

Government Contract Information and Expedited Processing Request

Northrop Grumman Systems Corp. ("NGSC") hereby requests an extension of a fixed experimental radio station facility, as detailed below and in the Form 442 application, beginning on March 2, 2009. Under the Counter Radio-Controlled Improvised Explosive Device Electronic Warfare ("CREW") program and pursuant to contract number N00024-08-C-6309, NGSC is developing systems for the Department of Defense to help troops in the field counteract roadside bombs that are triggered by radio control, improvised explosive devices. The authorization requested herein is necessary to allow NGSC to continue its tests on the CREW system's embedded GPS receiver and external antenna within an internal chamber at NGSC's facilities located at 15120 Innovation Drive, San Diego (San Diego County), California (NAD83: NL 32-59-3 1; WL 117-04-48).

The fixed experimental radio station facilities utilize a NavTech GPS Repeater Kit, GPSRK, which is used as Experimental RNSS Test Equipment for the limited purpose of testing GPS equipment., as described herein. The NavTech GPSRK is comprised of a roof receiver antenna located on the exterior of the building that is cabled to a transmit antenna mounted inside a screen room chamber within the building, which re-radiates the GPS signal. The re-radiated signal remains within the screen room chamber and the area of potential interference to GPS reception is under NGSC's control. The repeater kit re-radiates GPS frequencies L1 at 1575.42 MHz and L2 at 1227.60 MHz, with an emission designator of 24M0G1D and a power of -81.7 dBm EIRP. Please refer to the table below for the link budget analysis to compute the EIRP at a 100 foot distance from the radiating element. The stop buzzer contact to terminate operations for the program is Mr. Paul Wulff (Cell phone: 858-774-8513; Office: 858-592-3296).

Received Power on Earth	-136.2dBm
Receive Antenna Gain	39dBic
Losses in 200 ft./LMR-400	-5.5dB
Connector Losses	-1.0dB
Amplifier Gain	20.0dB
Pwr In to Re-rad Antenna	-84.7dBm
Gain of Re-rad antenna	3.0dBic
Re-rad elrp	-81.7dBm
Screen room attenuation	-92dB
RF Level outside ScreenRoom	-173.7dBm
Free Space loss at 100 ft.	-63.9dB
RF Power Level at 100 ft.	<u>-237.6dBm</u>