



STOCKPILE RELIABILITY

SRP determines the continuing performance, reliability, and safety of fielded missile inventories. Missile systems are designed and specified to meet a minimum shelf life at the time of delivery. Shelf life is the term during which a tactical missile will remain safe for handling or operation, meets acceptable reliability levels, and performs as expected in potential tactical engagements.

SRP is the mechanism for extending shelf life and allowing continuing use. The U.S. Army Combat Capabilities Development Command Aviation & Missile Center is recognized worldwide for SRP testing and analyses approaches, and has partnerships with the U.S. Navy, U.S. Air Force and 14 foreign military agencies.

IMPORTANCE TO THE ARMY

AR 702-6 requires SRP to be conducted and defines that SRP consists of surveillance testing, function (flight) testing, and laboratory (component) testing. CCDC AvMC generates a customized SRP plan during development of a missile that accounts for the system's reliability requirement, unit cost, testability, production quantity, reparability, projected life cycle, and other factors. The SRP plan is required to be published prior to full materiel release. AvMC manages execution of the SRP throughout the missile life cycle, and is responsible for issuing shelf life extension recommendations.

Approximately 5,000 missiles are non-destructively surveillance tested annually, with failing missiles immediately segregated from the wartime inventory. This testing historically increases the reliability of the inventory at each test location by two to seven percent. In addition, over 900 missile components are laboratory tested annually. This data is the primary focus of modern trend analysis techniques for predicting future performance and safety in support of extension decisions.

Flight testing provides the assessment of inventory reliability and is critical for identifying system failure modes that cannot be identified in surveillance or lab testing. SRP efforts have extended the current average shelf life of the tactical missile inventory from 7.9 years at delivery to 23 years. SRP supported shelf life extensions on over \$4.3B of missile inventory.



OUTLOOK FOR THE FUTURE

CCDC AvMC is in continuous pursuit of improvements to reduce life cycle costs and increase the accuracy of Army missile inventory management decisions.

AvMC chairs an active partnership between DoD and DoE to develop new and innovative life cycle technologies and tools.

AvMC has developed and supported fielding of multiple health monitoring devices that will identify missiles needing to be sampled for testing, determine what levels of environmental exposure are likely to result in failure, and optimize the quantities required for SRP testing.

FOR FURTHER INFORMATION:

U.S. ARMY COMBAT CAPABILITIES DEVELOPMENT
COMMAND AVIATION & MISSILE CENTER:

<https://www.avmc.army.mil>

Public Affairs

usarmy.redstone.ccdc-avmc.mbx.pao@mail.mil

256-876-1649