

Joint Biological Point Detection System (JBPDS)

Executive Summary

- DOT&E submitted classified reports to Congress on the Joint Biological Point Detection System's (JBPDS) capability to detect and identify tactically significant biological warfare agent attacks in order to support decisions to initiate medical treatment in June 2009 (for four biological warfare agents) and August 2011 (for six biological warfare agents).
- JBPDS's operational capability varies widely with the biological warfare agent used, the nature of the attack, and environmental conditions.
- The August 2011 report was based on the Army Test and Evaluation Command's Whole System Live Agent Testing conducted from June 2010 to February 2011.

System

- The JBPDS provides detect-to-treat biological agent point detection, identification, and sampling capability.
- The JBPDS consists of a biological suite that has a Biological Aerosol Warning Sensor (or trigger), collector, fluid transfer system, and identifier. The identifier inoculates assays that contain antibodies of specific biological warfare agents.
- The JBPDS provides the capability to collect and preserve samples for confirmatory analyses to support follow-on courses of action for the commander, including treatment, quarantine, countermeasures, and litigation.
- The Services require the system to detect the presence of a biological aerosol and to identify the biological warfare agent in less than 15 minutes.

Activity

- Based upon the June 2009 DOT&E report, the Joint Program Executive Officer for Chemical and Biological Defense approved full-rate production of the JBPDS on October 1, 2009, and directed an update of the Test and Evaluation Master Plan and Whole System Live Agent Testing for the remaining six biological warfare agents not previously tested against the integrated system.
- The Army Test and Evaluation Command conducted Whole System Live Agent Testing Phase II in a Bio-Safety Level-3 containment chamber at Dugway Proving Ground, Utah, from June 2010 to February 2011 for the remaining six biological warfare agents in accordance with the June 2010 DOT&E-approved Test and Evaluation Master Plan.
- DOT&E combined the whole system test data with modeling of agent transport and dispersion to assess the operational implications of system performance against biological warfare agents.



Shelter

Shipboard

- The Navy will employ the JBPDS aboard ship. The Army employs JBPDS mounted in a High Mobility Multi-purpose Wheeled Vehicle or integrated into the Stryker Nuclear, Biological, and Chemical Reconnaissance Vehicle.

Mission

Units equipped with the JBPDS provide early warning and identification of aerosolized biological warfare agents.

Major Contractor

General Dynamics Armament and Technical Products Division – Charlotte, North Carolina

Assessment

- JBPDS has limited capability to detect and identify tactically significant biological warfare agent attacks in order to support decisions to initiate medical treatment for the biological agents identified in the August 2011 DOT&E report.
- JBPDS's operational capability varies widely with the biological warfare agent used, the nature of the attack, and environmental conditions.

Recommendations

- Status of Previous Recommendations. The Services have addressed all previous recommendations.
- FY11 Recommendation.
 1. The Army and Navy combat developers should revise the concept of operations and tactics, techniques, and procedures to account for the performance of the JBPDS.

DOD PROGRAMS