

FCC FORM 442 – EXHIBIT 1

GPS Re-Radiation System Testing to Determine Accuracy of US Army Training Equipment

Lockheed Martin would like to use a GPS Re-Radiation (Re-Rad) system in order to provide GPS signals into a lab used to verify GPS receiver functionality in support of the following US Army contracts:

Contracting Agency: PEO-STRI (Orlando Florida)

Programs: PEO-STRI National Training Center Objective Instrumentation System (NTC OIS) (Soon to be Combat Training Centers Objective Instrumentation System CTC OIS)

PEO-STRI Common Training Instrumentation Architecture (CTIA) Program

PEO-STRI Multiple Integrated Laser Engagement System MILES XXI.

N61339-00-D-0707 STRICOM Omnibus Contract (STOC)

Delivery Orders under STOC:

-0005 MILES XXI

-0012 CTIA

-0017 NTC-OIS

All programs support live training equipment and systems development to assist in training the US Army for force on force and force on target engagements. The Re-Rad system allows the GPS signal to be received inside of the Lockheed Martin lab. This signal is used to verify GPS receiver performance and develop tracking systems.

The GPS re-radiation system is designed to work as follows:

A GPS antenna is positioned on the roof of the Lockheed Martin building in order to receive GPS signals. The GPS signal travels through a coax cable inside the building to a lab where it is connected to a series of attenuators and then to eight GPS antennas. These GPS antennas radiate the original GPS signal into the lab space. The signal level inside the lab space is designed to be equivalent to the GPS signal received on the roof of the building - approximately -160 dBW. The antennas in the labs are omni-directional. Due to the attenuation of the GPS signal by building construction materials, no GPS signal can be received outside the building.

The technical

GPS L1/L2 (1575.42 MHz/1227.6 MHz)

Emission 24M0G1D

Power at antenna is 1×10^{-16} watts or 0.0001 picowatts