



### What is ETV?

The U.S. Environmental Protection Agency (EPA) established the Environmental Technology Verification (ETV) Program in 1995 to verify the performance of innovative technical solutions to problems that threaten human health or the environment.

ETV's mission is to accelerate the use of new environmental technologies in the domestic and international marketplace.

ETV provides third-party, quality-assured performance data so buyers and users of environmental technologies can make informed purchase and application decisions.

ETV works through public/private testing partnerships (called Centers) to evaluate the performance of environmental technologies.

### The program

The Safe Buildings Monitoring and Detection Technology Verification Program is part of the U.S. EPA's National Homeland Security Research Center (NHSRC). The program operates under the auspices of ETV to verify technologies that monitor and detect chemical and biological contaminants in buildings and public places.

The Safe Buildings Monitoring and Detection Technology Verification Program develops test plans and protocols, conducts verification tests, and reports the technologies' performance.

For further information, contact Helen Latham at Battelle, 505 King Ave., Columbus, OH 43201-2693; phone 614-424-4062; fax 614-424-5601; or e-mail [lathamh@battelle.org](mailto:lathamh@battelle.org).

### April set for second round

## Meetings of Detection Vendors, Stakeholders Support Test Plans

After attending a meeting in February, five vendor representatives have expressed interest in participating in the second round of verification testing of chemical detection technologies that can be used by first responders to diagnose or respond to an indoor contamination event. Detection technologies for biological contaminants in indoor air or on indoor surfaces are still largely under development. Those technologies can be submitted for testing when they are ready for commercial use.

The chemical detection technologies are being tested by Battelle in collaboration with the U.S. Environmental Protection Agency's (EPA) Safe Buildings Monitoring and Detection Technology Verification Program,

a part of the agency's National Homeland Security Research Center (NHSRC).

Tests are being planned for several possible technologies—photoionization detectors (PID), surface acoustic WAVE (SAW) detectors, and flame spectroscopy detectors. In the initial verification test, a portable ion mobility spectrometer (IMS) instrument—the RAID-M—developed by Bruker Daltonics, Inc., was successfully tested.

The objective of testing chemical detection technologies is to assess the performance of commercially ready, portable chemical detectors under a range of conditions and practices that mimic field use by emergency first responders in an indoor environment. The chemical

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**Technologies That May Be Tested**

At left is Proengin SA's flame spectroscopy (AP2C) Detector. Below, from left to right are: RAE Systems, Inc.'s photoionization detector (PID); Process Analyzer's PID; Microsensor Systems' surface acoustic wave (SAW) detector; and BAE Systems' SAW detector.

## Second Round *(from Page 1)*

test compounds in the experimental design of the first verification test were chosen to represent important classes of compounds. Included were toxic industrial chemicals (TICs) such as cyanogen chloride, hydrogen cyanide, phosgene, and arsine, along with two chemical warfare agents—sarin and sulfur mustard.

Performance tests included response time, response threshold, repeatability, accuracy, recovery time, temperature and relative humidity effects, interferent effects, cold start behavior, and battery operation. Testing the operational characteristics of the instruments included ease of use, signal/data output capabilities, and the cost of the instrument.

Additional vendors interested in having their chemical detection technologies tested should contact Dr. Thomas Kelly at Battelle by phone (614-424-3495) or e-mail ([kellyt@battelle.org](mailto:kellyt@battelle.org)).

## Stakeholders Suggest Technology Priorities

Members of the stakeholder committee for the Safe Buildings Monitoring and Detection Technology Verification Program have recommended that the detection technologies be prioritized for testing as follows:

**High priority**—infrared detectors, other IMS technologies, flame photometric detectors, and biodetectors such as field polymerase chain reaction (PCR) technologies.

**Medium priority**—surface acoustic wave (SAW), mini-CAD, field gas chromatography with mass spectrometric detection (GC/MS).

**Low priority**—colorimetric tubes.

## Meet the Stakeholders

Mark A. Durno, who currently serves as the on-scene coordinator for the U.S. EPA's Region V, has a bachelor of science in civil engineering from the Rose-Hulman Institute of Technology in Terre Haute, IN. After graduating in 1992, he was employed by Ecology and Environment, Inc., serving as a consultant to EPA. Since 1997, Mr. Durno has been an on-scene coordinator in the Emergency Response Branch of the EPA-Region 5's Superfund Program.



**Mark A. Durno**  
On-Scene  
Coordinator  
U.S. EPA,  
Region V

During those years, he supported or completed more than 20 fund-lead removal actions and has overseen a number of responsible-party lead cleanups. In 1998, he coordinated the EPA's emergency response efforts at the Ohio flood site declared to be a federal disaster by the Federal Emergency Management Agency. A year later, he assisted in managing the Kirby Tire fire emergency response efforts. EPA presented awards to him for his outstanding efforts.

Mr. Durno assists in coordinating EPA's mercury reduction outreach efforts and counter-terrorism preparedness efforts in Ohio and all of Region V. In 2001, he was named Region V's On-Scene Coordinator of the year. He is also heavily involved in combined area contingency planning with the U.S. Coast Guard and other local and state response organizations.

His efforts were recognized in 2000 when the rear admiral of the U.S. Coast Guard's Ninth District presented a merit award to him. In 2001-02, Mr. Durno responded to the U.S. Capitol's anthrax incident. His duties have included designing characterization and verification sampling approaches for the detection of weaponized biological agents on Capitol Hill.

## Upcoming Events

### April

**6-7** DoD Advance Planning Briefing for Industry (APBI) Chemical Biological Defense, Kossiakoff Center, Laurel, MD.

**21-23** 5<sup>th</sup> Annual Science & Engineering Technology Conference, Charleston, S.C.

### May

**4-6** EnviroExpo 2004, Boston, MA.

**25-28** 20<sup>th</sup> Annual National Defense Industry Association Symposium & Exhibition, Arlington, VA.

### June

**22-25** Air & Waste Management Association's 97<sup>th</sup> Annual Conference & Exhibition, Indianapolis, IN. A paper will be presented about the Safe Buildings and Detection Technology Verification Program by Dr. Thomas Kelly of Battelle.

### July

**4-17** Annual Conference for National Association of County & City Health Officials (NACCHO), St. Paul, MN.