Joint Shipboard Weapons and Ordnance (JSWORD) Quick Reaction Test (QRT)

SUMMARY

- JSWORD is a quick reaction, ten-month test. It is headquartered in Suffolk, Virginia.
- JSWORD is sponsored by USSOCOM and executed by Commander, Operational Test and Evaluation Force (COTF).
- As a result of this QRT, USSOCOM should be able to operate and train from Navy ships without requiring waivers when using the 2.75-inch Folding Fin Aerial Rocket (2.75" FFAR).
- JSWORD will also determine if the developed and validated approval process for the 2.75" FFAR can be utilized to support certification of other munitions needed to support emergent contingency requirements.
- JSWORD will execute two demonstrations to validate the process. A ground-based risk mitigating demonstration focused on logistics and arming/de-arming procedures for USSOCOM, Army, and USMC helicopters operating aboard a U.S. Navy Amphibious Assault Ship. A shipboard operational demonstration to validate the JSWORD process and resolve any issues identified during the ground-based demonstration.
- Test results will provide empirical data to support findings, conclusions, and recommendations to the joint operational, training, and acquisition communities.

The shipboard operational demonstration will focus on issues related to personnel, training, ordnance assembly/load-out/ replenishment and validation of the final SSRA recommendations and process issues.

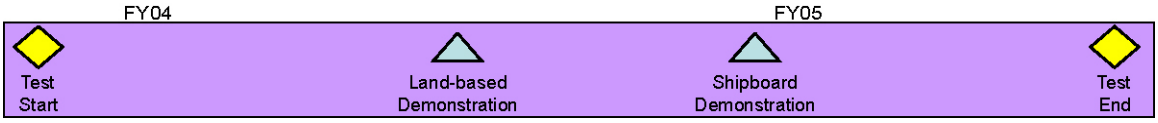
TEST DESCRIPTION AND MISSION

JSWORD was directed in May 2004 to establish, document, and publish a standard joint procedure for tube loading of the (2.75" FFAR on U.S. Army (USA) and USSOCOM helicopters. Operating procedures developed during this test shall be acceptable to both USSOCOM and Fleet Forces Command (FFC).

The results from JSWORD will provide procedures to mitigate the risks associated with the transportation, storage, handling, loading and unloading of the 2.75” FFAR during joint shipboard training and operations. One-time waivers for the 2.75” FFAR have been granted for each contingency without addressing the long-term problem. Without a formal process in place, USSOCOM and the Army are unable to conduct live-fire training exercises. Ships develop ad hoc procedures such as turning off radar and radio transmitters. These procedures increase the ship’s vulnerability when unapproved munitions are on deck. The risk of accidental discharge due to radio frequency interference is unknown. The goal of the JSWORD QRT is to validate and verify the process which will quantify the risk, and to determine the changes needed for the associated Service publications.

Since June, JSWORD focused on an operational process solution, research, and data gathering. Baseline data has been gathered from lessons learned from USS *Kitty Hawk* during Operation ENDURING FREEDOM (OEF) and USS *America* contingency operations during Haiti. A Systems Safety Working Group (SSWG) has been formed and is responsible for conducting a Systems Safety Risk Assessment (SSRA), which involves compiling data regarding previous systems safety testing of the 2.75" FFAR and the associated weapons systems from all the Services.

TEST AND EVALUATION ACTIVITY



JSWORD completed the land-based demonstration in October 2004 at Fort Campbell, Kentucky, with participants from the 160th Special Operations Aviation Regiment (SOAR), an Army Apache Squadron, and the 2nd Marine Air Wing. Each type of helicopter used live and inert 2.75" FFAR rounds to:

- Compare the NAVAIRSYSCOM approved contingency checklists with current Joint and Service checklists. JSWORD observed and documented Army, USMC, and SOCOM procedures, compared those procedures to current contingency checklists, and practiced procedures that will be performed during the shipboard demonstration.
- Identify changes needed to improve and validate the NAVAIR checklists and focus on inter-service logistics, packaging, handling, stowage, and transportation of the 2.75" FFAR.
- Examine the safety, technical, and operational issues associated with inert and live cold/hot tube loading.
- Provide an initial validation of the technical information generated from the System Safety Risk Assessment (SSRA) that has been drafted by the SSWG.
- Brief the Naval Ordnance Safety and Security Activity regarding the results of the SSRA to prepare for the shipboard demo in 2005.

The shipboard operational demonstration, scheduled for January through February 2005 onboard USS *Nassau*, will focus on issues related to personnel, training, ordnance assembly/load-out/replenishment and validation of the final SSRA recommendations and process issues. The initial coordination meeting with USS *Nassau* has been completed. The 160th SOAR will support the shipboard demonstration. USA and USMC units are being identified.

TEST AND EVALUATION ASSESSMENT

The JSWORD SSRA document is providing great insight into various technical issues with the 2.75" FFAR onboard ship. The document addresses these vital areas:

- Risk assessment for specific aircraft platforms, fire control systems, and launchers (for SOF/USA/USMC).
- Fastpack packaging vice wooden boxes.
- Detailed systems description (including rocket, motor, warhead, fuse, etc.).
- Risk spreadsheets for component and sub-assemblies, hazard category, and corrective action mitigation focused on CVNs and amphibious class ships.

Continued assessment will be provided as JSWORD briefs the NOSSA and CNO N411. USSOCOM views this process along with the SSRA to provide critical information for the future certification of specific weapons (30 MM, 7.62" mini-gun, and other Special Operations Forces weapons) in the shipboard environment. JSWORD will close in March 2005.