



# Environmental Technology Verification Program QUARTERLY REPORT

**April 1999**

## **Indoor Air Products Pilot Heads Toward Private Sector Implementation**



Activities are underway for the Business and Institutional Furniture Manufacturer's Association (BIFMA) to take the lead role in implementing the commercial furniture sector of the Indoor Air Products Pilot. BIFMA has been an

active stakeholder in the Indoor Air Products Pilot of the ETV Program since December 1996. BIFMA is an association of office furniture manufacturers and their associates that addresses issues of common concern among its members. As part of future activities under private sector management, BIFMA will establish an American National Standards Institute standard for indoor air emissions from commercial furniture. The test protocol developed by the ETV Indoor Air Products Pilot will be used to conduct product testing.

The Indoor Air Products Pilot will act as a stakeholder in the BIFMA Program, and as such will conduct several tasks, including revising the protocol based on what the pilot learns, helping BIFMA with technical testing issues as their program progresses, and helping to set up a laboratory qualification and QA/QC program. The Indoor Air Products Pilot will not perform any actual testing. The pilot will, however, help BIFMA to obtain user, public, and other non-industry comments on their effort. EPA's Office of Administration and Resource Management have agreed to help with this effort. EPA's Office of Air and Radiation's Indoor Environment Division also is expected to participate.

BIFMA will hold a 2-day meeting (May 12-13, 1999) in Grand Rapids, MI to discuss the program and to resolve both technical and policy issues. Dave Ensor and Les Sparks, the ETV Indoor Air Pilot Partner Manager and EPA Pilot Manager, respectively will attend the technical discussions as well as Jeff Davidson of EPA. BIFMA has initiated an industry-funding testing program to obtain emissions data on office workstations to support their standard. The standard is expected to be sent to ANSI for approval at the end of the year, after a program of review by interested parties, office furniture manufacturers and user groups.

Regarding the operation of the BIFMA-managed program, the process will consist of two phases. Phase I will address office workstations (i.e., cubicles), and Phase II will address office seating. At the end of Phase I (12-18 months), a final ETV/BIFMA stakeholder meeting will be held. The schedule for these activities depends on the standard and testing process.

BIFMA's new leadership role in the commercial furniture verification program represents a major effort on the part of the furniture industry. The first round of testing for workstations is expected to include 25-35 workstations at a substantial cost to the industry.



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# Pilot Points

## Advanced Monitoring Systems

- Completed NO/NO<sub>2</sub> analyzer testing for five vendors.
- Held third Air Stakeholder Group meeting in San Francisco, CA on February 22 and 23.
- Held third Water Stakeholder Group meeting in Albuquerque, NM on March 2 and 3.
- Held vendor meeting for fine particulate ambient air monitors in Columbus, OH on February 19.
- Held vendor meeting for turbidimeters in Columbus, OH on February 26.
- Held vendor meeting for open-path optical monitors in Columbus, OH on March 30.

## Air Pollution Control Technology

- Held a Stakeholder Group meeting in RTP, NC on January 28.
- Held an Add-on NO<sub>x</sub> Technical Panel meeting on March 1.
- Held a Baghouse Filtration Products Technical Panel meeting on March 11.
- Tested six filters under the Paint Overspray Arrestors technology category in March.

## Drinking Water Systems

- Increased pilot matching funds to offset testing costs by 75 percent up to \$100,000 (increased from \$75,000). For more information, go to <http://www.epa.gov/etv/01/notfund2.pdf>.
- Held a Stakeholder Group meeting to address the cost-effectiveness of technology verifications. Protocols and test plans will be revised accordingly, and cost reductions of up to 50 percent are expected.
- Qualified the eighth Field Testing Organization, Environmental Engineering and Technology, Inc. For more information, go to <http://www.epa.gov/etv/01/fto-01.htm>.
- Provided an ETV presentation to the Pennsylvania Department of Environmental Protection Technical Assistance Center Board of Small Systems in January and at the Pennsylvania Rural Water Association meeting in March. Similar presentations will be provided in April and May in Ohio, Maryland, and Georgia.

## Greenhouse Gas Technology

- Initiated testing for compressor leak capture technologies.
- Signed up a second vendor for testing compressor static seals.
- Signed up one vendor for microturbine testing.
- Signed up one vendor for pressure relief valve testing.
- Invited to review GHG verification guidelines for Canada and the UN.

## Indoor Air Products

- Began the transition of the commercial furniture sector of the pilot to BIFMA International. BIFMA will conduct product testing using the protocol developed under this pilot. The pilot will participate in the stakeholder group.
- Held a Commercial Furniture Task Group meeting on February 23 in Washington, DC.
- Held a Ventilation Air Filters Task Group meeting on January 22 in Chicago, IL.

## P2 Innovative Coatings and Coating Equipment

- Completed four verification tests on HVLP spray guns. The guns were submitted by ITW DeVilbiss of Maumee, OH and Sharpe Manufacturing Company of Santa Fe Springs, CA. Conventional Air Spray gun testing will be conducted in early April to establish a baseline for the HVLP spray gun tests.
- Presented a briefing at a meeting of the Chemical Coaters Association International (CCAI) in Milwaukee, WI on February 9.

- Presented information at the ETV booth at the Air & Waste Management Association's Permitting Conference in RTP, NC from February 17-19.
- Briefed representatives of Environment Canada and of India's Ministry of Environment and Forestry on February 23 and March 3, respectively.

## P2 Metal Finishing Technologies

- Issued a Request for Technologies on March 19 to solicit the participation of metal finishing P2 equipment suppliers (i.e., developers or manufacturers).
- Held the second pilot Stakeholder Group meeting on February 9 in Chicago, IL.

## P2, Recycling & Waste Treatment Technologies

- Verified first two technologies – SmartSonic's aqueous screen stencil cleaning technology and Rayovac's rechargeable alkaline batteries.
- Completed technology testing of Katec's aerosol can recycling system.
- Began evaluation activities for LMT Technologies, Inc.'s lithium metatungstate solution for mineral assays and Hydromatix, Inc.'s computerized ion-exchange regeneration process.

## Site Characterization & Monitoring Technologies

- Approved and signed verification reports and statements for five Wellhead Monitoring technologies in November.
- Held a developers conference in Orlando, FL on March 5 for Explosives Detection technologies.
- Held a developers conference in Las Vegas, NV on February 24 for Groundwater Sampling technologies.
- Planning a demonstration for five Sediment Sampling technologies in April and May in conjunction with EPA's SITE Program.
- Planning additional demonstrations for Explosives Detection, Geophysical, and Total Petroleum Hydrocarbons.

## Source Water Protection Technologies

- Selected technology focus areas: decentralized wastewater (including agricultural technologies), and storage and conveyance technologies. Identified four protocol areas for wastewater technologies.
- Identified additional technology categories that could undergo verification in the next few months. Several of these were identified at a White House meeting.

## Wet Weather Flow Technologies

- Held a Stakeholder Advisory Group meeting in Atlanta, GA on March 23 and 24.
- Discussed protocol development and testing issues as well as the five types of prioritized technologies: high rate inertial separation, high rate disinfection, flow monitoring equipment, models, and storm water source control technologies.
- Visited the Columbus, GA Water Works Advanced Demonstration Facility.

## Environmental Technology Evaluation Center (EvTEC)

- Started an Evaluation Project with Pennsylvania Department of Environmental Protection focusing on denitrification technologies for residential wastewater treatment.
- Started an energy project with the National Renewable Energy Laboratory and the Building Innovation Center to evaluate a building simulation computer program.
- Seeking panelists for an evaluation of an innovative silt fence installation machine as well as for the group evaluation of wastewater denitrification technologies.

## Web Watch

- ✓ A March 15 revision of the Test Protocol for General Ventilation Filters is available at [www.epa.gov/etv/library.htm](http://www.epa.gov/etv/library.htm)
- ✓ A March 12 revision of the Test Method for Fractional Filtration Efficiency of Air Cleaners is available at [www.epa.gov/etv/library.htm](http://www.epa.gov/etv/library.htm)
- ✓ The Source Water Protection Technologies Pilot February Stakeholder Advisory Group meeting summary is available at [www.epa.gov/etv/11/sun-02-1099.htm](http://www.epa.gov/etv/11/sun-02-1099.htm)
- ✓ The Wet Weather Flow Technologies Pilot November Stakeholder Advisory Group meeting summary is available at [www.epa.gov/etv/09/sun-11-1098.htm](http://www.epa.gov/etv/09/sun-11-1098.htm)
- ✓ The Portable NO/NO<sub>x</sub> Emission Analyzer Test QA Plan is available at [www.epa.gov/etv/07/prot\\_no2.pdf](http://www.epa.gov/etv/07/prot_no2.pdf)
- ✓ The Fuel Cell Verification Report is available at [http://www.epa.gov/etv/12/fuel\\_vrpt.pdf](http://www.epa.gov/etv/12/fuel_vrpt.pdf)
- ✓ The Smart Sonic Ultrasonic Aqueous Cleaning Systems Verification Statement and Report is available at [www.epa.gov/etv/library.htm#verifications](http://www.epa.gov/etv/library.htm#verifications)
- ✓ The Rayovac Renewal® Rechargeable Alkaline Household Battery System Verification Statement and Report is available at [www.epa.gov/etv/library.htm#verifications](http://www.epa.gov/etv/library.htm#verifications)

## Double Whammy! The P2, Recycling and Waste Treatment Technologies Pilot Verifies Two P2 Technologies



The Pollution Prevention (P2), Recycling and Waste Treatment Technologies Pilot, managed by California EPA's Department of Toxic Substances Control, has been busily working to complete its first two technology verifications. In February and March, this pilot verified two P2 technologies: one from Smart Sonic Corporation of Newbury Park, CA and one from Rayovac Corporation of Madison, WI.

The SMarTsonic® technology is an ultrasonic aqueous cleaning system for use in cleaning various types of solder paste from printed circuit board stencils. These cleaning systems replace 1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113), 1,1,1-trichloroethane (TCA), and isopropyl alcohol (IPA) based cleaning systems that commonly are used in the electronics industry. Results indicate that Model 2000 and Model 4200 are capable of removing all rosin mildly activated, no-clean, and water washable solder pastes so that no solder paste remains in stencil apertures viewed at 10X magnification and that the cleaning systems do not contain select volatile organic compounds and halogenated compounds above the detection limit of 0.01% (v/v).

The Rayovac Rechargeable Household Alkaline Battery System (Renewal®) includes rechargeable alkaline zinc-manganese dioxide 1.5 volt batteries and a recharging device. The additional charge cycles extend battery life by increasing the energy capacity which decreases the number of batteries in the waste stream. Results indicate that (1) the Renewal® System can reduce waste volume, (2) metals in disposed of Renewal® batteries do not need to be regulated as hazardous waste, and (3) costs for Size AAA Renewal® batteries (based on 25 useful charging cycles) are lower than for other Rayovac household batteries.

Additional information on these verified technologies is available at [www.epa.gov/etv/library.htm#verifications](http://www.epa.gov/etv/library.htm#verifications). This pilot is currently evaluating three additional P2, recycling, and waste treatment technologies.

## EvTEC Clients in the News!



Several EvTEC clients have recently received high-profile publicity. RB Ultra Plus (part of a group evaluation of dust control and road stabilization products), Ice Ban, and ThermoEnergy were each featured on the front page of the *Wall Street Journal* as examples of up-and-coming innovative technologies. In addition, Ice

Ban was featured on National Public Radio's "All Things Considered" when an official from the Indiana Department of Transportation discussed his experiences with the product. To learn more about the products inspiring so much public interest, visit EvTEC's evaluations pages at <http://www.cerf.org/evtec/evals.htm>.

## 33 Technologies Verified

### Cone Penetrometers

- ✓ Fugro Geosciences, Inc.; Houston, TX
- ✓ U.S. Navy, Naval Command, Control, and Ocean Surveillance Center, Research, Development, Test and Evaluation Division; San Diego, CA

### Field Portable GC/MSs

- ✓ Brucker Analytical; Billerica, MD
- ✓ Viking Instruments; Chantilly, VA

### Field Portable X-ray Fluorescence Analyzers

- ✓ Metorex, Inc.; Princeton, NJ (2 technologies)
- ✓ Scitec, Inc.; Kennewick, WA
- ✓ HNU Systems, Inc.; Newton Highlands, MA
- ✓ Niton Corporation; Bedford, MA
- ✓ TN Spectrace; Round Rock, TX (2 technologies)

### Emulsified Fuels

- ✓ A-55 Clean Fuels, Inc.; Reno, NV

### Soil/Soil Gas Sampling Devices

- ✓ W.L. Gore & Associates, Inc.; Elkton, MD
- ✓ Art's Manufacturing and Supply; American Falls, ID
- ✓ Geoprobe Systems, Inc.; Salina, KS

- ✓ SimulProbe; Novato, CA

- ✓ Quadrel Services, Inc.; Clarksburg, MD
- ✓ Clements & Associates, Inc.; Newton, IA

### PCB Analyzers

- ✓ Dexsil Corporation; Hamden, CT
- ✓ Hach Company; Loveland, CO
- ✓ Electronic Sensor Technology; Newbury Park, CA
- ✓ Strategic Diagnostics, Inc.; Newark, DE (3 technologies)
- ✓ Evirologix, Inc.; Portland, ME

### Well-Head Monitoring Devices

- ✓ Electronic Sensor Technology; Newbury Park, CA
- ✓ Inficon, Inc.; East Syracuse, NY
- ✓ Innova AirTech Instruments; Denmark
- ✓ Perkin-Elmer Corporation; Wilton, CT
- ✓ Sentex Systems, Inc.; Ridgefield, NJ

### Pollution Prevention Technologies

- ✓ Smart Sonic; Newbury Park, CA
- ✓ Rayovac; Madison, WI

### Fuel Cells

- ✓ International Fuel Cells Corporation; South Windsor, CT

# ETV Events

<u>Date</u>	<u>Location</u>	<u>Event</u>
April 2	Arlington, VA	Greenhouse Gas Technology Pilot - Second Executive Stakeholder Meeting
April 5-7	Columbus, OH	Drinking Water Systems Pilot - Presentation at the Ohio Rural Water Association Meeting
April 6-9	Washington, DC	P2 Innovative Coatings and Coating Equipment Pilot - Presentation at the National Pollution Prevention Roundtable Meeting
April 15	RTP, NC	P2 Innovative Coatings and Coating Equipment Pilot - Stakeholder Meeting
April 20	Arlington, VA	Greenhouse Gas Technology Pilot - Stakeholder Meeting
April 20-21	Atlantic City, NJ	Environmental Expo '99
April 27	Ocean City, MD	Drinking Water Systems Pilot - Presentation at the Maryland Rural Water Association Meeting
April 27-29	Plymouth, MA	ETV Team Training Meeting
May 16-18	Jekyll Island, GA	Drinking Water Systems Pilot - Presentation at the Georgia Rural Water Association Meeting
May 17-18	Chicago, IL	Source Water Protection Technologies Pilot - Stakeholder Meeting
June 2-3	Washington, DC	EvTEC Pilot - Soil Stabilization Products Panel Meeting
June 10	RTP, NC	Air Pollution Control Technologies Pilot - Stakeholder Meeting
June 20-24	St. Louis, MO	A&WMA 92nd Annual Meeting and Exhibition

*For more details on ETV Events, check out our online calendar at <http://www.epa.gov/etv/highup.htm>*

**GOAL: 300 Technologies  
Verified by 2005**



**The ETV Team  
Training Meeting  
will be held  
April 27-29, 1999 in  
Plymouth, MA**

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