United States Air Force Plant 42

United States Air Force Plant 42 (Plant 42) (IATA: PMD, ICAO: KPMD, FAA LID: PMD) is a classified United States Government aircraft manufacturing plant, used by the United States Air Force. It is also used by the National Aeronautics and Space Administration (NASA).

Plant 42 and Palmdale Regional Airport (PMD) are separate facilities that share a common runway at the site. The facility is located in the Antelope Valley, approximately 60 miles from downtown Los Angeles.

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Overview

Plant 42 is a United States Air Force facility. It is the Antelope Valley's second-largest employer, and is owned by Wright-Patterson AFB but operated as a component of Edwards Air Force Base, 23 miles north east of the airport. Most of the facilities are operated by private contractors and serve as a manufacturing plant for aircraft used by the United States and their allies' militaries.

Plant 42 has 3.2 million square feet of industrial space and a replacement value of $1.1 billion. Some of the plant's work involves production of spare parts for military aircraft, with other projects including maintenance and modification of aircraft such as the B-2 Spirit bomber and production of the Global Hawk and other unmanned craft.

Aerospace contractors at Air Force Plant 42 share a common runway complex, and either lease building space from the Air Force (commonly referred to as GOCO, or Government Owned Contractor
Operated) or own their own buildings outright (e.g., Lockheed Martin Skunk Works). There are eight production sites specially suited for advanced technology and/or "black" program projects. Currently the most well-known contractors at Plant 42 are Boeing, Lockheed Martin (home of the legendary Skunk Works) and Northrop Grumman[4]. Previously the facilities were operated by IT&T, McDonnell-Douglas Aircraft Co., Lockheed California Co., Norair, a Division of Northrop Corp. and Lockheed Air Terminal.[5] Plant 42 remains a GOCO (Government Owned Contractor Operated) but also now includes AF operations. Contractually operated for the Air Force since 1954, the Air Force under the Obama administration chose to insource the contracted operations of the plant. The airfield is now operated by DoD resources, with 412 TW/Operating Location in command[5]

Plant 42 controls over 5,800 acres (23 km²) of Mojave Desert land north of Avenue P and south of Columbia Way (Avenue M). The western border is Sierra Highway, and the plant extends east to around 40th Street East south of Avenue N to Avenue P and 50th Street East north of Avenue N to Columbia Way (Avenue M).[5]

Facilities

Northrop Grumman's B-2 final assembly and modification facility is at Palmdale. The Department of Defense, in February 1995, announced its plan for providing depot support for the B-2. The plan includes a mix of commercial and organic sources for providing various functions and/or maintaining various components. For example, the engines are to be maintained by the Air Force, software support is to be provided by commercial sources, and airframe maintenance is to be provided by Northrop Grumman at Palmdale, California.

Rockwell's Palmdale assembly facility is where all the individual parts, pieces and systems of the Space Shuttle came together and were assembled and tested. Upon completion, the spacecraft was turned over to NASA for transport overland from Palmdale to Edwards Air Force Base, California. NASA's Dryden Flight Research Facility at Edwards Air Force Base was the site of the mate-demate facility for mating or demating the spacecraft and the shuttle carrier aircraft. Approximately 250 major subcontractors supplied various systems and components to Rockwell's Palmdale assembly facility. The structures of the orbiter were manufactured at various companies under contract to Rockwell International's Space Transportation Systems Division, Downey, Calif. The upper and lower forward fuselage, crew compartment, forward reaction control system and aft fuselage were manufactured at Rockwell's Space Transportation Systems Division facility in Downey and were transported overland from Downey to Rockwell's Palmdale, Calif., assembly facility. The midfuselage was manufactured by General Dynamics, San Diego, Calif., and transported overland to Rockwell's Palmdale assembly facility. The wings (including elevons) were manufactured by Grumman, Bethpage, Long Island, N.Y., and transported by ship from New York via the Panama Canal to Long Beach, Calif., and then transported overland to Rockwell's Palmdale assembly facility. The vertical tail (including rudder/speed brake) were manufactured by Fairchild Republic, Farmingdale, Long Island, N.Y., and transported overland to Rockwell's Palmdale assembly facility. The payload bay doors were manufactured at Rockwell International's Tulsa, Okla., facility and transported overland to Rockwell's Palmdale assembly facility. The body flap was manufactured at Rockwell International's Columbus, Ohio, facility and transported overland to Rockwell's Palmdale assembly facility.
facility. The aft orbital maneuvering system/reaction control system pods were manufactured by McDonnell Douglas, St. Louis, Mo., and transported by aircraft to Rockwell's Palmdale assembly facility. They were also transported by aircraft from Rockwell's Palmdale assembly facility to the Kennedy Space Center.

The National Aeronautics and Space Administration had been paying the Air Force for use of Plant 42 facilities for the shuttle work. NASA decided in February 2002 to shift space shuttle overhaul and modification work from Palmdale to Florida.

Current projects include design, engineering, pre-production, production, modification, flight testing, servicing and repair mission related activities to the following:

- B-2 Spirit
- F-22 Raptor
- F-35 Lightning II (JSF)
- U-2
- Boeing B-52 Stratofortress
- RQ-4 Global Hawk
- MQ-4C Triton
- SOFIA (Stratospheric Observatory for infrared Astronomy) - NASA 747SP
- RQ-170
- X-47B

**Museums**

The Blackbird Airpark Museum part of Air Force Flight Test Museum and the adjacent Joe Davies Heritage Airpark (formerly Palmdale Plant 42 Heritage Airpark)[3] have recently been opened on Plant 42 property along Avenue P (both are free to the public) with displays of the SR-71, U-2, Century Series fighters and other aircraft designed, engineered, manufactured, and flight tested at its facilities.

The Blackbird Airpark Museum is an extension of the AFFT Museum at Edwards AFB, while the Heritage Airpark is operated by the City of Palmdale. Both are manned by retirees who had previously worked in the aerospace industry, some actually having worked on the aircraft displayed at the two parks. All of the aircraft have been carefully restored for public display. Operating hours of the airparks are the same - Friday through Sunday (except in inclement weather) from 11:00 A.M. to 4:00 P.M. Pacific Time. On Federal Government holidays both airparks are closed. The two airparks are located at Avenue P and 25th Street East near Site 9.

**History**

The origins of Plant 42 go to the early 1930s, when a small airstrip was built in the desert. It was listed in 1935 documentation as CAA Intermediate #5. It was established by the Bureau of Air Commerce (later the Civil Aeronautics Administration) who maintained a network of emergency landing fields. It provided a pilot in distress with a better alternative than landing on a public road or a farmer's field.[4]

**World War II**

In 1940, Palmdale Army Airfield was activated as a United States Army Air Corps (later Air Forces) airfield for use as an emergency landing strip and for B-25 Mitchell medium bomber support training during World War II. It was one of many intermediate fields that were used as auxiliary fields or emergency landing fields by the AAF during World War II. Their dispersion along the air routes, their infrequent use, and their U.S. government ownership made them ideal for use by military aircraft. It acted as a sub-base for Muroc Army Airfield and Hammer Army Airfield[4].
Postwar use

Palmdale Army Airfield was declared a surplus facility in 1946 and was purchased by Los Angeles County for use as a municipal airport. The outbreak of the Korean War in 1950 caused the Air Force to reactivate the property for use in final assembly and flight testing of military jet aircraft.

Both the Air Force and its aircraft contractors needed a location away from major population centers - due to sonic booms, other noises and security concerns - but close enough to the major centers of aircraft design and production, while having excellent flying weather the year around. The land which became Plant 42 fit these criteria. Consequently, the Air Force agreed to purchase the land from Los Angeles County in 1951.

The Air Force awarded a contract to Lockheed Aircraft to develop the master plan for the site. The plan was to construct a facility that would meet the requirements of full war mobilization and augment the industrial production potential of the major airframe manufacturing industry in southern California.

The concept for Air Force Plant 42 originated in the challenge of flight testing high performance jet aircraft over heavily populated areas. Following approval of the Master Plan in 1953, the Palmdale Airport officially became Air Force Plant 42; ownership of the installation was transferred to the Federal Government in 1954. With USAF encouragement, Lockheed, looked upon with favor by the Air Force at this time, established its permanent presence at Plant 42. It signed a lease in 1956 for 237 acres to use Palmdale Airport for final assembly and flight testing.

Lockheed Skunk Works

Lockheed's famed "Skunk Works" (black projects), which developed such aircraft as the U-2, SR-71 Blackbird and F-117 Nighthawk, is at Site 10 of the complex (actually private property with secure access to Plant 42 airfield), near Sierra Highway, and relocated to Plant 42 from its original Burbank-Glendale-Pasadena Airport (now Bob Hope Airport) site in Burbank after the end of the Cold War. Its present hangar was constructed in 1968 and the outer walls of the structure were put up in a matter of days. Its hangar originally was built for the Lockheed L-1011 Tristar passenger jet project.

Since then, the plant has supported facilities for the production, engineering, final assembly and flight testing of high performance aircraft. During the 1980s it was used by Lockheed to produce the U-2/TR-1 and support the SR-71. Northrop produced the F-5E, and Rockwell supported the B-1B LancerPasts projects included:

- Each of the Space Shuttle orbiters
- Modernization of the Space Shuttle Columbia's cockpit area
- Lockheed L-1011 Tristar passenger jet
- B-1 Lancer Bomber
- X-70 Valkyrie
- X-15
- SR-71 Blackbird
- F-117A Nighthawk

See also

- California World War II Army Airfields
- Air Force Plant 4, Fort Worth, Texas
- Air Force Plant 6, Marietta, Georgia
References

1. globalsecurity.org plant 42 (http://www.globalsecurity.org/military/facility/afp-42.htm)
3. Palmdale Plant 42 Heritage Airpark (http://www.cityofpalmdale.org/airpark)

External links

- Dream Land Resort: Air Force Plant 42
- Air and Space: Palmdale, Summer 1999
- Blackbird Airpark
- Flight Test Historical Foundation


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