Three test protocols were developed and verified with input from vendors. More recently, RTI has verified general air ventilation filters to remove particles and in-duct ultra-violet (UV) light systems to neutralize bioaerosols for homeland security-related ETV programs.

We have developed a new test plan and have permission to use it, although it is still going through final EPA review. Debbie Franke said that there are several UV system companies that were in our earlier tests who want to run verification tests on more of their products. There are UV systems that are marketed for commercial and for home use.

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Baghouse Filtration Products
This technology area looks at fine particulate matter (PM) penetration of bag media. Bench-scale testing is done at ETS, including pulse-jet preconditioning. After the protocol was completed in 2001, over a dozen products were tested and then there was a slowdown. Interest renewed in 2005, in part due to new fabrics, the growing market for replacement bags, and broad exposure of the ASTM test standard based on the ETV test method. Two verifications were recently completed, one is currently in progress, and three other companies are engaged in preliminary testing prior to verification.

Using verified products eases the test burden on end users; South Coast Air Quality Management District (SCAQMD) requires compliance testing every year for baghouses, but only once every five years if the baghouse material has been verified. Future activities in this area include developing an ISO standard based on the ETV test method. Funding is being sought to conduct a study comparing full-scale slipstream baghouse performance with the results of verified fabrics to document how the relative performance from verification tests relates to full-scale performance.

John McKenna and Drew said that the verification test is a relative measure comparing the verified fabric to a reference fabric; it does not account for holes, seams, or other factors that may affect baghouse performance. John has found companies that are willing to donate use of a baghouse for that comparison. This would not lead to a new test method but rather would provide more information for vendors and users. Drew said that the center is looking at ways to provide outreach to other states who might be interested. South Coast is first example of agency tie-in with verifications. Le Pham (SCAQMD) is very interested in tying ETV testing with EPA Test Method 5 to test baghouses in use.

Mobile Sources (Diesel Retrofit)
There are three protocols for retrofit controls of heavy duty engines that address different technologies:

- Add-on devices, such as particulate filters and oxidation catalysts
- Selective catalytic reduction (SCR)
- Alternative fuels and additives

Eight retrofit device verifications have been completed, all focused on PM control. The center has worked closely with stakeholders. RTI has a list of over 100 vendor companies who have contacted the center.

There is also an effort to build relationships with state and federal agencies. The center's prrimary partnership is with EPA's Office of Transportation and Air Quality (OTAQ). ETV applicants can use their verification data to submit to OTAQ's Voluntary Diesel Retrofit program (VDRP). OTAQ was a major stakeholder in developing the protocols. OTAQ provides grants to retrofit school busses; grantees must use ETV-verified products.

California Air Resources Board (CARB) also has diesel retrofit program. CARB allows companies to use ETV data as submission for CARB program. Texas provides grant funding under its New Technology Research and Development (NTRD) program to evaluate NOx control technologies to be used in non-compliance areas (Houston and Dallas). Grants awarded before FY06 are administered by the Texas Commission on Environmental Quality (TCEQ). Later grants are awarded and administered by the Texas Environmental Research

Commission (TERC) through the Houston Advanced Research Center (HARC). Texas also has a program to evaluate low-emission diesel fuels intended for non-compliance areas. Companies can test their alternative fuel products against the standard fuel; one testing path is through ETV. The most recent NTRD grants included nine vendors with 12 technologies (10 SCRs); many will require verifications.

Future activities in the near term include completing verifications for two applicants interested in OTAQ's VDRP and one for Texas' low-emission diesel (TxLED) fuel program. The center has completed the actual testing for one applicant and is finalizing the test plan for the other two. Within the next six months, the center expects to finalize test plans for two to four applicants with NTRD awards administered by TCEQ. For TERC/HARC NTRD grants, the center expects as many as 10 from the first round of awards and more in second round (applications now being reviewed).

The center anticipates that future work will require some modification to the protocols. RTI is working with OTAQ to develop a test protocol for hybrid vehicles. This protocol could potentially be used by ETV in the future, including for some of the NTRD grant applicants.

Dennis Johnson (OTAQ) added that one company that recently completed the verification process submitted the ETV data to both OTAQ and CARB. The company used ETV because our test documentation is more complete and they understood the ETV process better than CARB process.

Kate Williams (TCEQ) asked if there was any information on the time frame for completing the hybrid vehicle test protocol. Drew said that there had been a draft produced with some sections incomplete and it is currently in OTAQ review.

Other Activities

The center has been pursuing partnerships with other agencies, including New York State Environmental Research and Development Authority (NYSERDA), the U.S. Department of Energy (DOE), and EPA through the Environmental Sustainable Technology Evaluation (ESTE) program. NYSERDA has a grant for a biofilter to control styrene emissions from boat manufacturing that includes money for verification (the center has a biofilter protocol). There is an opportunity for partnering with DOE on their full-scale mercury control technology testing. DOE is willing to help fund, but not do all of funding. So this depends on whether there are ETV funds for leverage. ESTE is similar to ETV but the priorities are defined by EPA.

Under ESTE, RTI has worked with EPA to develop a test protocol for drift reduction technologies for pesticide field spraying. When the method is completed, RTI will look at adding it to APCT. There is a lot of international interest in the US ETV program. Drew attended a second international ETV Forum in Vancouver in March. Attendees represented the U.S., European Union, China, Japan, India, Bangladesh, Southeast Asia, Central America, and other countries.

Le Pham had a question about the biofilter test: Does APCT have interest in odor control using these technologies? Drew said that potentially we would be interested, but no vendors have contacted us. The early interest in biofilters was for VOCs, but this has died down.

Mike Kosusko – ETV Program

Mike summarized Teresa Harten's (ETV program manager) presentation from the September 6 ETV meeting. The ETV program has produced over 370 verifications and over 80 protocols, and has over 500 stakeholders in 19 groups. Nearly half the cost of

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verification (45 percent) comes from vendors and partners. Web and international interest is highest ever, projected at 2.9 million for 2006. ETV wants to partner with U.S. and international organizations.

She focused one of her slides about partnering on the Texas–APCT Center connections that Drew discussed earlier. ETV has to provide outcomes for its work (i.e., how it helps to protect health and environment). Two volumes of case studies are available at www.epa.gov/etv/pdfs/publications/600r06001/600r06001pv.pdf and www.epa.gov/etv/pdfs/publications/600r06082/600r06082pv.pdf.

The diesel retrofit case study identified seven technologies that were verified during 2003-2005, six of which reduced PM by 21 to 95 percent. One thousand two hundred thirty technologies were installed as result of verification and grants. At 10 percent market penetration for seven years' of use, this resulted in a reduction of PM calculated to be 9K-31K tons, avoided premature mortality calculated to be 683–2,380 fewer deaths, and resulted in monetary benefits calculated to be $5 to $18 billion.

In 2005, ETV hosted "ETV–International Forum" in Washington, DC, to begin discussions on potential collaborations, harmonization, and reciprocity. Five other international programs were represented (Canada, Japan, Korea, Singapore, European Union) and 12 other countries were in attendance. In March 2006, Environment Canada hosted a follow-on ETV-I meeting in Vancouver, Canada. Drew was in attendance. Teresa Harten has completed invitational to Germany (March 2006) and Finland (October 2006) to brief the environmental industry and European Commission on ETV.

Change is a major challenge for the ETV program. It needs to work more closely with the international community. It needs to reduce time and costs for completing verifications. Although ETV was not funded in the President's budget proposal for FY2007, Congress has recommended a budget of $2.5 million. The future structure of ETV is being discussed. One proposal is that it be operated as a consortium (one prime, the rest subcontracts). Or, there could be a new solicitation for multiple centers. ETV management hopes to have a solicitation out in early calendar year 2007. State agencies, EPA regions, and program offices are very supportive of ETV.

Summary

Drew sees a growing need for verifications because of other agency programs. As for covering all ETV costs through fees, it would be difficult. He feels it is important to have continuing EPA funding for stakeholder, outreach, and other center-wide efforts. It is very difficult to operate any business with uncertainty of funding, but RTI is committed to the continued success of the APCT Center.

Gene Praschan asked if there would be another program update soon. Drew said he would distribute the minutes of this meeting and send out an update after the first of the year.

Bob Bessette asked if APCT was looking at other areas, perhaps global climate change. There is an ETV center for this run by Southern Research Institute.

Drew asked stakeholders whether the conference call was effective. Several attendees appreciate being able to participate via conference call as travel budgets are limited, but the calls are less useful than actual meetings because there is less interaction. Several suggested webcasting the call. Attendees generally agreed that one meeting and one conference call per year were sufficient, with e-mail updates as necessary.

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Bob asked about the table listing the various companies and their respective technologies that was developed several years ago by the center. Drew and Jenni Elion said they would look for the table.

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