



# News Release

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## **SNIFFER pilot program to launch in Baltimore** *Teamwork, innovation drive new test and evaluation program for detectors used by city mass transit systems*

**ABERDEEN PROVING GROUND, Md.** – The U.S. Army Edgewood Chemical Biological Center (ECBC) has designed a standard methodology for testing stationary and autonomous commercially-developed chemical vapor detectors. Supported by the U.S. Department of Homeland Security Office of Health Affairs Chemical Defense Program (DHS OHA CDP), the pilot program aims to help select cities understand the capabilities and limitations of a given commercial off-the-shelf (COTS) detector for use by city mass transit systems.

ECBC will use the developed standard test methodology piloted on the Sensor Nodes Inform and Facilitate Fast Emergency Response (SNIFFER) chemical detection system to test detectors selected by the city of Baltimore. Currently, the team is waiting for Baltimore to purchase their chemical detectors. Testing is expected to begin in the summer of 2013.

“After the development of the standard test methodology and the success of the SNIFFER pilot, we were requested by the CDP to test chemical detectors for the Maryland Transit Administration (MTA) in Baltimore,” said Nichole Mortin, Detection Engineering Branch team member and co-project manager for SNIFFER. “The city of Baltimore was selected as a pilot program for this effort, and due to the work we did to develop a sound test methodology, as well as our proximity to Baltimore, CDP requested ECBC to test the detectors selected by the city of Baltimore.”

The design of the pilot program was a collaborative effort from multiple ECBC teams, including the Detection Engineering Branch and Protective Factor and Toxic Chambers Branch (PFTCB) within the Engineering Directorate, as well as the Chemical, Biological, Nuclear and Radiological (CBRN) Filtration Branch within the Research and Technology Directorate. The selected COTS detector is funded through the Fiscal Year 2009 Federal Emergency Management Agency Transportation Security Grant Program (TSGP).

In 2010, the Transportation Security Administration (TSA) and DHS OHA co-signed the *Chemical Detection Performance Specifications for Mass Transit and Passenger Rail Systems*. These specifications provide information to grantee cities of Transit Security Grants to make an informed decision on the types of stationary, autonomous chemical

vapor detectors to purchase. The performance specifications list target chemical warfare agents (CWAs) and toxic industrial chemicals (TICs) to identify and to quantify at either the Acute Exposure Guideline Levels (Level-2) or the Immediately Dangerous to Life and Health (IDLH) level while operating in an environment with common interferent chemicals (e.g., paints, glues, rail dust) and varying environmental conditions. Determination of detector efficacy against these specifications thus required the development and implementation of a laboratory test and evaluation plan.

During the test plan development, DHS OHA CDP requested that ECBC use the existing SNIFFER chemical detection system, designed by Sandia National Laboratories, as a test case for piloting the test procedures. Now that the standard test methodology has been developed and piloted, the chemical vapor detectors selected by each city will be tested using this plan. The results of this test and evaluation will then inform the city on how well the detector performed, which can affect how the city's Concept of Operations Plan (CONOP) is written in the event of a chemical incident.

The concept for the test standard was designed so that any qualified laboratory could use this standard test methodology to test chemical detectors to determine if they meet the TSGP requirements. During this project, the ECBC team's creativity and teamwork not only generated a community standard and great final product, but also secured for them a future project with CDP that will help the local community.

"The original program was to design a standard test methodology for chemical detectors that were required to meet numerous requirements in a highly variable real world environment, meaning many different operating conditions," said Mortin. "So given these conditions, we had to decide which chemicals and environmental conditions to test against and prioritize which elements were important, all while staying within the customer's budget."

For more information about ECBC, visit <http://www.ecbc.army.mil/>.

*ECBC is the Army's principal research and development center for chemical and biological defense technology, engineering and field operations. ECBC has achieved major technological advances for the warfighter and for our national defense, with a long and distinguished history of providing the Armed Forces with quality systems and outstanding customer service. ECBC is a U.S. Army Research, Development and Engineering Command laboratory located at the Edgewood Area of Aberdeen Proving Ground, Maryland. For more information about the Edgewood Chemical Biological Center, please visit our website at <http://www.ecbc.army.mil> or call (410) 436-7118.*

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