

Exhibit 1

Description of Experimental Program

Lockheed Martin Corporation requires the use of GPS Re-Radiation (Re-Rad) systems inside our aircraft production/flight test facilities at Palmdale, California. This equipment will be used as an “Experimental RNSS Test Device” for the purpose of testing and verifying GPS receiver functionality of various aircraft systems. Currently, in order to obtain a GPS signal, the aircraft and all supporting test equipment must be towed outside of the production/flight test facility. During this time, aircraft and personnel are exposed to adverse weather conditions and prevented from accessing certain tools and equipment. In addition, additional power and cooling is required for the aircraft. At certain times, due to safety and efficiency considerations, Lockheed Martin must have the ability to perform pre-flight GPS receiver functionality tests indoors. The GPS Re-Rad system is designed to re-transmit the GPS signal at approximately the same signal level as received outside the hangar. This Exhibit describes the various implementations required at Palmdale. May need to explain upfront, that Plants are comprised of numerous buildings, but they are or aren't all on one major LM Palmdale campus?

1. PROGRAM DESCRIPTIONS

F-117. The program title is F-117 “Blackhawk” Total System Sustainment Program (TSSP). The contract number is F33657-98-D-0117.

General Description

What's the difference between Plant terms – USAF/LM?

GPS re-rad capability is needed in a total of six buildings at USAF Plant 42, Site 7 to support the F-117 program. These facilities are used to test the avionics, the weapons systems, the navigation system and the test data system of the F-117 aircraft. The F-117 Test System Program Responsibility (TSPR) Combined Test Force (CTF) must correlate data between these various systems based upon GPS-derived time signals. Prior to a test mission, it is critical to perform a functional check of these systems to determine their operational readiness. Without this correlation the test data could become useless.

Technical information:

Locations

- Three fixed antennas inside hangar facility at USAF Plant 42, Site 7, and Building 730.

Latitude:	W 118 05.735	118-05-44.1W
Longitude:	N 34 37.128	34-37-07.7N

Latitude:	W 118 05.755	118-05-45.3W
Longitude:	N 34 37.115	34-37-06.9N

Latitude:	W 118 05.791	118-05-47.5W
Longitude:	N 34 37.110	34-37-06.6N

- One fixed antenna inside hangar facility at USAF Plant 42, Site 7, Building 740.

Latitude:	W 118 05.710	118-05-42.6W
Longitude:	N 34 37.204	34-37-12.2N

- One fixed antenna inside hangar facility at USAF Plant 42, Site 7, Building 762.

Comment: TSPR went away with the 2006 fiscal year. The new program is now called TSSP.

Deleted: Test System Program Responsibility (TSPR)

Comment: Good question! The overall Palmdale airfield is mostly USAF property including the airfield itself. The tower is manned by the FAA as the field allows limited commercial traffic. The AF designated their Palmdale facility “Plant 42” and segregated the facility into several physical “Sites” that are used for specific purposes or programs. USAF Plant 42 houses sites for the U-2 (used to include SR-71) at Site 2, the F-117A at Site 7, AF operations & HQ at Site 8, along with other sites for Northrup-Grumman, Boeing, etc.. LM Plant 10 (not to be confused with Site 10) is the only privately owned property associated with the Palmdale airfield. As far as I know, Palmdale Plant 10 is the only privately owned LM Aero facility. Thus the distinction between “Plant” and “Site.” If you can figure out how to put that into simple words I would be most grateful!

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Latitude: W 118 05.520 118-05-31.2W
Longitude: N 34 37.326 34-37-19.6N

- One fixed antenna inside hangar facility at USAF Plant 42, Site 7, Building 763.

Latitude: W 118 05.520 118-05-31.2W
Longitude: N 34 37.326 34-37-19.6N

- One fixed antenna inside hangar facility at USAF Plant 42, Site 7, Building 751.

Latitude: W 118 05.565 118-05-33.9W
Longitude: N 34 37.384 34-37-23.1N

- One fixed antenna inside hangar facility at USAF Plant 42, Site 7, Building 750.

Latitude: W 118 05.565 118-05-33.9W
Longitude: N 34 37.359 34-37-21.5N

Advanced Development Programs. The program title is: Advanced Development Programs (ADP). The primary classified contract number is: F33657-01-C-4198. is there a primary unclas program – WALRUS?

Comment: This contract number refers to one of the primary classified programs. The next paragraph, General Desecration, mentions the DARPA Walrus program as one of the unclassified ones.

General Description.

ADP encompasses many programs several of which are supported in this one large hangar facility. Most of the programs are classified by the US government. However, some unclassified programs are also supported in portions of this building. One such program housed in building 602 is the DARPA WALRUS development and evaluation program, contract number HR0011-05-C-0139. Where possible, a single GPS re-rad system will be used to support an area of a facility that may house multiple programs. How many programs will this license request support?

Comment: A sensitive subject. However, I can say that we typically support at least 3 active test programs in addition to those under development or still in the laboratories.

GPS re-rad capability is needed in a total of two buildings at Lockheed Martin Aeronautics Co. Plant 10 to support classified, proof-of-concept and developmental systems programs. These facilities are used to test the electronics, weapons systems, navigation, test and communications systems of conceptual, experimental and developmental systems. These programs require GPS position and timing information for accurate navigation and time correlation between various sub-systems and support elements. Verification of proper systems/sub-systems performance is critical to the development and safe operation of these programs. Outdoor test and evaluation is often impossible or impractical due to the experimental and/or classified nature of the systems under test/development.

Technical Information.

Locations:

- Three fixed antennas inside hangar and laboratory facility at Lockheed Martin Aeronautics Co. Plant 10, Building 602, North Hangar.

Latitude: W 118 07.092 118-07-05.5W
Longitude: N 34 37.110 34-37-06.6N

Latitude: W 118 07.126 118-07-07.6W
Longitude: N 34 37.111 34-37-06.6N

Avionics Laboratory, room 309:
Latitude: W 118.07.100 118-07-06.0W
Longitude: N 34 37.097 34-37-05.8N

- Two fixed antennas inside hangar facility at Lockheed Martin Aeronautics Co. Plant 10, Building 602, South Hangar.

Latitude: W 118 07.126 118-07-07.6W
Longitude: N 34 37.064 34-37-03.8N

Latitude: W 118 07.092 118-07-05.5W
Longitude: N 34 37.064 34-37-03.8N

- Four fixed antennas inside hangar facility at Lockheed Martin Aeronautics Co. Plant 10, Building 601, East Hangar.

Latitude: W 118 07.125 118-07-07.5W
Longitude: N 34 36.833 34-36-50.0N

Latitude: W 118 07.052 118-07-03.1W
Longitude: N 34 36.835 34-36-50.1N

Latitude: W 118 07.038 118-07-02.3W
Longitude: N 34 36.860 34-36-51.6N

Latitude: W 118 07.130 118-07-07.8W
Longitude: N 34 36.862 34-36-51.7N

- One fixed antenna inside hangar facility at USAF Plant 42, Site 2, Building 210.

Latitude: W 118 05.129 118-05-07.7W
Longitude: N 34 38.232 34-38-13.9N

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- One fixed antenna inside hangar facility at Lockheed Martin Aeronautics Co. Plant 10, Building 681A (Flight Line stall 1).

Latitude: W 118 06.925 118-06-55.5W
Longitude: N 34 37.180 34-37-10.8N

F-22. The program title is: F-22 "Raptor" modification line. The contract number for this program is: F33657-99-C-0036.

General Description.

GPS re-rad capability is needed in one building at Lockheed Martin Aeronautics Co. Plant 10 to support the F-22 "Raptor" modification line. GPS signals are necessary for the checkout, alignment and maintenance of the F-22 avionics and test instrumentation systems. GPS signal coverage indoors is needed to allow GPS enabled systems to be operated while the aircraft is physically unable to be moved outdoors.

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Technical Information.

Locations:

Two fixed antennas inside Lockheed Martin Aeronautics Co. Plant 10, Building 601, West Hangar.

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Latitude: W 118 07.175 118-07-10.5W
Longitude: N 34 36.791 34-36-47.4N

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Latitude: W 118 07.177 118-07-10.6W
Longitude: N 34 36.835 34-36-50.1N

One fixed antenna inside Lockheed Martin Aeronautics Co. Plant 10, Building 601, Room 307, Flight Test Instrumentation Development Lab .

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Latitude: W 118 07.170 118-07-10.2W
Longitude: N 34 36.861 34-36-51.7N

U-2. The program title is: U-2 “Dragon Lady” Depot Maintenance, modifications and Flight Test. The contract number for this program is: FA8528-05-D-0015-DO0012.

General Description.

GPS re-rad capability is needed one building at USAF Plant 42, site 2 to support the U-2 “Dragon Lady” program. This facility is used for periodic and depot maintenance, modifications, flight testing and sensor systems development/integration on the U-2 high altitude surveillance aircraft. GPS re-rad is needed for testing and verification the flight platform, flight test instrumentation, avionics and missions equipment when moving the aircraft outdoors is unreasonable for mechanical, logistics, weather or security classification reasons.

Technical Information.

Location:

Four fixed antennas inside USAF Plant 42, Site 2, Building 210.

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Latitude: W 118 05.383 118-05-23.0W
Longitude: N 34 38.270 34-38-16.2N

Latitude: W 118 05.366 118-05-22.0W
Longitude: N 34 38.251 34-38-15.1N

Latitude: W 118 05.428 118-05-25.7W
Longitude: N 34 38.250 34-38-15.0N

Latitude: W 118 05.422 118-05-25.3W
Longitude: N 34 38.270 34-38-16.2N

2. EQUIPMENT

All of the above sites will use the following equipment:

Antenna Orientation: 180 degrees vertical, 360 degrees horizontal. All antennas are directional facing down towards the ground.
Antenna Polarization: Left hand circular polarization (LHCP)
Frequencies: 1227.6 MHz, 1575.42 MHz (GPS L2/L1)

Emissions: ~~24M0G1D~~ will change ~~20M4W7D~~
Power at antenna: 12x10⁻¹⁶ watts or 0.0012 picowatts.

Comment: See Boeing's description of the emissions designator.

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3. CONDITIONS OF LICENSE

For all the foregoing programs, the following conditions will apply.

The experimental period will last for two years or 24 months.

In order to ensure no GPS re-radiated signal adversely affects safety-of-life applications, Lockheed Martin will only transmit:

- Indoors;
- Such that no GPS re-radiated signal level greater than or equal to -140 dBm, measured 100 feet from the building perimeter will occur; and
- When testing an airplane indoors is considered necessary by flight-test personnel. - why this caveat?

In addition:

- The "Stop Buzzer" emergency point of contact (POC) will be Mr. Wayne Maynard (661) 572-3516, pager (888) 449-5479. The secondary POC will be Rich Elersich (661) 572-3019, pager (888) 336-5619.
If the POC changes, Lockheed Martin will immediately notify the FCC, FAA, DoD and any other interested agency;
- The location of the GPS transmitters will be fixed and located in such a way that the entire area of potential interference from the GPS transmitters is under the control of Lockheed Martin personnel - the facility where the transmitters will be located is a "secure" facility where security personnel control ingress and egress.

If you have any questions, please contact David Wye at 703-413-5603 or david.wye@lmco.com.