



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.

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Safe Buildings Program Described at Conferences

Presentations about the progress of the U.S. EPA's Safe Buildings Monitoring and Detection Technology Verification Program were provided to attendees at two technical conferences in May and June. Two additional presentations are scheduled at conferences in September and November. The four host organizations and dates of the presentations are:

- The 20th Annual National Defense Industry Association (NDIA) Symposium and Exhibition, May 26-27, in Arlington, VA.
- The Air & Waste Management Association's 97th Annual

Conference and Exhibition, June 22-25, in Indianapolis, IN

- The Oak Ridge National Laboratory's Conference on Detector/Sensor Research and Technology for Homeland and National Security, September 14-16, Gatlinburg, TN, and
- The 2004 Scientific Conference on Chemical and Biological Defense Research, November 15-18, Hunt Valley, MD.

The purpose of presenting at these conferences is to provide background information about the Safe Buildings Program. The

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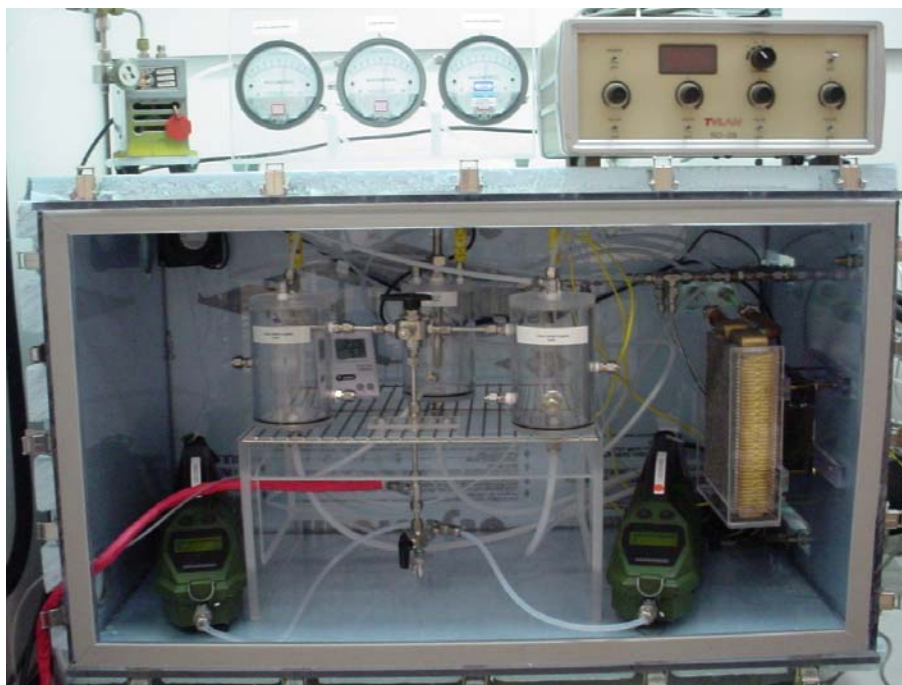
The first to complete verification testing was Bruker Daltonics' RAID-M IMS technology (below). The HAZMATCAD Plus Instrument (left) will soon complete its test.

Conferences *(from Page 1)*

presentations describe the types of detection technologies being tested, illustrate the test methods, and describe the completed performance test reports posted on the ETV Web site (<http://www.epa.gov/etv>).

The U.S. EPA's National Homeland Security Research Center (NHSRC) in Cincinnati, OH, has three main research areas: Safe Buildings, Drinking Water Protection, and Rapid Risk Assessment. The Safe Buildings Program is applying the U.S. EPA's Environmental Technology Verification (ETV) Program's performance testing process to these homeland security technologies.

The priorities for testing the various detection technologies are determined by the needs of first/emergency responders. Selections of the technologies to be tested are made by members of



The two RAID-M IMS technologies, pictured in a glove box, were tested for detection of toxic industrial chemicals and chemical warfare agents under conditions representing the needs of first responders.

the volunteer stakeholder committees, U.S. EPA representatives, and Battelle scientists.

Two types of tests of detection technologies are conducted: with

toxic industrial chemicals (TICs), such as hydrogen cyanide, chlorine, and phosgene, and *chemical warfare agents* (CWA), including sarin and sulfur mustard. Realistic interference effects—such as cold- and hot-start conditions and battery life—are also evaluated in each test.

The first detection technology to complete verification testing was the Bruker Daltonics' RAID-M ion mobility spectrometer (IMS). The test evaluated response times, accuracy of TIC/CWA identification, response time, temperature and humidity, false negatives and positives, and cold-start results.

Testing is nearly complete on the HAZMATCAD Plus instruments from Microsensor Systems, Inc., and is in progress on the M90 portable IMS chemical agent detector from Environics USA, Inc.

Upcoming Events

September

14-16 ORNL Conference on Detector/Sensor Research and Technology for Homeland and National Security, Gatlinburg, TN.

21-22 New Hampshire Pollution Prevention/Homeland Security Conference, Durham, NH.

27-29 Joint DOJ-DHS Conference: Technologies for Public Safety in Critical Incident Response, New Orleans, LA.

October

3-4 Symposium on Building Security in an Age of Terrorism, Washington, DC.

5-6 Bay Area 2nd Annual Pacific Security Expo, Oakland, CA.

13-14 Securing New Ground, Annual Security Conference 2004, New York, NY.

13-15 Worldwide Chemical Conference XXI, Ft. Leonard Wood, MO.

November

8-9 ASIS International Bioterrorism Conference, Washington, DC.

15-18 2004 Scientific Conference on Chemical and Geological Defense Research, Hunt Valley, MD.

22-23 4th Global Homeland Security Conference & Expo, Crystal City, VA.