

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

Executive Summary

- The Joint Service Light Nuclear, Biological, and Chemical Reconnaissance System (JSLNBCRS) completed First Article Testing to address integration, power, weight, and overpressure issues to assess readiness for Multi-Service Operational Test and Evaluation (MOT&E).
- Government production verification testing was conducted in FY06 to address vehicle and mission equipment integration and performance.
- The MOT&E was conducted in April 2006 in accordance with the DOT&E-approved Test and Evaluation Master Plan. The test plan approved by DOT&E was not followed with respect to the size of simulant releases for Joint Service Lightweight Standoff Chemical Agent Detector (JSLSCAD).

System

- The JSLNBCRS is a mobile Nuclear, Biological, and Chemical (NBC) reconnaissance system mounted in two platforms: the Light Armored Vehicle (LAV) for the Marine Corps and the High Mobility Multi-purpose 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
 - JSLSCAD system



- Chemical and Biological Mass Spectrometer (Block II) and Dual Wheeled Sampling System
- Legacy radiological detectors
- Automatic Chemical Agent Detection Alarm
- NATO standard markers

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 performed First Article Testing of a production representative system to address integration, power, weight, and overpressure performance issues stemming from operational testing conducted in FY02.
- Road safety and mobility tests were conducted at the Nevada Automotive Test Center for the Light Armored Vehicle and HMMWV.
- Government production verification testing was completed in FY06 to assess system performance and readiness for MOT&E.
- The Multi-Service Operational Test was completed in April 2006 at the Dugway Proving Ground, Utah, with Marine Corps and Air Force JSLNBCRS teams performing NBC reconnaissance missions under realistic field conditions and simulant agent challenges. The test plan approved by DOT&E was not followed with respect to the size of simulant releases for JSLSCAD. Larger than approved simulant

clouds were released. The Army is conducting modeling and simulation activities to better characterize the detection performance of the JSLSCAD in the presence of battlefield backgrounds and interferences.

Assessment

- Although government and contractor technical testing verified key system performance parameters, software stability, and integration of the NBC sensors, these capabilities must be confirmed in the multi-Service operational test evaluation, which is ongoing.
- JSLSCAD detection performance is significantly degraded by the presence of naturally occurring environmental interferences. Even if it meets revised operational requirements for detection and range performance, its critical detection information will not likely provide the battlefield commander with a beneficial standoff detection capability when employed on the move.

DOD PROGRAMS

This conclusion is derived from the fact that the system completes a search pattern in 45 seconds, but can travel almost 750 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.

- Validation, verification, and accreditation of the JSLSCAD modeling and simulation effort is ongoing.
- The larger than approved simulant clouds were not threat-realistic and would overstate the performance of the detector.

Recommendations

- Status of Previous Recommendations. There were no FY05 recommendations.
- FY06 Recommendations. None.