

Joint Chemical Agent Detector (JCAD)

INVESTMENT COMPONENT

Modernization

Recapitalization

Maintenance

MISSION

To provide advanced detection, warning, identification of contamination on personnel and equipment, and monitoring for the presence of chemical warfare agent contamination.

DESCRIPTION

The Joint Chemical Agent Detector (JCAD) is a detector or an array of networked detectors capable of automatically detecting, identifying, and quantifying chemical agents, providing handheld monitoring capabilities, protecting the individual Soldier, Airman, and Marine through the use of pocket-sized detection and alarm.

The JCAD program will provide the services a handheld, combined-portable monitoring and small-point chemical agent point detector for ship, aircraft, and individual warfighter applications.

JCAD will automatically and simultaneously detect, identify, and quantify chemical agents in their vapor form. The detector will provide visual and audible indicators and display the chemical agent class and relative hazard level dosage. The services will deploy the system on mobile platforms to include vehicles, at fixed sites, and on individuals designated to operate in a chemical threat area (CTA). The system will operate in a general chemical warfare environment, and can undergo conventional decontamination procedures by the warfighter. JCAD is designed to interface and be compatible with current and future anti-chemical, nuclear, and biological software.

The JCAD acquisition program market survey found that commercially available detectors could satisfy revised JCAD requirements. JCAD's restructured acquisition strategy assessed commercially available products to provide the most capable, mature system, at the best life-cycle cost. This strategy provides opportunities to leverage commercial developments for fielding expanded capabilities. In 2009, the acquisition

strategy incorporated a production cut-in of an Enhanced JCAD (M4E1 JCAD) to provide an additional capability to meet the objectives requested in the capability production document.

JCAD Increment 1 systems are being purchased to replace the Automatic Chemical Agent Detector and Alarm (ACADA or M22), M90, and M8A1 systems.

Specific capabilities include:

- Instant feedback of hazard (mask only or full Mission-Oriented Protective Posture)
- Real-time detection of nerve, blister, and blood agents
- Stores up to 72 hours of detection data
- Will be net-ready through implementation of the Common Chemical, Biological, Radiological, and Nuclear (CBRN) Standard Interface (Increment 2)

SYSTEM INTERDEPENDENCIES

Modular Lightweight Load-carrying Equipment (MOLLE), HMMWV, M113, M2 (Bradley)

PROGRAM STATUS

- **FY09:** Full-rate production and fielding of JCAD Increment 1

PROJECTED ACTIVITIES

- **FY10:** Customer testing of M4E1 JCAD
- **FY11:** Production cut-in decision

ACQUISITION PHASE

Technology Development

Engineering & Manufacturing Development

Production & Deployment

Operations & Support



Joint Chemical Agent Detector (JCAD)

FOREIGN MILITARY SALES

None

CONTRACTORS

Smiths Detection, Inc. (Edgewood, MD)

