



# Testing in a Joint Environment

## Value Added and Considerations



***Janet Garber***

***Director***

***Test and Evaluation Office***

Office of the  
Deputy Under Secretary  
of the Army

June 2008



**UNCLASSIFIED**

Why do we test?



*Support the Warfighter to accomplish mission!*

## DPG Testing 1

September 2006





# Agenda

- Why do we test?
- Introduce Test & Evaluation Office (TEO), Deputy Under Secretary of the Army (DUSA)
- Provide insight on Chemical and Biological Defense Program (CBDP) testing challenges



# Why Do We Test ?

- **Determine/verify performance envelope (capabilities & limitations)**
- **Evaluate Systems' Effectiveness, Suitability, & Survivability**
  - ✓ Assess mission accomplishment
- **Identify and Assess Acquisition & Operational Risks**
- **Certify attainment of:**
  - ✓ Technical Performance Specifications
  - ✓ Operational Requirements
  - ✓ Safety
- **Verify Correction of Deficiencies**
- **Address Compatibility/Interoperability/Net Readiness**
- **Assist in Determining DOTMLPF Requirements**



***Support the Warfighter!***

*DOTMLPF - Doctrine, Organization, Training, Materiel, Leadership & education, Personnel, & Facilities*



# T&E Critical to the Warfighter



Biological Warfare Agent (BWA) and Chemical Warfare Agent (CWA) performance data provides:

- Performance envelope
- System limitations
- Insight on how to employ system in the field

***Does the System support mission success?***



Unclassified

# Pop Quiz



What is Data?

- A fact or body of facts
- Information that could save your life
- An android from a TV series
- All the above

Answer: d



*Test & Evaluation Office*

Unclassified



# Importance of Testing

- Collecting Data: measure test environment and system under test
- To answer questions:
  - Is the system safe for use?
  - Does system meet performance specifications?
    - Where it works
    - Where it doesn't work
- Reliability and Logistic Supportability
- Human Factors, MANPRINT
- Others







# Importance of Testing (cont.)



## Provides Data Needed for Evaluation

### Evaluation:

- Integration of data and analysis from many sources
- To answer questions:
  - Was mission accomplished?
  - Was the system effective, suitable, survivable?
  - How well were requirements met?



*Test & Evaluation Office*



# Types of Tests: Chemical and Biological Defense



- Developmental/Operational Testing:
  - Data are critical for operational evaluation
  - Surety chamber tests with
    - BWA and CWA
    - BWA and CWA simulants
  - Field tests with BWA/CWA simulants
- Operational Testing
  - Military test participants performing unit missions/tasks
  - Operationally realistic environment

***Threat and Environmental Realism Is Key To All Testing***



# T&E Executive Vision

*Ensure world class combat and support systems for our nation's Warfighters by providing programs with sound analyses, adequate testing, and credible evaluation procedures supported by robust, efficient and versatile T&E resources, and infrastructure*



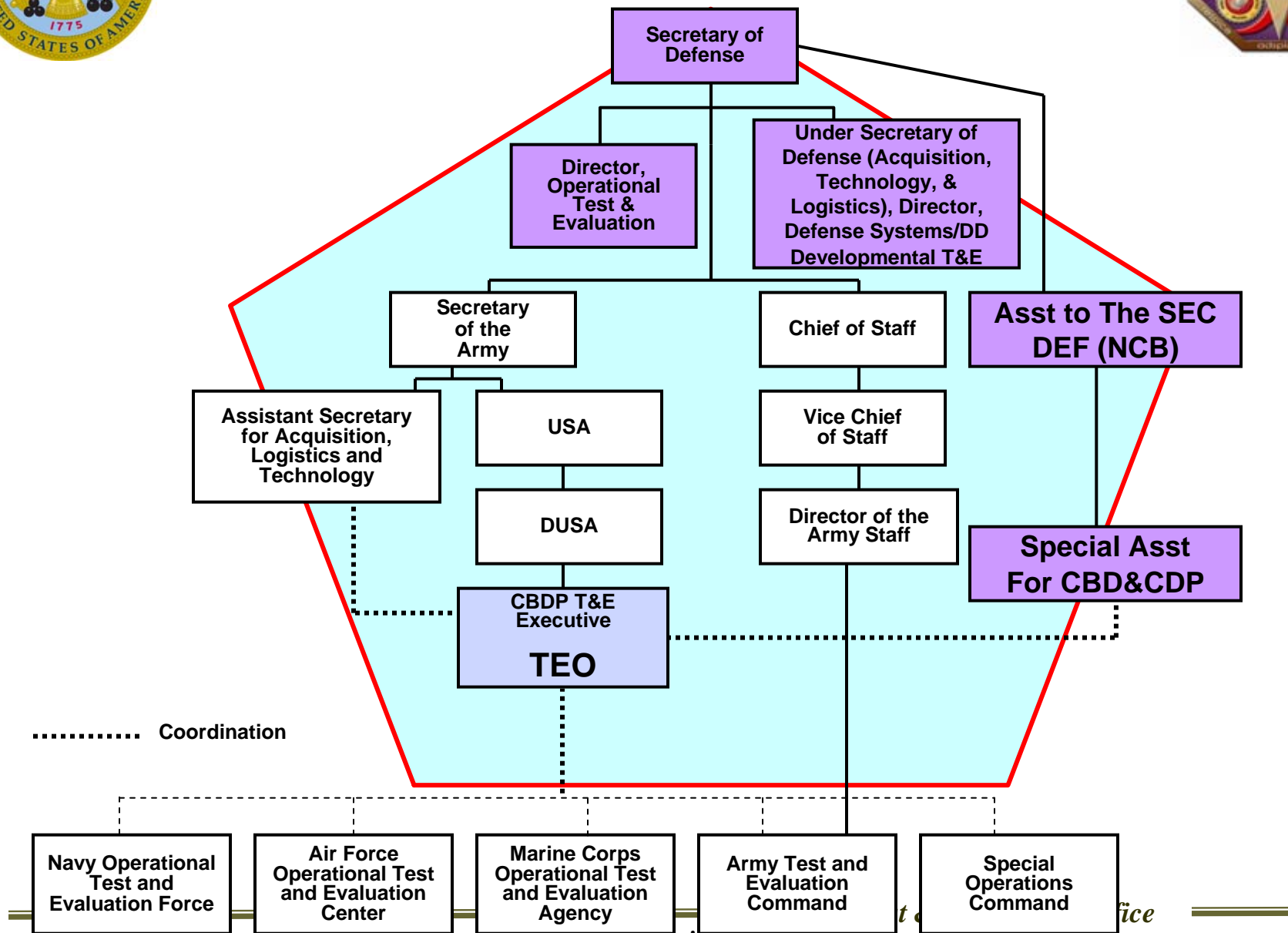
Unclassified

# Mission of the CBDP T&E Executive



- Ensure Adequate and Credible Testing
- Establish T&E Policy for CBDP
- Plan T&E Infrastructure Investment
- Advocate for T&E Funding
- Promote early T&E community involvement in planning

# TEO Structure for CBDP



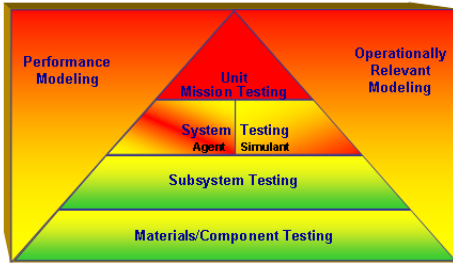


Unclassified

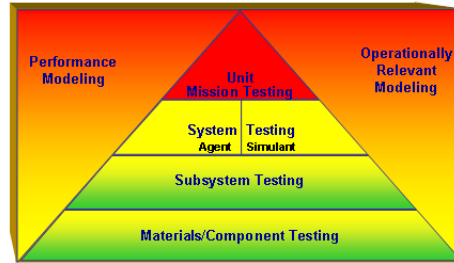
# Assessment and Projection of T&E Infrastructure Capabilities (Incremental Improvements)



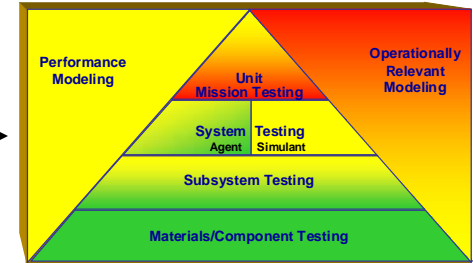
FY 06



FY 08

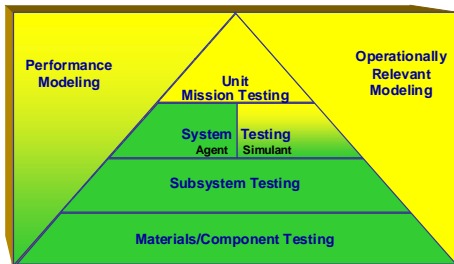


FY 10

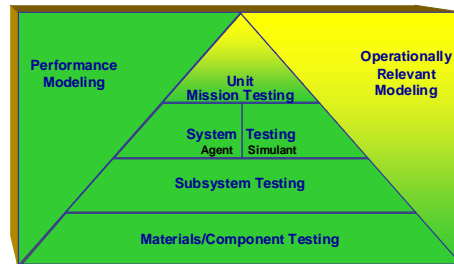


**Continuous Assessment**

FY 12



FY 15

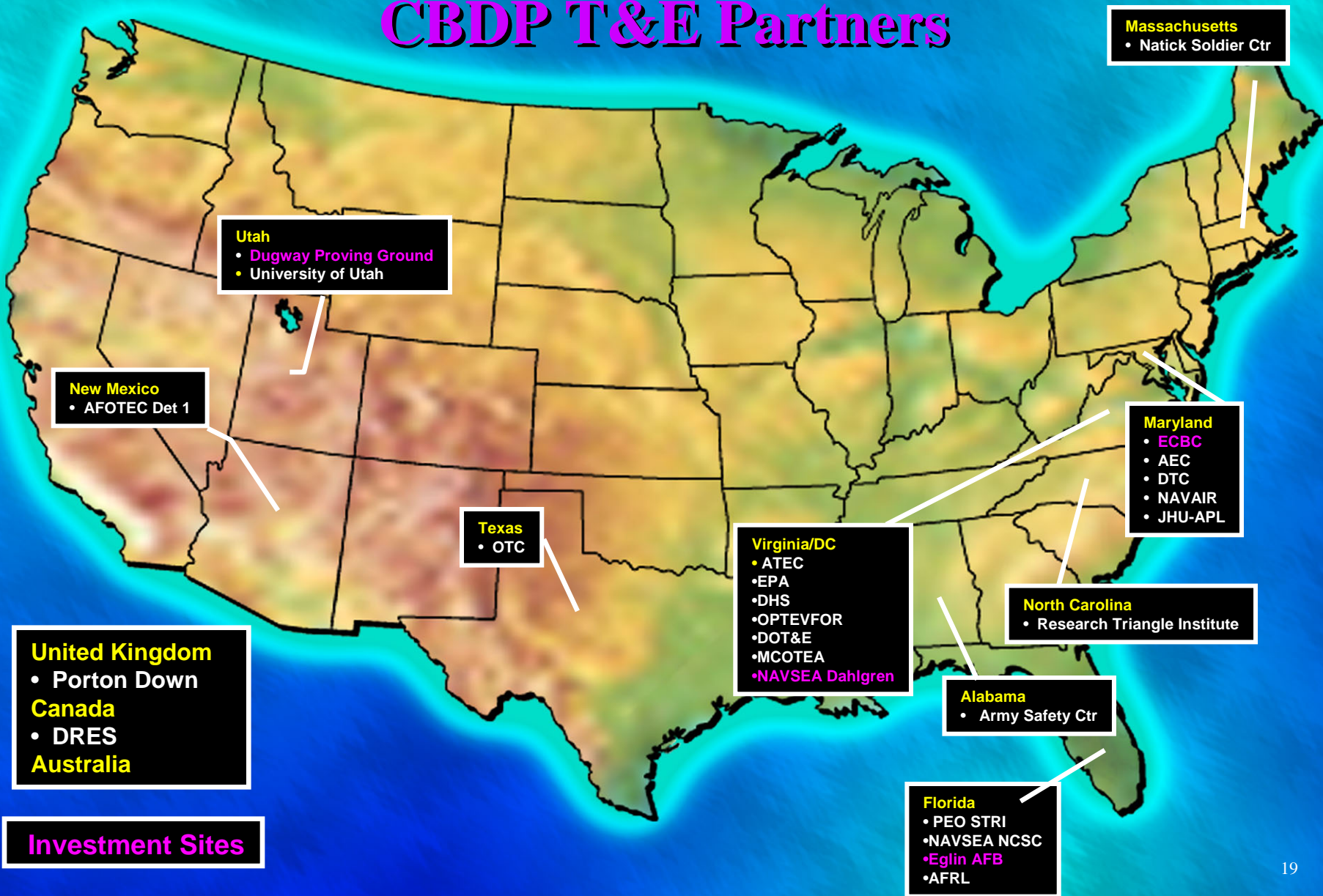


Note: After FY 12, most infrastructure should be in place. Ongoing improvements will be primarily to address new technologies, new threats and emerging capability gaps

Unclassified

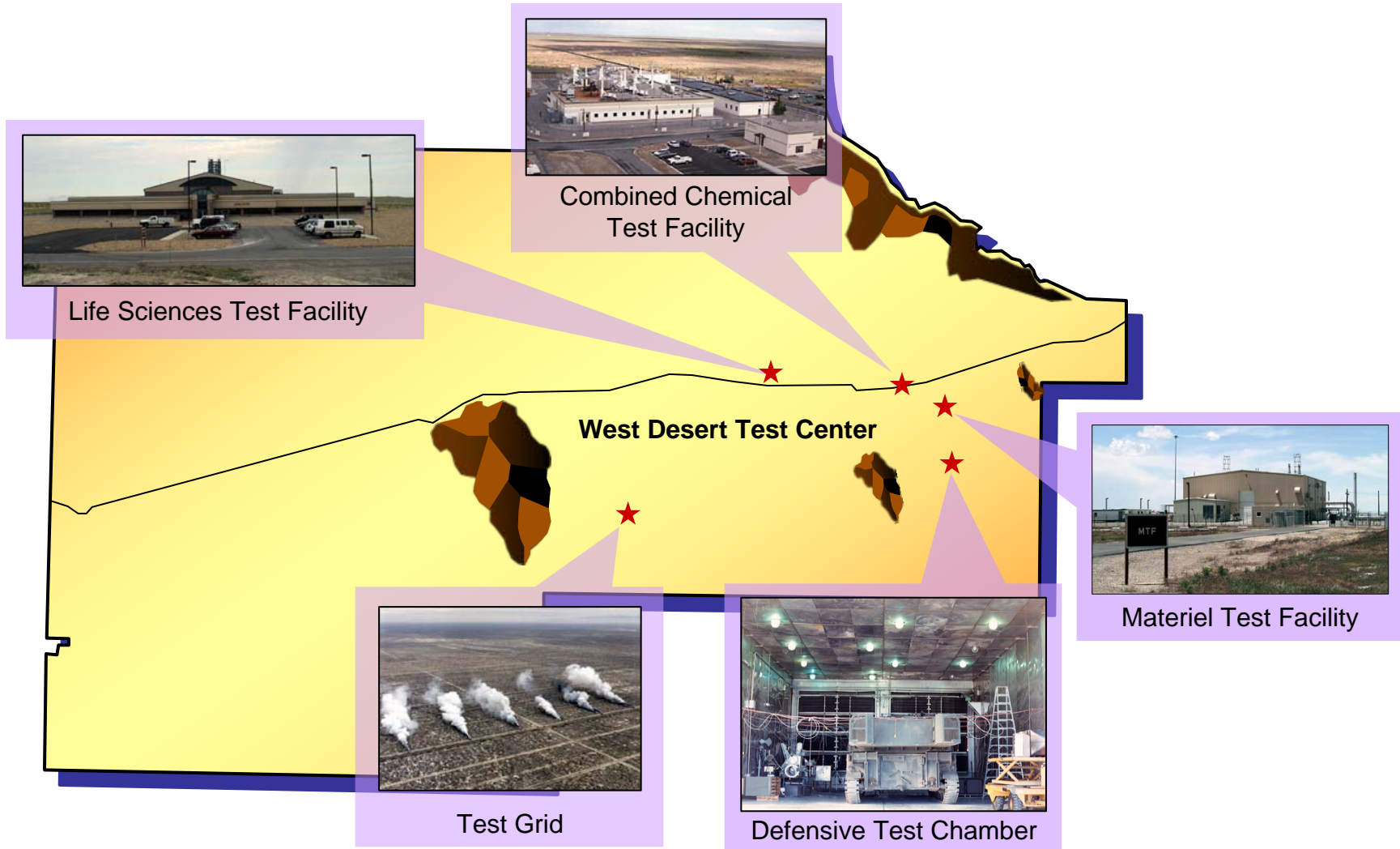
Test & Evaluation Office

# Joint, Multi-national, and Interagency CBDP T&E Partners





# Key Dugway T&E Facilities







# CBDP T&E Infrastructure



- **Hardware**
  - Chambers, instrumentation, equipment, fixtures
- **Software**
  - Documentation, methodology, source data, M&S
  - Written procedures, validation trial data
- **Personnel resources**
  - intellectual capital



Unclassified

# Multi-Service Testing Considerations



- **Common set of standards and processes**
  - Each Service has its own policy and procedures
  - MOA for MOT&E
  - CBDP T&E Policy
- **Evaluation Reports**
  - Combined with inputs from all Services, Lead OTA coordinates
  - Dissenting evaluations must be included
- **Test Design**
  - Must accommodate missions of each Service
  - Lead OTA coordinates
- **Staffing TEMPs and Test Plans**
  - Concurrence from each participating OTA



# Ensuring Test Adequacy



- Provide test environment with realistic threat portrayal
  - Get the assets for a realistic force laydown
- Chamber DT/OT critical to Operational Evaluation
  - Key performance aspects identified using BWA/CWA in chamber
  - Field performance verified using simulants
  - Accurate correlation between simulant and agent critical to credible evaluation
- Environmental Diversity
  - Simulant dissemination is strictly controlled by EPA restricting test locations
  - M&S is critical to expanding test envelope

***Operational Testing Under Battlefield Type Conditions Using Warfighters Critical to Evaluation***



# My Focus as the CBDP T&E Executive



## *Support Program Development and Fielding*

- Ensure Developmental and Operational testing is robust
  - Systems under test satisfy requirements
  - System supports mission success
  - Provide Decision Makers with the information they need to make Milestone and Fielding Decisions
- Ensure Warfighter gets right information to accomplish mission
  - Evaluation report should clearly state limitations and impact to employment in the field

***Value of testing to Warfighter = Demonstrated Mission Success in Operationally Realistic Setting***



# Backup



**Active Standoff Chamber (ASC) and Joint Ambient Breeze Tunnel (JABT)**

*Test & Evaluation Office*



---

**JABT Exterior**

*Test & Evaluation Office*

---



---

## JABT Interior

*Test & Evaluation Office*

---





---

**ASC Exterior**

*Test & Evaluation Office*

---



ASC Interior

Unclassified



JBAIDS Test Support Trailers



BSL3 Lab

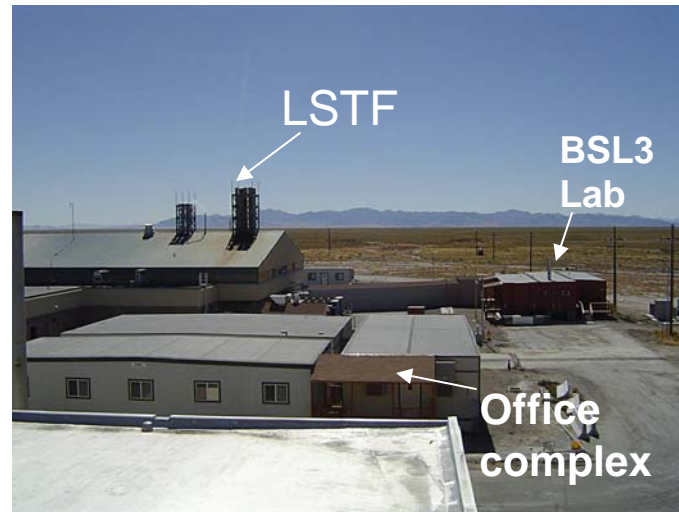


JBAIDS BLS2 Lab

Work load is expanding faster than facilities



Offices for 45 personnel



Unclassified



Field Support Trailer