

ATEC



Redstone Test Center Overview

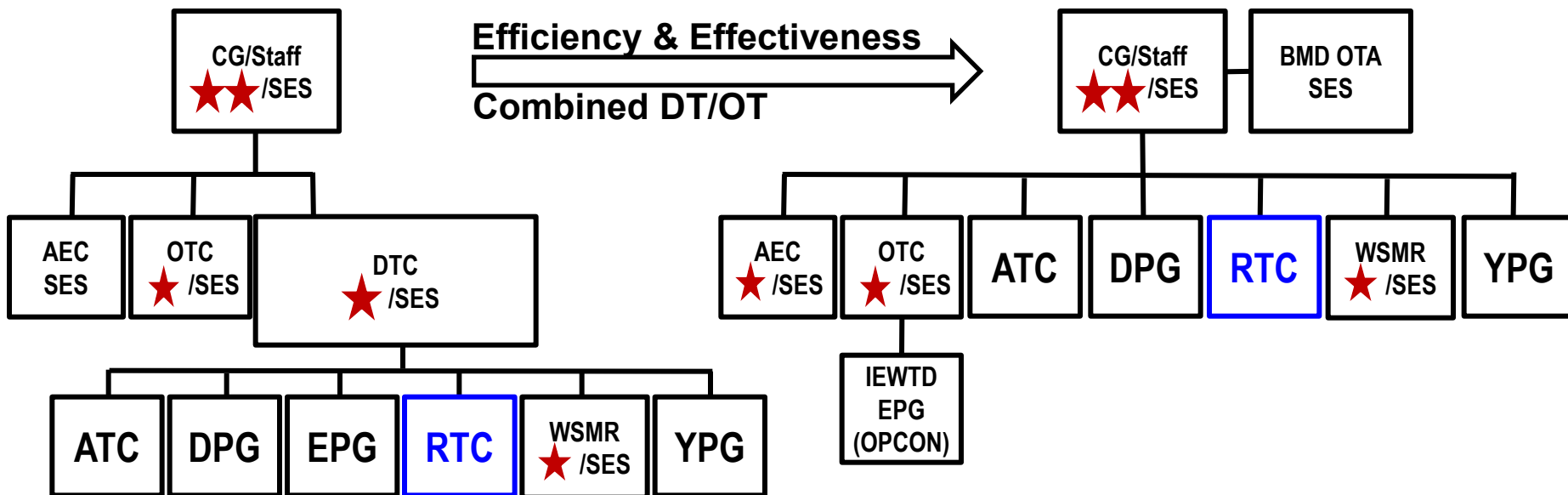
COL STEVE KIHARA
COMMANDER, RTC
14 OCTOBER 2011

Army Proven
Battle Ready

UNCLASSIFIED



U S Army Test and Evaluation Command REORGANIZATION



*ATEC: Army Test Evaluation Command
DTC: Developmental Test Command
OTC: Operational Test Command
AEC: Army Evaluation Center
BMD: Ballistic Missile Defense
OTA: Operational Test Agency*

*IEWTD: Intelligence Electronic
Warfare Test Directorate*

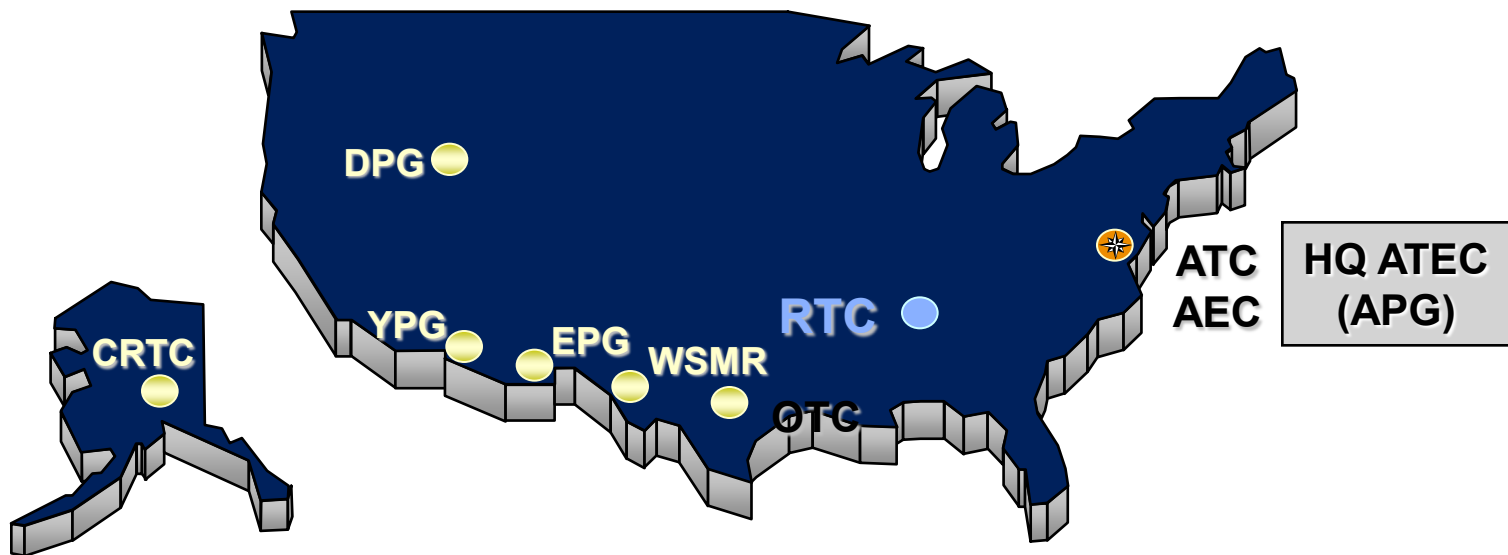
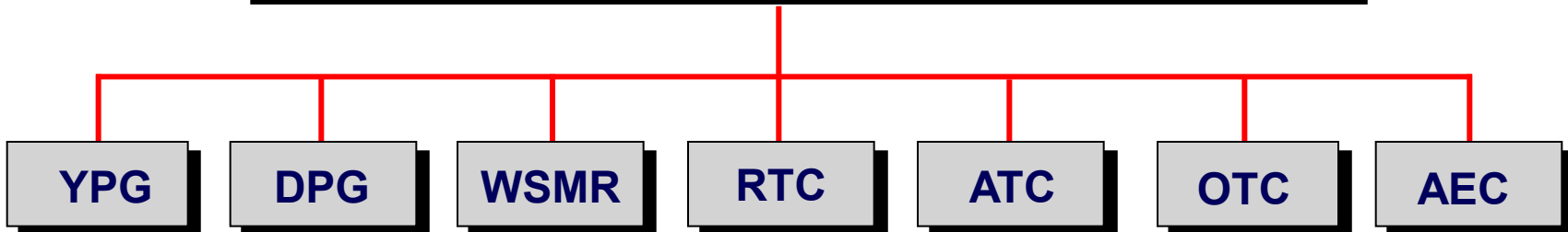
*ATC: Aberdeen Test Center
DPG: Dugway Proving Ground
EPG: Electronic Proving Ground
RTC: Redstone Test Center
WSMR: White Sands Missile Range
YPG: Yuma Proving Ground*



U S Army Test and Evaluation Command



Army Test and Evaluation Command (ATEC)



RTC Mission

Provide Technical Expertise, State-of-the-Art Facilities, and Capabilities to Plan, Conduct, Analyze, and Report the Results of Tests on Missile and Aviation Systems, Sensors, Subsystems and Components



World Class Test Center for Aviation, Missile & Sensor Testing



2005 BRAC Redstone Test Center



Provisional Stand-Up of RTC (P) – 20 Aug 2009
Establishment of RTC – 29 Mar 2011
BRAC Complete – 27 May 2011!



Specified Tasks



- **MISSION**
 - 819 Active Programs
 - 60 Acq Evaluated
 - 19 Rapid Initiative
- **BRAC**
 - Build the Organizational Structure
 - Best of Breed
 - Merging of Cultures into RTC
- **COMMUNITY**
 - Aviation/Missile/Army Enterprise
 - Information Flow
 - Officer Assignments
 - Aircraft Assets
 - USNTPS



BRAC Stats (FTR-HUA)



- **PERSONNEL**
 - 80% of all DAC's moved (9% retired/11% declined TOF)
- **EQUIPMENT**
 - 19, 598 lines of property (1.2 M lbs). Turned in 41%
- **OPTEMPO**
 - 6000+ Flight Hours (60 aircraft)
- **SAFETY**
 - Class D: 4 to 1
 - Class E: 23 to 3
 - Non recordable Aviation incidents: 20-10
- **BRAC EXSUM 27 May 11**
- **\$22M in efficiencies**
- **Rotary Wing Center**



RTC Resources



- **Highly Reimbursable Organization--Not an MRTFB**
- **Over 1200 Highly Skilled Personnel**
- **60 Aircraft (representing all design series in Army fleet)**
- **14,000 Acres of Test Ranges**
- **Over ~1.2 M Square Feet of Test Facility Space**

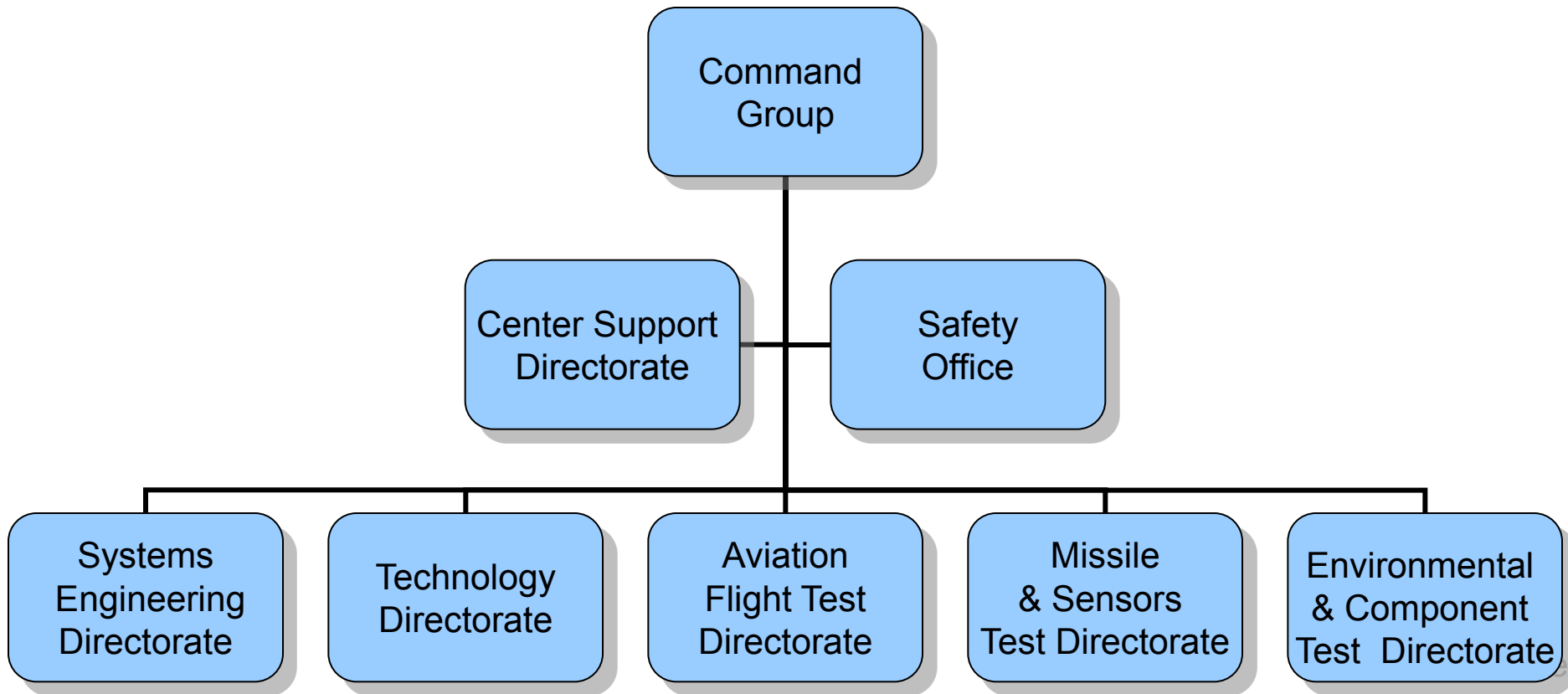
MRTFB: Major Range and Test Facility Base

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US Army Redstone Test Center

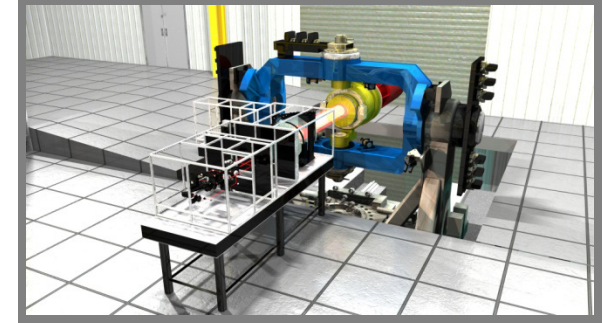
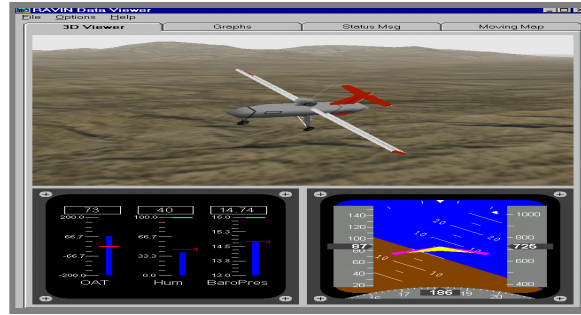
RTC Organization





Missile Systems Division Aviation & Sensors Division

- *Maintains center-level status of all test operations.*
- *Enables horizontal coordination among test directorates.*
- *Staffed with highly-qualified and experienced engineers knowledgeable in test center capabilities and weapons systems.*
- *Applies a systems approach to testing to ensure cost, schedule and test requirements are met.*
- *Customer interface for defining test requirements and developing test strategies.*



- **Strategic test technology planning and investments**
- **Integrated test technology approach across the Center**
- **Establish, integrate, and maintain secure information technology systems for the Center**
- **Ensure proper establishment and development of required senior technologists**

Information Management Division

- **Manage all IT Services**
- **Information Assurance Compliance**
- **High Performance Computer (HPC)**
- **Network Architecture**

Advanced Technology Office

- **Senior Technologists: (Man in Job) Advanced Sensors, Structural, Dynamics**
- **Technologists: Electromagnetics, Hardware in the Loop, Structural Modeling Instrumentation**
- **Rotational Assignments: Systems of Systems Distributed Testing Advanced Instrumentation**
US Army Redstone Test Center



- *Aircraft Performance*
- *Handling Qualities*
- *Aircraft Survivability Testing*
- *Aircraft Survivability Equipment*
- *Human Factors Engineering*
- *Structural Testing*
- *Icing – Natural & Artificial*
- *Targeting/Pilotage Sensors*
- *Software Regression*
- *Navigation/Communication/Avionics*
- *Interoperability*
- *UAS and Manned-Unmanned (MUM) Teaming*

- Attack/Reconnaissance Test Division**
- Cargo/Utility/Fixed-Wing Test Division**
- Integrated Systems Test Division**
- Special Projects Test Division**
- Systems Integration and Simulation Division**



Laboratory Sensors Test Division

- *State-of-the-Art Sensor Labs*
- *Testing of Forward-Looking Infrared, Degraded Visual Optics, and Day TV and LASER Range Finder Systems and Subsystems*
- *Target Acquisition Sensor Measurements at Environmental Temperature Extremes*



Field Sensors Test Division

- *Seeker/Sensor/Designator Field Performance, Test Area 3*
- *Dirty Battlefield / Obscurant Environments*
- *Signature Measurements; Mobile Data Acquisition*



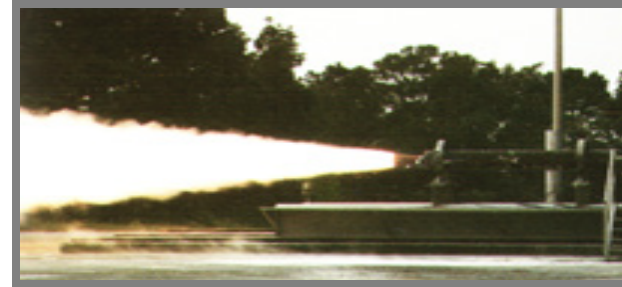
Missile Flight Test Division

- *Conduct Small Missile & Rocket Flight Testing at Test Areas 1 and 6*
- *Warhead Performance*
- *Hit Avoidance/Active Protection Systems (APS)*
- *Expertise in custom instrumentation design and miniaturization*



Telemetry & Data Management Division

- *Telemetry Instrumentation Design & Fabrication*
- *Mobile Data Acquisition & Reporting*
- *Expertise in Miniature High Data Rate Applications*



Propulsion Test Division

- *Conduct Missile/Rocket Motor Static Firings (Solid & Liquid Fuels), Test Area 5*
- *Insensitive Munitions & Hazard Classification Testing of Rocket Motors & Warheads, Test Area 4*
- *Conduct Aviation Propulsion System Testing with Emphasis on Turbo-Shaft Engines and Aviation Environments.*

Environmental & Component Test Directorate

(1 OF 2)



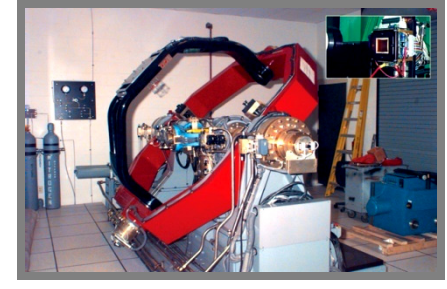
Electromagnetic Environmental Effects (E3) Test Division

- *Full Spectrum of E3 Testing for Missiles and Aviation Systems*
- *Extensive laboratory for Electro Magnetic Interference/Compatibility/Vulnerability*
- *Near & Direct Strike Lightning (Hazardous)*



Component and Surveillance Test Division

- *Testing of Mechanical Components*
- *Worldwide Surveillance Testing of Missiles*
- *Supports Missile & Aviation Parts Supply and Sustainment*

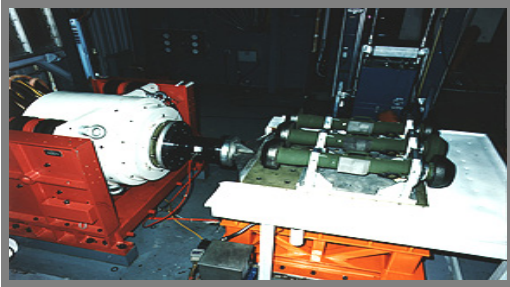


Subsystem Test and Analysis Division

- *Testing of Electrical / Electronic Components and Subsystems*
- *Functional Test Set Design & Fabrication*
- *Extensive Distributed Test Capability*

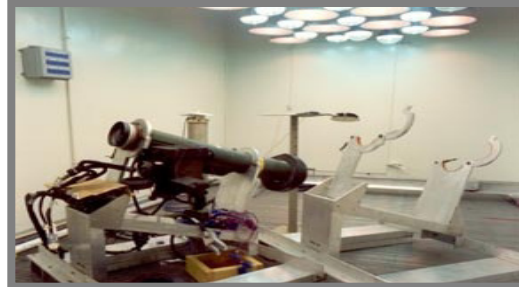
Environmental & Component Test Directorate

(2 OF 2)



Dynamic Test Division

- ***Vibration/Shock Testing of Weapon Systems and Components***
- ***Field Dynamic Data Acquisition & Laboratory Profile Development***
- ***Acoustic Testing and Modal Analysis***



Climatic Test Division

- ***MIL-STD-810 Testing of Weapon Systems and Components***
- ***Temperature Extremes, Altitude, Humidity, Sand/Dust, Salt/Fog, Etc.***
- ***Non-Destructive Test Capabilities***
- ***Tactical Missile Disassembly and Modification***

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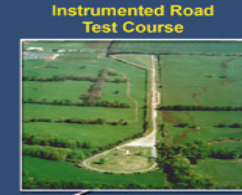
J-PRIMES Test Office

- ***Communications/Navigation and Subsystem Noise Floor***
- ***Electromagnetic Interference/Compatibility/Vulnerability***
- ***Threat Emitter Simulation***
- ***Radar Target Generation***

US Army Redstone Test Center



Key RTC Test Areas, Ranges, Facilities, Shared Facilities, Etc.



TA-3

TA-3 (5.0 Km)

TA-7

Bldg. 4500+



TA-6 (3.7 Km)

TA-10



TA-1 (500 m - 8 Km)

Bldg. 7290+



TA-4

E3

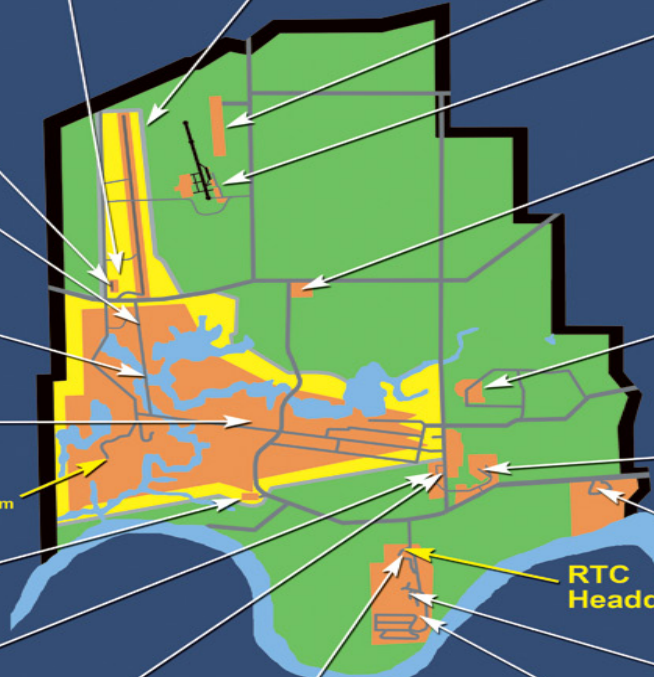


TA-2

FAAD Site

On TA-5

TA-5



Programs Supported



Missiles

Joint Attack Munitions Systems
Lower Tier-PEO Missiles & Space
Precision Fires Rocket & Missiles System
Cruise Missile Defense Systems
Close Combat Weapon System
Ground-Based Midcourse Defense
THAAD
Targets and Countermeasures
Armed Scout Helicopter
Apache Attack Helicopter
Unmanned Aviation Systems
Aviation and Missile RDEC
AMCOM Integrated Materiel Mgmt Center
NASA-Marshall Space Flight Center
Missile & Space Intelligence Center
Targets Management Office
Private Industry



Aviation

Joint Attack Munitions Systems
Armed Scout Helicopter
Apache Attack Helicopter
Cargo Helicopter
Utility Helicopter
Unmanned Aviation Systems
Aviation Systems
Technology Applications Program
Office
Aviation and Missile RDEC
Private Industry
Aviation Survivability Equipment

Others

PEO – Soldier
PM Close Combat Systems
PM-ITTS (PEO STRI)
PEO IEWS
PEO Integration
US Navy/USMC/USAF

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Sensors

Joint Attack Munitions Systems
Close Combat Weapon System
Integrated Air & Missile Defense
Armed Scout Helicopter
Apache Attack Helicopter
Cargo Helicopter
Utility Helicopter
Unmanned Aviation Systems
Aviation Systems
Aviation and Missile RDEC
Missile & Space Intelligence Center
Threat Simulator Mgmt Office
Targets Management Office
Private Industry
PM NV/RSTA

US Army Redstone Test Center

Supporting the Warfighter



Aircraft Survivability



Rapid Acquisition Programs



Continuous rotations of experimental test pilots in support of Combat Aviation Brigades and First Unit Equipped, Pipeline back to PEO/AMC/ATEC



Stockpile Reliability Program, setting up and supporting in-theater forward test and repair capability.



QUESTIONS