

Joint Biological Tactical Detection System (JBTDS)



The Joint Biological Tactical Detection (JBTDS) program completed all developmental and integrated tests in FY25, in accordance with the DOT&E-approved TEMP, with exception of modeling and simulation, which will now be completed in 1QFY26. The multi-Service operational test and evaluation (MOT&E) is now scheduled for 1QFY26. DOT&E will publish a classified MOT&E report in 3QFY26 to inform the full-rate production (FRP) decision.

SYSTEM DESCRIPTION

The JBTDS consists of an integrated man-portable biological warfare agent (BWA) aerosol detector and sample collector, a base station, a meteorological station, a GPS receiver, a sample extraction kit, and a handheld BWA identifier with consumable assays. The detector and sample collector can be connected to the base station using a Service-provided, closed, or restricted local area wired or wireless network to enable remote monitoring and reporting.

MISSION

Army, Marine Corps, and Navy units will deploy JBTDS during major combat, stability, and strategic deterrence operations where an adversary's employment of BWAs could severely disrupt military operations or cause hazardous exposure to warfighters or civilians. Service units equipped with the JBTDS will conduct biological surveillance missions to detect the presence of, collect samples, identify, and warn forces of the BWA threat. The JBTDS is intended to support commanders' force protection actions, support medical planning, and provide information to enable consequence management. U.S.

Special Operations Command will employ the JBTDS identifier to identify BWA in samples to support intelligence gathering and forensics analyses.

PROGRAM

JBTDS is a joint Acquisition Category II program in the production and deployment phase of acquisition. DOT&E approved the Milestone C (MS C) TEMP in September 2023. In July 2025, the program office delivered the identifier component to U.S. Special Operations Command and plans to deliver the identifier component to the National Guard Bureau in 4QFY25. The program completed all developmental

and integrated tests in FY25, in accordance with the DOT&E-approved test plans, with exception of modeling and simulation, which will now be completed in 1QFY26. The MOT&E was delayed from 4QFY25 to 1QFY26, due to warfighter availability.

» **MAJOR CONTRACTORS**

- Chemring Sensors & Electronic Systems – Charlotte, North Carolina
- Biomeme – Philadelphia, Pennsylvania

TEST ADEQUACY

The program completed multiple laboratory tests in FY25, in accordance with the DOT&E-approved test plans, to demonstrate detector performance across various BWAs.

PERFORMANCE

» **EFFECTIVENESS, SUITABILITY, AND SURVIVABILITY**

Rather than submitting a separate MOT&E report on the BWA identifier component, as discussed in the FY24 Annual Report, DOT&E will submit a single classified MOT&E report on the system as a whole. The assessment will use the laboratory test data combined with the future MOT&E data as inputs to a model and simulation to assess the operational effectiveness, suitability, and survivability of the JBTDS system. DOT&E will provide the classified MOT&E report in early 3QFY26 to inform the FRP decision.

RECOMMENDATIONS

The Joint Product Manager should continue to address the following recommendations from the FY23 and FY24 Annual Reports:

1. Mitigate identified vulnerabilities to electromagnetic effects.
2. Add cyber-specific topics to the training curriculum to better enable operators to recognize cyber threats and to protect, mitigate, and recover from hostile cyber actions.
3. Improve the identifier assays to meet performance requirements.