

## 46 TEST WING



### MISSION

The 46 Test Wing is the premier test and evaluation center for Air Force air-delivered weapons, navigation/guidance systems, and Command and Control (C2) systems. The Wing provides expert evaluation and validation of the performance of systems throughout the design, development, acquisition, and sustainment process to ensure the warfighter has technologically superior, reliable, maintainable, sustainable, and safe systems.

The 46 Test Wing performs developmental test and evaluation (DT&E) across the complete system life cycle for a wide variety of customers including: Air Force Systems Program Offices, the Air Force Research Laboratory, logistics and product centers; major commands (MAJCOMs); other DoD services and US government agencies (Department of Transportation, NASA, etc.); foreign military sales (FMS); and private industry.

The 46 Test Wing employs a highly skilled and trained workforce of more than 3,450 people dedicated to ensuring DoD systems will continue to be second to none. The full spectrum of the Wing's T&E capabilities provide a rich and diverse test environment capable of meeting the most demanding test requirements, to include:

- Nonnuclear munitions testing – to include ballistics, guidance and terminal effects
- Munitions ground testing -- including modeling, simulation and analysis
- Munitions seeker performance evaluation -- including EO, IR, MMW, RF, laser sensors
- Aircraft stores integration SEEK EAGLE certification recommendations
- Command, control and information testing
- Computer network attack
- Aircraft systems and electronic countermeasure evaluation
- Munitions and aircraft navigation and guidance systems

Radar target signatures -- including very low observables and antenna pattern measurements  
Unmanned aerial vehicles  
Base intrusion and interdiction systems

The Wing also operates, maintains, and manages the Eglin AFB land and water ranges. The Eglin Gulf Test Range (GTR) provides approximately 120,000 square miles of overwater airspace, covering the eastern third of the Gulf of Mexico from the Florida panhandle to the Florida Keys. The land range covers 724 square miles and contains 51 specific test and training areas, including an approved depleted uranium test range and the only qualified air-to-ground supersonic range east of the Mississippi River. To ensure its ability to meet the future testing requirements the Test Wing has developed a comprehensive technology infrastructure to support its DT&E mission.

The Wing's advanced facilities include:

Guided Weapons Evaluation Facility (GWEF)

Joint Preflight Integration of Munitions and Electronic Systems (J-PRIMES) Test Facility

McKinley Climatic Laboratory

Santa Rosa Island Tower

Large footprint weapon overwater test and training area – Gulf of Mexico

Instrumented A-10C, AT-38B, F-15C, F-15E, F-16CG, F-16CJ, UH-1N, C-130

Armament/C2 Systems Test Environment

Multi-spectral Test and Training Environment (MSTTE)

Holloman High-Speed Test Track (HHSTT)

7 Test Squadron's Guidance Facility

National Radar Cross-Section Test Facility (NRTF)

The 46 Test Wing is the test and evaluation center for Air Force air-delivered weapons, navigation and guidance systems, Command and Control (C2) systems, and Air Force Special Operations Command systems. The Eglin Gulf Test and Training Range provides approximately 130,000 square miles of over water airspace. The land range covers 724 square miles and contains 51 specific test and training areas, including an approved depleted uranium test range and the only qualified air-to ground supersonic range east of the Mississippi River.

The Armament/C2 Systems Test Environment consists of all the precision instrumentation for data collection, microwave systems for data transfer, and radio and land communication networks to support test and evaluation.

The Multispectral Test and Training Environment (MSTTE), used in conjunction with the Armament Systems Test and Training Environment (ASTTE), provides a real-world multispectral (electro-optical, infrared, millimeter wave, radio frequency) test environment for munitions and weapons systems and C2 developmental testing and evaluation and operational test and evaluation. The MSTTE also supports electronic combat test and training as well as live fire tests. The ASTTE test environment has a Department of Defense – unique land-sea interface

with contrasting background and clutter environments for munitions seeker testing. The unique McKinley Climatic Laboratory simulates rain, snow, ice, icing, dust, sand, salt, fog, humidity, and solar radiation in six chambers. The main test chamber will hold all operational aircraft, including the C-5. The

Guided Weapons Evaluation Facility (GWEF) provides test support for developing and evaluating precision-guided weapons in simulated “real-world” environments. The Joint Preflight Integration of Munitions and Electronic Systems (J-PRIMES) Test Facility performs installed systems testing of air-to-air and air-to-surface munitions and electronic systems on full-scale aircraft and land vehicles. The main chamber will hold all current U.S. Air Force and U.S. Navy fighter aircraft as well as U.S. Army rotorcraft with the rotors extended.

The GWEF and J-PRIMES facilities can be linked in real-time (fiber optic) to allow early aircraft systems to munitions data transfer testing. The Test Wing, through the Weather Squadron, is responsible for all operational and staff meteorological support to Eglin. The Weather Squadron supports testing, training, and operations for the Test Wing, 96th Air Base Wing, 53rd Wing, 33rd Fighter Wing, 919th Special Operations Wing, AAC, 20th Space Control Squadron, and the DoD’s Explosive Ordnance Disposal School.

The Test Group at Holloman AFB, New Mexico, provides a unique combination of test and evaluation services and state-of-the-art measurement and support facilities for: guidance and navigation testing, sled track testing, radar cross-section testing, flight testing, and White Sands Missile Range liaison. Their Guidance Facility is the DoD center of expertise for the test and evaluation of Inertial Navigation System (INS), Global Positioning System (GPS), GPS-Jamming, and blended INS/GPS components and systems in both benign and electronic warfare environments.

Holloman’s High-Speed Test Track is the lead facility for all supersonic tracks and is the track center of expertise for aircraft escapes system testing, full scale lethality testing, electronic countermeasure systems, explosive blast effects, environmental erosion, dispenser testing, and hypersonic environmental testing. The National Radar Cross-Section Test Facility (NRTF) is a one-of-a-kind facility combining the best of monostatic and bi-static RCS measurements.

Consolidation efforts at the NRTF have set the standard for industrial partnering, and the completion of significant technology improvements confirms the NRTF’s future in the ever changing world of stealth.

The Air Force SEEK EAGLE Office (AFSEO) was chartered by the Secretary of the Air Force in December 1987. The mission of the AFSEO is to provide the United States Air Force increased combat capability through central management of the aircraft-stores certification process and provide in-house engineering and operations research capabilities. Additionally, the AFSEO is required to ensure the future viability of the aircraft-stores organic in-house capability with the insertion of evolving technologies.

The Air Force SEEK EAGLE Office utilizes three main avenues for accomplishing its mission. First, it supports the store developmental, suspension equipment, and aircraft Systems Groups in ensuring their equipment will integrate with their production counterparts. Since this is a support function, it is paid for by the respective Systems Groups.

Secondly, AFSEO is responsible for recommending safe carriage and employment limits for production stores on production aircraft, minimizing the risk of potential inflight mishaps. Finally, AFSEO is responsible for ensuring that a capability exists within the Air Force to make these recommendations. Such a capability has existed within the U.S. Air Force for more than 35 years. The Air Force SEEK EAGLE Office maintains this capability through the utilization and development of digital modeling and simulation, ground testing, flight testing and the continual reinvestment in its intellectual capital.

The Landing Gear Test Facility, located at Wright-Patterson Air Force Base, Ohio, is equipped to perform functional tests on landing gear components and assemblies. As the only facility of its kind within DoD, it is devoted primarily but not exclusively to the support of military systems. The Aerospace Vehicle Survivability Facility accomplishes programs to predict and assess the magnitude of combat damage, increase aerospace vehicle survival despite combat damage, and achieve rapid repair of combat damage.

#### **LINEAGE**

46 Bombardment Group (Light), established, 20 Nov 1940  
Activated, 15 Jan 1941  
Disestablished, 1 May 1944

46 Aerospace Defense Wing, established, 10 Feb 1975  
Activated, 15 Mar 1975  
Inactivated, 1 Apr 1983

46 Bombardment Group (Light), reestablished and consolidated with the 46 Aerospace Defense Wing, 31 Jan 1984

Redesignated 46 Test Wing, 24 Sep 1992  
Activated, 1 Oct 1992

#### **STATIONS**

Savannah, GA, 15 Jan 1941  
Bowman Field, KY, 20 May 1941  
Barksdale Field, LA, 2 Feb 1942  
Galveston Muni Aprt, TX, 1 Apr 1942  
Blythe AAB, CA, 23 May 1942  
Will Rogers AAFld, OK, 10 Nov 1942  
Drew Field, FL, 9 Oct 1943  
Morris Field, NC, 6 Nov 1943-1 May 1944

Peterson Field (later, AFB), CO, 15 Mar 1975-1 Apr 1983  
Eglin AFB, FL, 1 Oct 1992

### **ASSIGNMENTS**

Air Force Combat Command, 15 Jan 1941  
V Air Support Command (later, Ninth Air Force), 1 Sep 1941  
Third Air Force, 18 Apr 1942  
XII Bomber Command, 2 May 1942  
III Bomber Command, 8 May 1942  
Second Air Force, 8 Jul 1942  
I Ground Air Support Command, c. 10 Nov 1942  
III Air Support Command, 25 Jan 1943  
III Bomber Command, 6 Aug 1943-1 May 1944  
Aerospace Defense Command, 15 Mar 1975  
4 Air Division, 1 Oct 1979-1 Apr 1983  
Air Force Development Test Center (later, Air Armament Center), 1 Oct 1992

### **WEAPON SYSTEMS**

A-20, 1941-1944  
B-25, 1944  
C-118, 1975  
C-131, 1975  
T-29, 1975  
T-33, 1975-1979  
T-37, 1975-1979  
T-39, 1975  
U-4, 1975-1979  
RF-4, 1992-1993  
F-15, 1992  
F-16, 1992  
F-111, 1992-1995  
UH-1, 1992  
C-130, 1992  
A-10, 1994

### **COMMANDERS**

Maj Guy L. McNeil, 15 Jan 1941  
Maj Otto C. George, 18 Apr 1941  
Col Richard H. Lee, 9 May 1941  
Lt Col Robert D. Gapen, 1 Nov 1942  
Lt Col Martin P. Crabtree, 11 Apr 1943  
Lt Col Robert V. DeShazo, 21 Jul 1943  
Col Harold L. Mace, 13 Sep 1943  
Lt Col Robert V. DeShazo, 21 Oct 1943-1 May 1944

Col Donald J. Parsons, 15 Mar 1975  
Col Edward L. Ellis, 12 Aug 1976  
Col Alfred H. Uhalt Jr., 2 Mar 1977  
Col William G. Dolan Jr., 6 Aug 1979  
Col Glenn A. Griffith, 6 Feb 1981-1 Apr 1983  
Col Elton T. Pollock, 1 Oct 1992  
Col Harold T Strittmatter, 29 Aug 1994  
Col Michael D. Shackelford, 11 Aug 1997  
Col David J. Eichhorn, 3 Aug 1999  
Col Dennis F. Sager, 10 Jul 2001  
Col Robert C. Nolan II, 2 Jul 2003  
Col Joseph E. Zeis Jr., 26 May 05  
Col Gary L. Plumb, 19 Jun 2007

## **HONORS**

### **Service Streamers**

#### **Campaign Streamers**

World War II

Antisubmarine, American Theater

#### **Armed Forces Expeditionary Streamers**

#### **Decorations**

Air Force Outstanding Unit Awards

1 Jul 1975-30 Jun 1977

1 Jul 1977-30 Jun 1979

[1 Oct]-31 Dec 1992

1 Jan-31 Dec 1993

1 Jan-31 Dec 1994

1 Jan-31 Dec 1995

1 Jan-31 Dec 1997

1 Jan 1998-31 Dec 1999

1 Jan-31 Dec 2000

1 Jan-31 Dec 2001

1 Jan-31 Dec 2002

1 Jan-31 Dec 2003

1 Jan-31 Dec 2004

1 Jan-31 Dec 2005

1 Jan-31 Dec 2006

## **EMBLEM**



Azure, a bend inverted within a diminished bordure or. Significance: Ultramarine blue and Air Force yellow are the Air Force colors. Blue alludes to the sky, the primary theater of Air Force operations. Yellow refers to the sun and the excellence required of Air Force personnel. The inverted bend suggests a cloud formation and represents the sky, the area where the wing's missions are conducted. (Approved, 9 Dec 1993, replaced emblems approved, 14 Jul 1942 and 25 Mar 1975)

## **MOTTO**

## **OPERATIONS**

Trained with A-20's and participated in maneuvers and flew some antisubmarine patrols over the Gulf of Mexico early in 1942. It later served as an operational training unit until late in 1943, and then became a replacement training unit until 1 May 1944.

Replacing the 4600th Air Base Wing in Mar 1975, it took over the mission of administering facilities of North American Air Defense Command (NORAD), Air Defense Command (ADC), and Army Air Defense Command (ARADCOM) located on Ent AFB, Peterson Field (later, AFB), and Cheyenne Mountain Complex, plus various other nearby off-base facilities. Although the provision of administrative and logistical support was the wing's primary mission, its flying training squadron served NORAD and ADC mission requirements and provided flying training for cadets at the USAF Academy until 1 Oct 1979.

The 46<sup>th</sup> replaced the 32 Test Wing at Eglin AFB, FL in Oct 1992.

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DEPARTMENT OF THE AIR FORCE ORGANIZATIONAL HISTORIES

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Sources

Air Force Historical Research Agency, U.S. Air Force, Maxwell AFB, Alabama.

The Institute of Heraldry. U.S. Army. Fort Belvoir, Virginia.