

ESA FCC STA License Request

1 Purpose of Operation

Raytheon Largo will use a laboratory test equipment signal source to conduct antenna pattern testing and make antenna gain measurements for deliverable ESAs. The operation will include the following: Station Location ? Largo (Pinellas), FL; North Lat. 27-51-55; West Long. 82-46-57 Station Radiated Signal Characteristics ? Authorized Power 100 mW (ERP) ? Emission Designator ? NON (CW) Airports in near vicinity of and Largo stations ? Tampa International Airport with beacon interrogator (assumed and approximately 15 nmi from Largo station). ? St. Petersburg International Airport (no beacon interrogator and approximately 7.5 nmi from Largo station) Beacon systems at and Tampa airports characteristics ? Antenna gain = +21 dBi (per FAA-E-2660, 5 foot OPA array) ? Transmit power at antenna = 500 Watts peak (assumed, includes 3 dB cable and network losses to interrogator) Station source antenna (line array) characteristics ? Elevation beamwidth = 5.5° at 1060 MHz and 5.2° at 1090 ? Azimuth beamwidth = 60° ? Gain = +12.98 dBi @ 1060 MHz and +13.22 dBi @ 1090 MHz (Gain was calculated using calculated directivity less measured feed network losses) Target Aircraft Transponder characteristics: ? Transponder sensitivity = -77 dBm ? Transponder antenna gain = +1 dBi ? Aircraft cable losses = 3 dB

- File Number: 0911-EX-ST-2012
- Class of Station: FX
- Station Locations: FIXED
- Effective: 12/03/2012
- Expiration: 06/03/2013

2 STA Explanation

As detailed in paragraph 1 above, Raytheon seeks This STA is required to support evaluation and Factory Acceptance Testing of Electronic Scan Antennas for DOD systems. **FAA Coordination : NGT120469 Dated 11/14/2012.**