

## Joint Service Light Nuclear, Biological, and Chemical Reconnaissance System (JSLNBCRS)

### Executive Summary

- The Joint Service Light Nuclear, Biological, and Chemical Reconnaissance System (JSLNBCRS) is undergoing First Article Testing to address integration, power, weight, and overpressure issues to support a decision by the Joint Program Executive Office in 2005 for low-rate initial production II articles.
- Testing is being conducted in accordance with the DOT&E-approved Test and Evaluation Master Plan.
- Government production verification testing will start in October 2005. The Multi-Service Operational Test and Evaluation (MOT&E) is scheduled to start in FY06.



- Chemical and Biological Mass Spectrometer, Block II, and Dual Wheeled Sampling System
- North Atlantic Treaty Organization standard markers

### System

- The JSLNBCRS is a mobile Nuclear, Biological, and Chemical (NBC) reconnaissance system based on two platforms: Light Armored Vehicle (LAV) for the Marine Corps; High Mobility Multipurpose Wheeled Vehicle (HMMWV) for the Air Force.
- NBC sensors and communications are integrated to perform NBC detection, identification, sampling, and reporting of NBC hazards.
- The NBC mission equipment package includes:
  - Joint Biological Point Detection System
  - Joint Service Lightweight Standoff Chemical Agent Detector system

### Mission

- Marine Corps NBC reconnaissance squads and Air Force airbase reconnaissance teams use JSLNBCRS to conduct searches, surveys, surveillance, sampling, and reconnaissance (route, area, and zone) to confirm the presence or absence of NBC hazards.
- Reconnaissance units report NBC information to supported Marine Air Ground Task Force and Air Force Wing commanders.

### Activity

- The contractor is performing First Article Testing to address integration, power, weight, and overpressure performance issues stemming from operational testing conducted in FY02.
- Software integration testing was conducted in early 2005.
- Road safety and mobility tests are being conducted at the Nevada Automotive Test Center for the Light Armored Vehicle and HMMWV.
- Government production verification testing is planned for September 2005 to January 2006. The MOT&E is scheduled for FY06.
- The Army is conducting modeling and simulation activities to better characterize the detection performance of the Joint Service Lightweight Standoff Chemical Agent Detector (JSLSCAD) in the presence of battlefield backgrounds and interferences.

### Assessment

- The performance of the NBC sensors integrated with the JSLNBCRS is key to mission success. While the program should demonstrate integration without degradation of the sensors, operational testing must confirm that the JSLNBCRS can support the Marine Air Ground Task Force or Air Force Wing commanders with timely warning and accurate battlefield NBC information. This will form the basis of the MOT&E in 2006.
- Testing is proceeding in accordance with the Test and Evaluation Master Plan.
- Technical software integration testing demonstrated that the applications Critical Software Configuration Item is stable.
- JSLSCAD detection performance is significantly degraded by the presence of naturally occurring environmental interferences.

# DOD PROGRAMS

Even if it meets revised operational requirements for detection and range performance, its critical detection information will not provide the battlefield commander with a beneficial standoff detection capability. This conclusion is derived from the fact that the system completes a search pattern in 90 seconds, and can cover almost 1,500 meters in 90 seconds. If

the detector can only detect out to 500 meters, the platform will have entered the cloud before it will alarm.

## **Recommendations**

None.