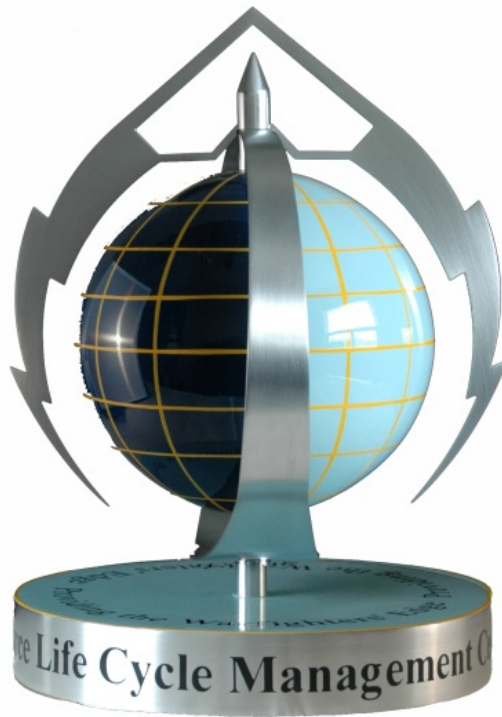




Air Force Life Cycle Management Center:  
Integrating the Acquisition and  
Sustainment Enterprise



Air Force Life Cycle Management Center History Office  
Wright-Patterson Air Force Base, Ohio  
2020

## TABLE OF CONTENTS

The Wright Brothers Lead the Way .....	1
McCook Field: A Foundation Is Established .....	2
A New Home: Wright Field .....	4
World War II Reorganization and Expansion .....	5
A New Air Force Brings Specialized Commands and Product Centers .....	7
Post-Cold War Reform and Consolidation.....	8
A Five-Center Construct .....	10
A Center for Life Cycle Management.....	11
Air Force Life Cycle Management Center Activates.....	11
Conclusion.....	18
APPENDICES	
A. AFLCMC Lineage and Honors .....	20
B. AFLCMC Commanders .....	21
C. AFLCMC Emblem and Heraldic Device .....	22
D. AFLCMC Assigned Personnel.....	24
E. AFLCMC Units 2012-2016.....	25
F. AFLCMC Unit Locations 2016 .....	29

# AIR FORCE LIFE CYCLE MANAGEMENT CENTER:

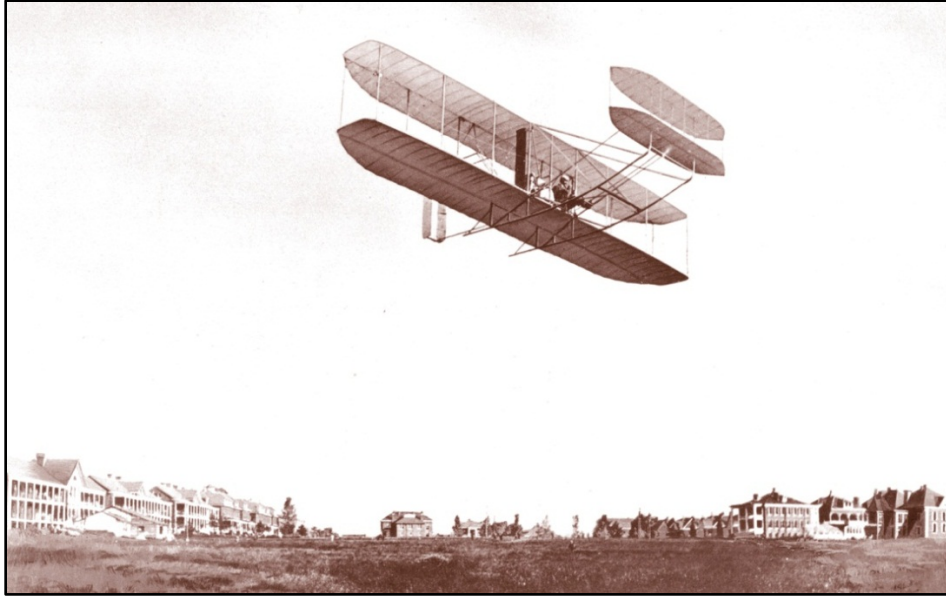
## Integrating the Acquisition and Product Support Enterprise

### The Wright Brothers Lead the Way

The legacy of the Air Force Life Cycle Management Center (AFLCMC) began with the pioneering work of Orville and Wilbur Wright from 1899 to 1903 that enabled them to achieve the first manned, powered flight. After their success at Kitty Hawk, they returned home to Dayton, Ohio, where in 1904 and 1905 they perfected their flying skills while turning the *Wright Flyer* into the first practical airplane capable of fully-controlled flight. They accomplished this work at a site known as the Huffman Prairie Flying Field, now a part of Wright-Patterson Air Force Base where AFLCMC is headquartered.



In 1907, the Aeronautical Division was established within the Office of the Chief Signal Officer of the Army and put in charge “of all matters pertaining to military ballooning, air machines, and all kindred subjects on hand.” The Signal Corps fleet consisted of two balloons and one dirigible. Following Orville Wright’s successful test flight of an aircraft at Fort Meyer, Virginia, the Army Signal Corps took delivery on August 2, 1909 of Signal Corps Airplane No. 1 at a total cost of \$30,000. (Signal Corps Specification, No. 486). Through their research, development, production, and logistics, the Wrights pioneered the aerospace system life cycle management process, which the Signal Corps acquired along with Airplane No. 1.



### **McCook Field: A Foundation Is Established**

**T**he outbreak of World War I found the United States ill-prepared to assist the Allied Powers in the air war. In July 1914 the Army Signal Corps Aviation Section, the successor to the Aeronautical Division, had 30 aircraft and 40 pilots. By April 1917, when the United States entered the war, the Aviation Section had 200 airplanes—none were fit for combat—and fewer than 1,200 men assigned. By the time of the November 11, 1918 Armistice, the 45 American Expeditionary Force (AEF) squadrons had 740 airplanes equipped with the latest armament, 12 of them flying American built planes.



**Engineering Division, McCook Field**



To meet wartime demands, the Signal Corps sought a new location for construction of a temporary experimental engineering field where all Army aircraft engineering and procurement functions could be consolidated. A site north of downtown Dayton, Ohio, was selected and construction of McCook Field began in October 1917. The field soon became home to the Signal Corps (later Air Service) Airplane Engineering Department.



**McCook Field**

Over the next decade, the Airplane Engineering Department (renamed the Airplane Engineering Division) served as the center of all Army aviation research and development.



**McCook Field Staff**

clothing and other improvements such as closed cockpits, heated and pressurized

cabins, oxygen systems, the concept of the electric ignition system, as well as the invention of anti-knock fuels. They worked on improving navigational aids, weather forecasting techniques,

propellers, aerial photography, and the design of landing and wing lights for night flying. In short, they were engaged in the research, development, and acquisition of everything related to flying.

In 1925, the Engineering Division's role shifted from aircraft design and construction to acquiring and evaluating prototype systems submitted by commercial aircraft companies. The transition to commercial suppliers forced manufacturers to compete with each other to produce quality aircraft. This change freed McCook's engineers to concentrate on developing standards unique to military aircraft, reviewing designs, modifying and testing procured machines, and developing ancillary equipment to enhance military aircraft.

## A New Home: Wright Field

In 1926, the Engineering Division and the Field Service Section were combined under the newly established Army Air Corps to form the Materiel Division, which was given responsibility for aeronautical research, procurement, supply, and maintenance. The

expanding Materiel Division required better quarters than the temporary facilities and limited runway available at McCook Field and the search for a new location began. With Dayton facing the threatened loss of McCook Field's operations, John H. Patterson, President of the National Cash Register Corporation in Dayton, initiated a local campaign to raise money to purchase a tract of land large enough for a new air field. A coalition of prominent Dayton citizens and businessmen conducted a campaign that raised \$425,000 in two days, enough to purchase 4,520 acres east of Dayton,



including Wilbur Wright Field (a flying field already leased by the Air Service which included the Huffman Prairie). In August 1924, the Air Service accepted Dayton's gift and agreed to build a new field on the site.

Wright Field was officially dedicated on October 12, 1927 and the McCook Field laboratories and engineering shops were moved to the new home of the Materiel Division. Wright Field's facilities included a main laboratory, a final assembly hangar and adjacent shops, a dynamometer laboratory, wind tunnels, propeller test facilities, an airship hangar, an armament range, a foundry, and other supporting facilities.

The Wright Field staff began acquiring aircraft designed to fulfill specific mission roles. The first production attack, cargo, and bomber aircraft were soon being delivered. Meanwhile, Wright Field's engineers and





scientists developed navigation and communications equipment, cockpit instrumentation, electrically-heated flight clothing, and in-flight refueling equipment. However, Congress' continued severe underfunding of the Army Air Corps up to the eve of World War II left the service a small, poorly-equipped, and outdated force compared to the adversaries it would soon engage.



Wright Field, 1927

## World War II Reorganization and Expansion

Under the Lend-Lease Act of 1941, the Materiel Division began supplying armament, aircraft, and equipment to the European Allies. These operations expanded massively when the United States entered World War II in December 1941. The previous June, the Army Air Corps had been redesignated the Army Air Forces. In October the engineering and logistics functions, which had been combined in 1926 as the Materiel Division, were separated again and the logistics activities moved to the new Air Service Command. The Materiel Division became Materiel Command in 1942 and was given responsibility for planning, development, testing, evaluation, modification, contracting, and coordinating production for all Army aircraft deployed worldwide. Subsequent jurisdictional conflicts between Materiel and Air Service Commands resulted in the August 31, 1944 establishment of Air Technical Service Command (renamed Air Materiel Command in 1946) which once again reunited the research, development, acquisition, and logistics functions.





**Building 262, Wright-Patterson Air Force Base, was Headquarters for Air Service Command, Air Materiel Command, Air Force Logistics Command, and Air Force Materiel Command.**

The massive scope of defense work during World War II resulted in many Wright Field functions moving to new locations. Wartime work conducted by the Massachusetts Institute of Technology at Hanscom Field paved the way for Hanscom to emerge as the post-war center for the development and acquisition of electronic systems. Eglin Field, Florida, was established as a proving ground for aircraft armament. Kirtland Army Air Field in New Mexico transitioned from a flight training center in 1946 to a flight test center. It also assumed responsibility for developing aircraft modifications for weapons delivery, determining ballistic characteristics for weapons of the future, and testing and evaluating special weapons. Tinker Field in Oklahoma repaired and modified bombers and cargo planes. It also overhauled thousands of aircraft engines enroute to becoming the Air Force's premier propulsion facility. The immense volume of flight test work and the need for a secret location to test experimental aircraft drove flight testing from Wright Field to Rogers Dry Lake in Muroc, California, which later become the Air Force Flight Test Center, Edwards Air Force Base.



### **Hanscom Field**

## A New Air Force Brings Specialized Commands and Product Centers

The Air Force became an independent service in 1947. Growing involvement with research and development activities and the advent of more technologically sophisticated systems gave impetus to the new service's reassessment of the roles of research, acquisition, and logistics. In 1950 the Air Force announced the creation of a separate command for research and development. Those missions transferred from Air Materiel Command to the new Air Research and Development Command (ARDC). In 1951 ARDC placed the principal elements of engineering, the laboratories, and flight testing under the Wright Air Development Center (WADC) at Wright-Patterson Air Force Base. The following year, ARDC brought together armament development and testing in what would become the Air Force Armament Center at Eglin AFB, Florida.



During the 1950's, aeronautical development in the Air Force was the WADC mission. WADC's seven divisions (Weapons Systems, Weapons Components, Research, Aeronautics, All-Weather Flying, Flight Test, and Materiel) and 12 laboratories conducted research and development efforts through Weapon System Project Offices (WSPOs). The WSPO concept originated from

Germany's World War II missile development program, where missile designers were forced to focus on the entire system rather than simply build an airframe, then hang engines, avionics, and armament on it. This original concept evolved into the modern Air Force System Program Office (SPO).

In 1961, the Air Force announced a substantial reorganization of the systems acquisition structure. The research and development mission of the Air Research and Development Command was combined with the procurement and production mission of Air Materiel Command to form Air Force Systems Command (AFSC). The mission of AFSC and its subordinate units was to manage the research, development, and acquisition of aerospace systems. The Aeronautical Systems Division (ASD) activated at Wright-Patterson Air Force Base April 1, 1961 replaced WADC and assumed its missions. Simultaneously, the Electronic Systems Division (ESD) activated at Hanscom AFB and was tasked to consolidate management of the Air Force's electronic systems under one agency.




## Post-Cold War Reform and Consolidation

The end of the Cold War combined with a declining Soviet threat, federal budget constraints, and the high cost of modern technology triggered Air Force reassessments of its acquisition processes as well as research, development, and logistics roles. Congress also began passing substantial legislation designed to improve and increase oversight of acquisition programs. These actions generated a host of management tools and initiatives such as total quality management, activity based costing, lean aerospace initiative, integrated weapon systems management, and strategic planning to foster production of more reliable systems that could be delivered faster and cheaper. Other reforms focused on integrating all functional life cycle requirements into the development of weapon systems.

A 1986 Blue Ribbon Commission on Defense Management (Packard Commission) and the Goldwater-Nichols DoD Reorganization Act laid the groundwork for the coming reforms. A follow-on Defense Management Report directed by President George H.W. Bush outlined a path to improve weapons procurement and Pentagon management by fully implementing the Packard Commission recommendations. Accordingly, in 1990 management authority for major programs was transferred from AFSC to independent Program Executive Officers (PEOs) at the Pentagon. PEOs were established for six mission areas: space systems, strategic systems, tactical strike systems, tactical airlift systems, information support systems, and command, control, and communications systems. Product center system program managers reported directly to their PEOs at the Pentagon, bypassing both the system divisions and the AFSC commander. AFSC, however, retained program management authority for minor programs.

On January 10, 1991, the Secretary of the Air Force announced that Air Force Systems Command and Air Force Logistics Command would inactivate and Air Force Materiel Command (AFMC) would be established and activated at Wright-Patterson AFB, Ohio, on July 1, 1992. This announcement started the first complete overhaul of Air Force materiel management since 1961.

The logo of the Air Force Materiel Command (AFMC) is a shield-shaped emblem. It features a blue background with a yellow border. In the center, there is a white gear with a red star in the middle, surrounded by yellow wings. Below the shield, a yellow banner contains the text "AIR FORCE MATERIEL COMMAND" in blue capital letters.

AFMC did more than reunify the research, development, procurement, and sustainment missions within a single major command. It developed a new culture by drawing upon the talents, capabilities, and best practices of both AFSC and AFLC while incorporating modern management concepts, tools, and processes. AFMC became responsible for the full spectrum of activities necessary to provide systems to the warfighter and to support them from “cradle to grave.” The Aeronautical Systems Division and Electronic Systems Division were re-designated as Centers. The 88th Air Base Wing, the host organization for Wright-Patterson Air Force Base, was assigned to the Aeronautical Systems Center (ASC). In 1994 ASC’s 4950th Test Wing inactivated and its operations moved to the Air Force Flight Test Center. Further restructuring came in 1997 when the Air Force Research Laboratory (AFRL) was activated. AFRL separated the research units from the product centers and consolidated the Air Force’s laboratories to reduce manpower and

more easily serve the entire Air Force rather than just their assigned product centers. The next year, the Air Force Development Test Center at Eglin AFB, Florida, became the Air Armament Center, a product center responsible for development, acquisition, testing, and fielding of all air-delivered weapons. The Human Systems Center at Brooks AFB, Texas, was also reintegrated into the Aeronautical Systems Center.

In 2003, the Air Force Chief of Staff initiated a review of the Air Force's product, logistics, and test centers to make them more recognizable and understandable to their counterparts across the Air Force. The review drove an Air Force decision to improve program accountability by consolidating its PEO portfolios around larger mission groups and relocating them to the product centers. A second decision in 2005 replaced the System Program Offices at the product centers with standard Air Force units—wings, groups, and squadrons. These units were assigned their own organic functional resources and manpower. Matrix management, the practice of detailing functional support as needed to the program offices, was eliminated. Air Force leaders believed military units would make acquisition and product centers more transparent to the operational side of the service, reduce confusion when programs moved from the acquisition to the sustainment phase, and establish better program accountability.

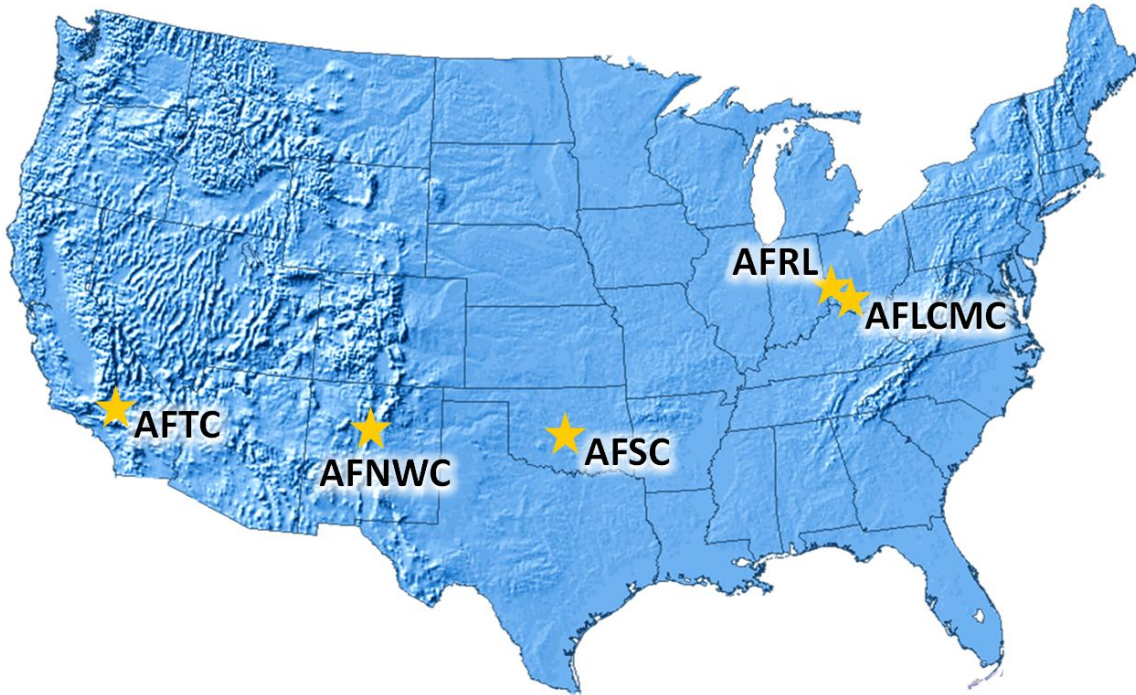
The military units soon faced new problems. Their structure prevented senior managers from quickly detailing specialists and moving personnel between program offices and units as needed. Administrative tasks and a hierarchical structure burdened commanders and slowed the flow of information and decision making. Consequently, the military unit structure was replaced in 2010 with named directorates, divisions, and branches. Smaller PEO portfolios were co-located with their product centers rather than in Washington, D.C. The PEOs, while continuing to report to the Service Acquisition Executive at the Pentagon, were also named directors of their respective product center directorates.

## **A Five-Center Construct**

**O**n June 4, 2010, the Secretary of Defense issued a memorandum challenging the military services to eliminate redundant functions and increase funding for mission functions through efficiency savings in overhead, support, and non-core mission areas.

A subsequent Air Force strategic review revealed imbalances between high priority areas that required more manpower and management overhead functions that needed to be streamlined. A DoD Resource Management Decision freezing civilian manpower at FY 2010 budget levels forced the Air Force to initiate a variety of measures to correct manpower imbalances and realign scarce resources to the most critical missions. AFMC's senior leaders decided in 2011 to attack the issue by restructuring the command's centers from twelve location-specific subordinate organizations requiring full support staffs into five mission-based, integrated life cycle centers.





The five-center construct was designed to reduce overhead costs and redundant layers of staff. Its benefits included fostering a life cycle management focus, integrating maintenance and supply chain functions, and improving the goal of presenting a single face to customers. The consolidated organizations would standardize business practices, streamline processes and decision making authority, and bring AFMC into a one mission-one commander alignment. AFMC's five centers would be the Air Force Life Cycle Management Center (AFLCMC) at Wright-Patterson AFB, Ohio; the Air Force Sustainment Center (AFSC) at Tinker Air Force Base, Oklahoma; the Air Force Test Center (AFTC) at Edwards AFB, California; the Air Force Research Laboratory (AFRL) at Wright-Patterson Air Force Base; and the Air Force Nuclear Weapons Center (AFNWC) at Kirtland AFB, New Mexico. The restructuring would eliminate over 1,000 civilian positions while preserving mission capability. The result would also unleash the full power of the system program manager and program executive officer concepts by replacing the traditional management-staff model with lead centers that oversaw multiple locations for each core mission area. Additionally, each system would have one unified program execution chain of command for oversight from conception to disposal.

## A Center for Life Cycle Management

Air Force planners conceived the Air Force Life Cycle Management Center as a mechanism to bring focused, disciplined, and integrated life cycle management to the acquisition of Air Force weapon systems. This approach would drive long-term strategic perspectives to weapon system development, procurement, and support. Planners believed that consolidating design, production, and product support decisions under a single manager would establish clear lines of authority, responsibility, and accountability for all Air Force weapon systems, increase flexibility in response to changing operational needs and optimize use of program dollars. AFLCMC would foster standard business processes across the enterprise, allowing the Center to uniformly and continuously improve its processes enterprise wide to achieve on-time and on-cost weapon procurement, fielding, and product support. AFLCMC would also present a single weapon system face to the Air Force, the other services, and the Allied and Combatant Commands to facilitate faster responses to warfighter requirements.



## Air Force Life Cycle Management Center Activates

Headquarters Air Force Life Cycle Management Center was constituted on June 18, 2012, activated on July 9, 2012 at Wright-Patterson Air Force Base, Ohio, and assigned to the Air Force Materiel Command. Lieutenant General Clyde D. Moore II was appointed as AFLCMC's first commander. The mission assigned to the new Center was to:

Develop, acquire, modernize, integrate, and support affordable and sustainable advanced aerospace, cyberspace, command, control and communications, and weapons capabilities to our warfighters (AF, joint service, allied and coalition partners) and work the priorities of the Secretary of the AF, Chief of Staff of the AF, AF Materiel Command (AFMC) Commander, and the Service Acquisition Executive. To provide dominant air, space, and cyberspace power, AFLCMC delivers affordable and sustainable war-winning capabilities to US and international partners--on time, on cost, anywhere, anytime from cradle to grave. Accomplish the Center mission through ten Program Executive Officers (PEOs) (Agile Combat Support; Armament; Battle Management; C3I and Networks; Business Enterprise Systems; Fighters and Bombers; Intelligence, Surveillance, Reconnaissance and Special Operations Forces (ISR and SOF); Mobility; Strategic Systems; and Tanker Directorates) and three program directorates (Air Force Security Assistance Cooperation, Airborne Laser, and Propulsion) at nine major geographic locations (Wright-Patterson AFB OH, Hanscom AFB MA, Eglin AFB FL, Lackland AFB TX, Robins AFB GA, Tinker AFB OK, Hill AFB UT, Kirtland

AFB NM and Gunter AFB AL), with responsibility for installation support at the 66th Air Base Group (Hanscom AFB MA) and 88th Air Base Wing (Wright-Patterson AFB OH).



For operational convenience, Lieutenant General Moore simplified the mission statement to: “Delivering affordable and sustainable war-winning capabilities to U.S. and international partners, on time, on cost, anywhere, anytime from cradle to grave.” AFLCMC was the sole center responsible for total life cycle management of all aircraft, engines, munitions, electronics, and cyber systems. It handled the acquisition and initial fielding of new systems and upgrades, developed new materiel solutions, and transitioned interesting technologies into militarily useful capabilities. It was responsible for ensuring the systems were sustainable, while extending and improving the capabilities of systems that were already fielded. AFLCMC also executed foreign military sales of aircraft and other defense-related equipment, while building security assistance relationships with foreign partner nation air forces.

AFLCMC would consolidate PEO portfolios under a single center. Wright-Patterson Air Force Base was selected as the location for Headquarters, Air Force Life Cycle Management Center based on mission, ability to absorb workload, facilities and infrastructure, cost of facilities, and ability to meet the Initial Operational Capability date.

During the transition period extending from AFLCMC’s activation until Initial Operational Capability was declared on 1 October 2012, Air Armament Center, Aeronautical Systems Center, Electronic Systems Center, and Air Force Security Assistance Center and their subordinate units were attached to AFLCMC. On October 1, 2012, those four centers inactivated and the 66th Air Base Group, 88th Air Base Wing, and 645th Aeronautical Systems Group and their subordinate units were formally assigned to the Air Force Life Cycle Management Center.<sup>1</sup> The Air Force Life Cycle Management Center achieved Full Operational Capability (FOC) on October 22, 2013.

Headquarters, Air Force Life Cycle Management Center was built around and absorbed the former Aeronautical Systems Center staff. The Center’s functional staff offices were/are:

- |   |                                     |
|---|-------------------------------------|
| Acquisition Excellence Directorate (AQ) | Plans and Programs Directorate (XP) |
| Engineering Directorate (EN)            | Staff Judge Advocate Office (JA)    |
| Financial Management Directorate (FM)   | Small Business Office (SB)          |
| Personnel Directorate (DP)              | Safety Office (SE)                  |

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<sup>1</sup> The 645<sup>th</sup> Aeronautical Systems Group reports indirectly to the ISR and SOF Directorate while also directly reporting to AFLCMC/CC.



Contracting Directorate (PK)

Logistics Directorate (LG)<sup>2\*</sup>

The execution directorates were/are:

Contract Execution Directorate (PZ)	Technical Engineering Services Directorate (EZ)
Program Execution Directorate (AZ)	Financial Analysis and Cost Directorate (FZ)
Intelligence Directorate (IN) <sup>3</sup>	Program Development and Integration Directorate (XZ)
Logistics Services Directorate (LZ) <sup>4*</sup>	Cyber and Analysis Programs (OZ) <sup>5*</sup>

The program directorates were:

- Air Force Security Assistance Cooperation Directorate (WF), Wright-Patterson Air Force Base, Ohio
- Propulsion Directorate (LP), Tinker AFB, Oklahoma
- High Power Directed Energy Program Directorate (TM), Kirtland AFB, New Mexico (Until 2013).\*\*



The Propulsion Directorate (LP) is accountable for the Air Force propulsion enterprise and oversees a portfolio of over 23,000 engines. The Air Force Security Assistance and Cooperation

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<sup>2</sup> The Logistics Directorate (LG) was activated on 3 DEC 2013.

<sup>3</sup> 21<sup>st</sup> Intelligence Squadron reports indirectly to the Intelligence Directorate while also reporting directly to AFLCMC/CC.

<sup>4</sup> The Logistics Services Directorate was activated on 3 DEC 2013.

<sup>5</sup> The Cyber and Analysis Programs Directorate was activated 9 July 2014. The Cyber Integration Division (OZI) reports indirectly to the Cyber and Analysis Programs Directorate while also directly reporting to AFLCMC/CC.



(WF) Directorate manages Foreign Military Sales (FMS) for the Department of Defense (DoD) and weapon systems purchased by allied countries.



The Program Executive Officer (PEO) directorates were/are:

- Advanced Aircraft Directorate (WA)<sup>6\*</sup>
- Agile Combat Support Directorate (WN), Wright-Patterson Air Force Base, Ohio
- Armament Directorate (EB), Eglin AFB, Florida
- Battle Management Directorate/Digital Directorate (HB), Hanscom AFB, Massachusetts<sup>7</sup>
- Business and Enterprise Systems Directorate (HI), Maxwell Gunter Annex, Alabama
- Command, Control, Communications, Intelligence and Networks Directorate (HN), Hanscom AFB, Massachusetts
- Fighters and Bombers Directorate (WW), Wright-Patterson Air Force Base, Ohio<sup>8</sup>
- Intelligence, Surveillance, and Reconnaissance Directorate (WI), Wright-Patterson Air Force Base, Ohio
- Mobility Directorate (WL), Wright-Patterson Air Force Base, Ohio<sup>9</sup>

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<sup>6</sup> The Advanced Aircraft Directorate was stood up on 2 October 2019.

<sup>7</sup> The Battle Management Directorate was renamed Digital Directorate in 2019.

<sup>8</sup> The Fighters and Bombers (WW) Directorate will separate into their own, respective directorates (Bombers assuming the symbol, WB) in July 2020.

<sup>9</sup> The Mobility Directorate (WL) absorbed the Tanker Directorate (WK) in June 2020.

- Presidential and Executive Airlift Directorate (WV), Wright-Patterson Air Force Base, Ohio<sup>10\*</sup>
- Rapid Sustainment Directorate (RO)<sup>11\*</sup>
- Strategic Systems Directorate (SS), Kirtland AFB, New Mexico (until 2015)<sup>12\*\*</sup>
- Tanker Directorate (WK), Wright-Patterson Air Force Base, Ohio (until 2020)<sup>13\*\*</sup>

The Agile Combat Support Directorate (WN) oversees metrology and calibration missions, automatic test systems, combat electronics systems, electronic warfare and avionics, environmental and industrial engineering, human systems, simulator systems, and support equipment and vehicles.



The Armament Directorate (EB) jointly managed, with the U.S. Navy, develops, tests, fields, and sustains air-to-air missiles, air-to-ground munitions, directed energy weaponization, and armament test and training systems.

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<sup>10</sup> Originally named the Presidential Aircraft Recapitalization Directorate (PAR) and renamed in September 2018.

<sup>11</sup> The Rapid Sustainment Office was established in 23 July 2018 with Lt. Gen. McMurry, AFLCMC Commander as its PEO.

<sup>12</sup> The Strategic Systems Directorate (SS), which supplied safe, secure, and effective nuclear capability to the nation's deterrent forces, was abolished 1 October 2015. Its manpower authorizations, functions, and the Program Executive Officer for Strategic Systems (AFPEO/SS) were transferred to the Air Force Nuclear Weapons Center (AFNWC).

<sup>13</sup> See Footnote 8.

The Battle Management Directorate (HB) supports aerospace management, air operations command and control, mission planning, intelligence, theater battle control, airborne battle management, missile warning, space control sensors, joint operations and force application planning, force protection, and weather operations.



The Business and Enterprise Systems Directorate (HI) enable enterprise information technology capabilities and supported upgrades to modernize infrastructure across the combat and mission support spectrum.

The Command, Control, Communications, Intelligence, and Networks (C3I&N) Directorate (HN) sustain cyberspace, communications, cryptologic, and space and nuclear network capabilities.



The Fighter (WW) and Bomber (WB) Directorates provide the Air Force's strike aircraft.



The Intelligence, Surveillance, Reconnaissance (ISR), and Special Operations Forces (SOF) Directorate (WI) delivers intelligence, surveillance, reconnaissance, and special operations systems.



The Mobility Directorate (WL) manages the development, production, testing, deployment, and sustainment of mobility, tanker and training aircraft programs.

The Presidential and Executive Airlift Directorate (WV) was effectively established in September 2018 with the renaming of the Presidential Aircraft Recapitalization (PAR) Directorate. As part of this approval signed by Dr. William B. Roper, Jr., Assistant Secretary of the Air Force (Acquisition, Technology & Logistics), the Air Force Program Executive Officer (AFPEO) responsibility for the Commercial Derivative Aircraft Division (CDAD) was realigned under the Presidential and Executive Aircraft Directorate from the Mobility PEO. This action also assigned execution responsibility for the Big Safari Senior Leader Communication System (a system foundational to the Presidential and executive Airlift Fleet) as well as the Analysis of Alternatives (AoA) for the E-4B and C-32A recapitalization effort. This realignment brought the “blue-and-white” executive airlift fleets into a single AFPEO portfolio.







Rapid Sustainment Directorate (RO) was stood up by the Secretary of the Air Force (SECAF) in July 2018 to rapidly identify develop, test, and deploy new technologies to improve sustainment processes, improve the readiness of the Air Force and reduce maintenance costs.

Established 2 October 2019, the Advanced Aircraft Directorate (WA), under the direction of PEO, Brig. Gen. Dale White (dual-hatted as the PEO for the Fighter (WW) Directorate as well), has been tasked to harness the Air Force's Digital Century Series initiative that calls for the leveraging of digital engineering, modular, open systems architecture, and agile software development practices to design, produce and field technologically advanced aircraft faster and with greater flexibility, all of which is key to the Air Force Next Generation Air Dominance (NGAD) program.



Several AFLCMC functional staffs (*i.e.* Acquisition Excellence, Engineering, Financial Management, Contracting, *etc.*), were divided into management directorates and new mission execution directorates. The latter contained low density-high demand authorizations to provide shared resources for organization, training, and equipping functions through the AFLCMC command chain to directly support the Program Executive Officers. Where applicable, the management and execution directors of these organizations were dual-hatted. Program Executive Officers remained at their existing locations where they reported to the AFLCMC commander for organization, training, and equipping, but continued to perform and report their program execution responsibilities through the Service Acquisition Executive.



Units reporting to the Center were the 66th Air Base Group at Hanscom AFB, Massachusetts, and the 88th Air Base Wing, 645th Aeronautical Systems Group, and 21st Intelligence Squadron at Wright-Patterson Air Force Base.

AFLCMC also assumed oversight responsibility for the life cycle management mission within the former Aerospace Sustainment Directorates (ASDs) at Tinker AFB, Oklahoma, Hill AFB, Utah, and Robins AFB, Georgia. The ASDs provided important program management, logistics, and engineering support to assigned weapon systems. Their staff organizations were eliminated and their program offices realigned under acquisition directorates reporting to AFLCMC's PEOs. Their acquisition workforces remained in place. System Program Managers (SPM) had authority to accomplish program objectives for development, production, and product support to meet the operational needs of customers. They reported to and were rated by the Program Executive Officers and Directors. To ensure system program efforts were horizontally integrated at Air Force Sustainment Center's Air Logistics Complexes, the SPMs also reported to the ASD for depot operations functions executed by the Air Logistics Complex commander. In all, AFLCMC operated from 77 worldwide locations.

## Conclusion

The Air Force Life Cycle Management Center inherited both a rich tradition and many challenges. It once again brought acquisition and product support together in a single organization. This time, however, the organization was charged with operating as a single integrated team across the acquisition and product support enterprise, combining acquisition and product support units and missions spread across the globe. It was to hone the warfighter's edge by acquiring and supporting war-winning aircraft, engines, munitions, electronics, and cyber weapon systems, and sub-systems. To accomplish this, AFLCMC had to develop, acquire, and field new systems, while modifying existing ones and operating several major installations. Functioning with minimum management overhead, the AFLCMC team is focused on accomplishing its mission with effective, affordable, on-time solutions while maximizing value through efficient mission execution and cross enterprise integration. Facing and meeting these challenges presents AFLCMC with an opportunity to carve a new chapter in Air Force history and promises it an exciting future.



\* Denotes that the organization was added after AFLCMC reached FOC (22 October 2013)

\*\* Denotes that the organization has been disestablished or is no longer within AFLCMC

**APPENDIX A**  
**AIR FORCE LIFE CYCLE MANAGEMENT CENTER**  
**LINEAGE AND HONORS**

**Lineage**

Established as HQ Air Force Life Cycle Management Center on 18 Jun 2012. Activated on 9 Jul 2012.

**Assignments**

Air Force Materiel Command, 1 Jul 2012.

**Stations**

Wright-Patterson Air Force Base, Ohio, 1 July 2012.

**Commanders**

Lt Gen Clyde D. Moore II, 9 Jul 2012; Lt Gen John F. Thompson, 2 Oct 2014; Lt Gen Robert D. McMurry, Jr., 2 May 2017; Lt Gen Shaun Q Morris, 16 July 2020.

**Aircraft**

None.

**Honors**

Air Force Organizational Excellence Award, [9 Jul] 2012 - 30 Jun 2014.

**Emblem**

Approved on 17 August 2012.

**APPENDIX B**  
**AIR FORCE LIFE CYCLE MANAGEMENT CENTER**  
**COMMANDERS**

Lieutenant General Clyde D. Moore II	9 Jul 2012
Lieutenant General John F. Thompson	2 Oct 2014
Lieutenant General Robert D. McMurry, Jr.	2 May 2017
Lieutenant General Shaun Q. Morris	3 Sept 2020



## APPENDIX C

### AIR FORCE LIFE CYCLE MANAGEMENT CENTER

#### EMBLEM



### AIR FORCE LIFE CYCLE MANAGEMENT CENTER

#### BLAZON

Azure within two lightning flashes conjoined in chief curved to base, one in dexter and one in sinister Argent, voided in chief as a delta of the field, a globe per pale Azure (Cobalt Blue) and Celeste, gridlined Or, overall a lance erect of the second, all within a narrow bordure of the fourth.

#### 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 globe represents the worldwide impact of the Center and its ability to develop solutions for the warfighter for night, day and in all situations. A lance and lightning bolts outline a stylized aircraft system, representing the full range of systems--aeronautical, armament and electronic--that the Center provides to the United States Air Force and its international partners.

#### HERALDIC DEVICE



A three-dimensional representation of the unit emblem evokes the Air Force Life Cycle Management Center's clear vision of its mission and unequivocal commitment to providing our warfighters with the finest systems in the world. The two-toned globe represents the wide ranging Center workforce, the unit's worldwide impact, and its ability to develop solutions that serve the warfighter in all operational situations, 24-hours a day. A lance and lightning bolts outline a stylized aircraft system. These elements represent the full range of systems—aeronautical, armament, and electronic—and the unified life cycle weapon system management that the Center provides to the United States Air Force and its international partners.

## APPENDIX D

### AIR FORCE LIFE CYCLE MANAGEMENT CENTER

#### ASSIGNED PERSONNEL

Year	Officer	Enlisted	Civilian	Total	CME*
2012	2,412	2,618	14,743	19,773	5,960
2013	2,420	2,643	14,681	19,744	5,849
2014	2,267	2,570	14,734	19,571	6,194
2015	2,133	2,444	15,196	19,733	6,230
2016	2,129	2,512	15,040	19,681	6,081
2017	2,405	2,583	15,598	20,586	
2018	2,233	2,584	16,113	20,930	
2019	2,403	2,582	22,111	27,906	

\* CME - Contract Man-Year Equivalent were budget authorizations that could be either filled or vacant, but were always counted as filled.

## APPENDIX E

### AIR FORCE LIFE CYCLE MANAGEMENT CENTER

#### UNITS 2012-2016

#### UNITS ASSIGNED

HQ 66th Air Base Group	1 Oct 2012
66th Comptroller Squadron	1 Oct 2012
66th Security Forces Squadron	1 Oct 2012
66th Force Support Squadron	1 Oct 2012
66th Logistics Readiness Squadron	1 Oct 2012
66th Medical Squadron	1 Oct 2012
HQ 88th Air Base Wing	1 Oct 2012
HQ 88th Civil Engineer Group	1 Oct 2014
88th Civil Engineer Squadron	1 Oct 2014
788th Civil Engineer Squadron	1 Oct 2014
HQ 88th Medical Group	1 Oct 2012
88th Aerospace Medicine Squadron	1 Oct 2012
88th Dental Squadron	1 Oct 2012
88th Diagnostic and Therapeutics Squadron	1 Oct 2012
88th Inpatient Operations Squadron	1 Oct 2012
88th Medical Operations Squadron	1 Oct 2012
88th Medical Support Squadron	1 Oct 2012
88th Surgical Operations Squadron	1 Oct 2012
HQ 88th Mission Support Group	1 Oct 2012
88th Force Support Squadron	1 Oct 2012
88th Logistics Readiness Squadron	10 Oct 2013
88th Security Forces Squadron	1 Oct 2012
HQ 88th Communications Group	1 Oct 2012
88th Communications Squadron	1 Oct 2012
88th Comptroller Squadron	1 Oct 2012
88th Operations Support Squadron	1 Oct 2012
HQ 645th Air Base Group	1 Oct 2012
645th Aeronautical Systems Squadron	1 Oct 2012
661st Aeronautical Systems Squadron	1 Oct 2012
Detachment 1, HQ AFLCMC	1 Oct 2012 - 21 Feb 2013
Detachment 2, HQ AFLCMC	1 Oct 2012 - 21 Feb 2013
Detachment 3, HQ AFLCMC	1 Oct 2012
Detachment 4, HQ AFLCMC	1 Oct 2012
Detachment 5, HQ AFLCMC	1 Oct 2012
Detachment 6, HQ AFLCMC	1 Oct 2012
Detachment 7, HQ AFLCMC	1 Oct 2012



United States Air Force Band of Liberty	1 Oct 2012 - 17 Aug 2013
21st Intelligence Squadron	9 Oct 2012
Detachment 1, 661st Aeronautical Systems Squadron	4 Jun 2013

### UNITS ATTACHED

HQ AF Security Assistance Center	9 Jul 2012 – 1 Oct 2012
Detachment 1, HQ Air Force Nuclear Weapons Center	9 Jul 2012 – 1 Oct 2012
Detachment 1, HQ Oklahoma City Air Logistics Complex	10 Jul 2012 – 1 Oct 2012
Detachment 1, HQ Ogden Air Logistics Complex	12 Jul 2012 – 1 Oct 2012
HQ Electronic Systems Center	16 Jul 2012 – 1 Oct 2012
HQ 66th Air Base Group	16 Jul 2012 – 1 Oct 2012
United States Air Force Band of Liberty	16 Jul 2012 – 1 Oct 2012
Detachment 1, HQ Electronic Systems Center	16 Jul 2012 – 1 Oct 2012
Detachment 2, HQ Electronic Systems Center	16 Jul 2012 – 1 Oct 2012
Detachment 3, HQ Electronic Systems Center	16 Jul 2012 – 1 Oct 2012
Detachment 1, HQ Warner-Robins Air Logistics Complex	17 Jul 2012 – 1 Oct 2012
Detachment 2, HQ Warner-Robins Air Logistics Complex	17 Jul 2012 – 1 Oct 2012
Detachment 3, HQ Warner-Robins Air Logistics Complex	17 Jul 2012 – 1 Oct 2012
HQ Air Armament Center	18 Jul 2012 – 1 Oct 2012
HQ Aeronautical Systems Center	20 Jul 2012 – 1 Oct 2012
HQ 88th Air Base Wing	20 Jul 2012 – 1 Oct 2012
HQ 645th Aeronautical Systems Group	20 Jul 2012 – 1 Oct 2012
Detachment 1, HQ Aeronautical Systems Center	20 Jul 2012 – 1 Oct 2012
Detachment 2, HQ Aeronautical Systems Center	20 Jul 2012 – 1 Oct 2012
Detachment 3, HQ Aeronautical Systems Center	20 Jul 2012 – 1 Oct 2012
AFMC Intelligence Squadron	1 Aug 2012 - 9 Oct 2012
Detachment 4, HQ Air Force Life Cycle Management Center	
00BE Palmdale AF Plant CA	1 Oct 2012
00FH Palmdale AF Plant CA	1 Oct 2012
0PZS Palmdale AF Plant CA	1 Oct 2012
Detachment 5, HQ Air Force Life Cycle Management Center	
00LF Maxwell Gunter AFS AL	1 Oct 2012
00LG Maxwell Gunter AFS AL	1 Oct 2012
00LH Maxwell Gunter AFS AL	1 Oct 2012
00LJ Maxwell Gunter AFS AL	1 Oct 2012
00LR Maxwell Gunter AFS AL	1 Oct 2012
00MS Maxwell Gunter AFS AL	1 Oct 2012
00MT Maxwell Gunter AFS AL	1 Oct 2012
00NB Maxwell Gunter AFS AL	1 Oct 2012
00NO Maxwell Gunter AFS AL	1 Oct 2012
0EZM Maxwell Gunter AFS AL	1 Oct 2012
0JAG Maxwell Gunter AFS AL	1 Oct 2012
0PZC Maxwell Gunter AFS AL	1 Oct 2012
Detachment 6, HQ Air Force Life Cycle Management Center	
00BA San Antonio, TX	1 Oct 2012

00DN JBSA Lackland AFB TX	1 Oct 2012
00GA San Antonio, TX	1 Oct 2012
00GP JBSA Randolph AFB TX	1 Oct 2012
00KF JBSA Lackland AFB TX	1 Oct 2012
00KW JBSA Lackland AFB TX	1 Oct 2012
00LE San Antonio, TX	1 Oct 2012
00LN San Antonio, TX	1 Oct 2012
00MM JBSA Lackland AFB TX	1 Oct 2012
00MN JBSA Randolph AFB TX	1 Oct 2012
00NE JBSA Lackland AFB TX	1 Oct 2012
00NQ JBSA Randolph AFB TX	1 Oct 2012
0PZH San Antonio, TX	1 Oct 2012
0PZL JBSA Lackland AFB TX	1 Oct 2012
0PZP JBSA Randolph AFB TX	1 Oct 2012
Detachment 7, HQ Air Force Life Cycle Management Center	
00JR Hanscom AFB MA	1 Oct 2012
00JS Hanscom AFB MA	1 Oct 2012
00JT Hanscom AFB MA	1 Oct 2012
00KB Hanscom AFB MA	1 Oct 2012
00KC Hanscom AFB MA	1 Oct 2012
00KE Hanscom AFB MA	1 Oct 2012
00KT Hanscom AFB MA	1 Oct 2012
00KZ Hanscom AFB MA	1 Oct 2012
00LB Hanscom AFB MA	1 Oct 2012
00LC Hanscom AFB MA	1 Oct 2012
00LQ Hanscom AFB MA	1 Oct 2012
00LS Hanscom AFB MA	1 Oct 2012
00LT Hanscom AFB MA	1 Oct 2012
00LU Hanscom AFB MA	1 Oct 2012
00LV Hanscom AFB MA	1 Oct 2012
00LY Hanscom AFB MA	1 Oct 2012
00MB Hanscom AFB MA	1 Oct 2012
00MH Hanscom AFB MA	1 Oct 2012
00MJ Hanscom AFB MA	1 Oct 2012
00MY Hanscom AFB MA	1 Oct 2012
00MZ Hanscom AFB MA	1 Oct 2012
00NC Hanscom AFB MA	1 Oct 2012
0AQH Hanscom AFB MA	1 Oct 2012
0AZH Hanscom AFB MA	1 Oct 2012
0ENH Hanscom AFB MA	1 Oct 2012
0EZH Hanscom AFB MA	1 Oct 2012
0FMH Hanscom AFB MA	1 Oct 2012
0FZH Hanscom AFB MA	1 Oct 2012
0JAH Hanscom AFB MA	1 Oct 2012
0PMH Hanscom AFB MA	1 Oct 2012
0PZA Hanscom AFB MA	1 Oct 2012

0PZR Hanscom AFB MA	1 Oct 2012
0XJH Hanscom AFB MA	1 Oct 2012
0XZB Hanscom AFB MA	1 Oct 2012
0IZH Hanscom AFB MA	1 Oct 2012

## **APPENDIX F**

### **AIR FORCE LIFE CYCLE MANAGEMENT CENTER**

#### **UNIT LOCATIONS**

**2016**

#### **ASSIGNED UNIT LOCATIONS**

HQ Air Force Life Cycle Management Center, Wright-Patterson Air Force Base, Ohio;

HQ 66th Air Base Group, Hanscom AFB, Massachusetts;

HQ 88th Air Base Wing, Wright-Patterson Air Force Base, Ohio;

HQ 645th Aeronautical Systems Group, Wright-Patterson Air Force Base, Ohio;  
661st Aeronautical Systems Squadron, Waco, Texas;  
Detachment 1, 661st Aeronautical Systems Squadron, Denver, Colorado;  
645th Aeronautical Systems Squadron, Greenville, Texas;

21st Intelligence Squadron, Wright-Patterson Air Force Base, Ohio;

Detachment 3, HQ Air Force Life Cycle Management Center, Poway, California;

Detachment 4, HQ Air Force Life Cycle Management Center, Palmdale AF Plant, California;

Detachment 5, HQ Air Force Life Cycle Management Center, Maxwell AFB/Gunter Annex, Alabama;

Detachment 6, HQ Air Force Life Cycle Management Center, JBSA Lackland AFB, Texas; and

Detachment 7, HQ Air Force Life Cycle Management Center, Hanscom AFB, Massachusetts.

#### **OPERATING LOCATIONS**

Detachment 5, HQ Air Force Life Cycle Management Center, Maxwell AFB/Gunter Annex, Alabama

00LF Maxwell AFB/Gunter Annex, Alabama

00LG Maxwell AFB/Gunter Annex, Alabama

00LH Maxwell AFB/Gunter Annex, Alabama

00LJ Maxwell AFB/Gunter Annex, Alabama

00LR Maxwell AFB/Gunter Annex, Alabama



00MS Maxwell AFB/Gunter Annex, Alabama  
00MT Maxwell AFB/Gunter Annex, Alabama  
00NO Maxwell AFB/Gunter Annex, Alabama  
0EZM Maxwell AFB/Gunter Annex, Alabama  
00PN Maxwell AFB/Gunter Annex, Alabama  
0PZC Maxwell AFB/Gunter Annex, Alabama

Detachment 6, HQ Air Force Life Cycle Management Center, JBSA Lackland, Texas

00BA San Antonio, Texas  
00DN JBSA Lackland, Texas  
00GA San Antonio, Texas  
00GP JBSA Randolph, Texas  
00KW JBSA Lackland, Texas  
00LE San Antonio, Texas  
00LN JBSA Lackland, Texas  
00MN JBSA Randolph, Texas  
00NE JBSA Lackland, Texas  
00NQ JBSA Randolph, Texas  
0IZL JBSA Lackland, Texas  
0PZH San Antonio, Texas  
0PZL JBSA Lackland, Texas  
0PZP JBSA Randolph, Texas

Detachment 7, HQ Air Force Life Cycle Management Center, Hanscom AFB, Massachusetts

00JR Hanscom AFB, Massachusetts  
00JS Hanscom AFB, Massachusetts  
00JT Hanscom AFB, Massachusetts  
00KB Hanscom AFB, Massachusetts  
00KC Hanscom AFB, Massachusetts  
00KE Hanscom AFB, Massachusetts  
00KT Hanscom AFB, Massachusetts  
00KZ Hanscom AFB, Massachusetts  
00LB Hanscom AFB, Massachusetts  
00LC Hanscom AFB, Massachusetts  
00LQ Hanscom AFB, Massachusetts  
00LS Hanscom AFB, Massachusetts  
00LT Hanscom AFB, Massachusetts  
00LU Hanscom AFB, Massachusetts  
00LV Hanscom AFB, Massachusetts  
00LY Hanscom AFB, Massachusetts  
00MB Hanscom AFB, Massachusetts  
00MH Hanscom AFB, Massachusetts  
00MJ Hanscom AFB, Massachusetts  
00MY Hanscom AFB, Massachusetts  
0AQH Hanscom AFB, Massachusetts  
0AZH Hanscom AFB, Massachusetts

0ENH Hanscom AFB, Massachusetts  
0EZH Hanscom AFB, Massachusetts  
0FMH Hanscom AFB, Massachusetts  
0FZH Hanscom AFB, Massachusetts  
0PMH Hanscom AFB, Massachusetts  
0PZA Hanscom AFB, Massachusetts  
0PZR Hanscom AFB, Massachusetts  
0XJH Hanscom AFB, Massachusetts  
0XZB Hanscom AFB, Massachusetts  
0IZH Hanscom AFB, Massachusetts

## **OTHER LOCATIONS**

Aberdeen Proving Ground, Maryland  
Amendola AB, Italy  
Arlington, Virginia  
Bolling AFB, DC  
Cairo City, Egypt  
Cherry Point MCAS, North Carolina  
Colorado Springs, Colorado  
Corpus Christi Depot, Texas  
Dahlgren NSF, Virginia  
Denver, Colorado  
Dhahran, Saudi Arabia  
Edwards AFB, California  
Eglin AFB, Florida  
Eindhoven AB, Netherlands  
Ft Huachuca, Arizona  
Ft Worth, Texas  
Gray Butte Plant, California  
Greenville, Texas  
Hanscom AFB, Massachusetts  
Heath, Ohio  
Hill AFB, Utah  
Hurlburt Field, Florida  
Indian Head, Maryland  
JB Langley-Eustis, Virginia  
JBMDL McGuire, New Jersey  
JBSA Lackland, Texas  
JBSA Randolph, Texas  
Kadena AFB, Japan  
King Khaled ABS, Saudi Arabia  
Kirtland AFB, New Mexico  
Luke AFB, Arizona  
Marietta City, Georgia

Maxwell Gunter Annex, Alabama  
Meppen, Germany  
Mons, Belgium  
Natick Laboratory, Massachusetts  
New Delhi, India  
Offutt AFB, Nebraska  
Oslo, Norway  
Palmdale, California  
Patrick AFB, Florida  
Patuxent River NAS, Maryland  
Peterson AFB, Colorado  
Philadelphia, Pennsylvania  
Picatinny, New Jersey  
Poway, California  
Prince Sultan AB, Saudi Arabia  
Redstone Arsenal, Alabama  
Riyadh, Saudi Arabia  
Robins AFB, Georgia  
Rock Island Arsenal, Illinois  
Rome City, New York  
Salt Lake City, Utah  
San Antonio, Texas  
Seattle, Washington  
Tabuk AFB, Saudi Arabia  
Taif, Saudi Arabia  
The Hague, Netherlands  
Tinker AFB, Oklahoma  
Tokyo, Japan  
Travis AFB, California  
Vandenberg AFB, California  
Waco, Texas  
RAF Waddington, United Kingdom  
Washington, DC  
Whiteman AFB, Missouri  
Wright Patterson AFB, Ohio.

AFLCMC also served as the Secretary of the Air Force executive agent for nine United States Air Force Government-Owned, Contractor-Operated (GOCO) aircraft and missile industrial facilities. The Air Force Plants were:

AFP 4, Fort Worth, Texas;  
AFP 6, Marietta, Georgia;  
AFP 36, Evendale, Ohio;  
AFP 42, Palmdale, California;  
AFP 44, Tucson, Arizona;  
AFP 59, Johnson City, New York;

AFP 70, Sacramento, California;  
AFP 85, Columbus, Ohio;  
and the former AFP Peter J. Kiewit and Sons (PJKS), Waterton, Colorado.