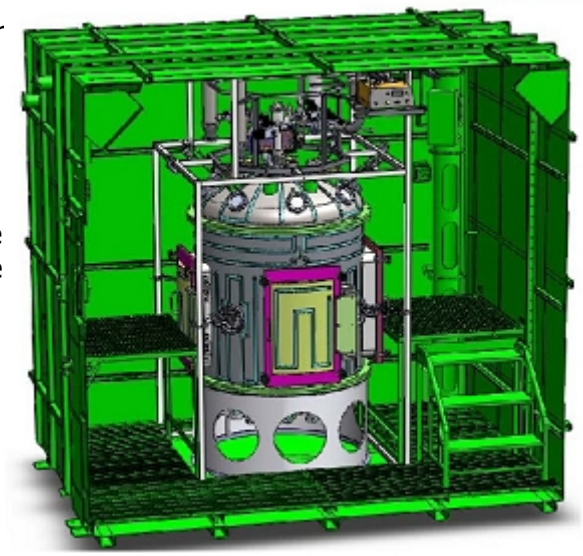
Dynamic Test Chamber

DTC

Description



The Dynamic Test Chamber will provide an interactive test fixture for the validation of multiple chemical point detection systems in numerous real-world operational environments. The DTC provides the ability to control a range of challenge concentrations, altitudes, humidities, temperatures, interferents, and multi-component challenges (e.g., two to six different challenge components). The chamber completed verification with simulant agent in 1QFY12. Due to issues with the facility it is located in, validation is estimated to be completed in 4QFY13.

Mission

Provide Dugway Proving Ground with a unique test capability that allows for rapid low-level Chemical Warfare Agent vapor generation and measurement, as well as automated control of various environmental and threat conditions.

Capabilities

- Provides a test chamber capable of operating across wide ranges of temperature (-25 to +65°C), humidity (0 to 90%), and barometric pressure (0 to 25,000 ft.)
- Low-level, near real-time chemical vapor measurement for multiple, point detection systems (e.g., Joint Chemical Agent Detector, Improved Point Detection System II).
- Provides a whole-system exposure testing capability for one system under test and a point challenge capability for up to six systems under test
- Positive-pressurization of the system and engineering controls to simulate sea-level atmospheric conditions.
- Computer control and automation, communications and data acquisition, agent and aerosol generation and monitoring, and variable control of the rate-of-change for conditions.

Users

US Navy, US Marine Corps, US Army, US Air Force

Status

Engineering and Manufacturing Development - Anticipated Fielding: FY 2013 Q4

This Fact Sheet was cleared for public release on 4/24/2012.
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