### **PUBLIC INTEREST STATEMENT**

### 1. <u>Introduction</u>

By the instant request ("Application"), BAE Systems Unmanned Aircraft Programs Inc. ("BAE Systems") requests that the Commission grant to BAE Systems a 2 year experimental license to operate the facilities (the "Facilities") specified in the instant Form 442.

#### 2. Purpose and Nature of the Operation

As the Commission is aware, BAE Systems manufactures and tests antennas as well as RF systems for DOD as well as other governmental customers. This unit's lines of business generally include development and production of small unmanned aircraft and associated ground control station equipment in support of military operations and homeland defense. The transmissions to be conducted pursuant to this license involves the need to test a new radio modem and telemetry transmitter/receiver on the Silver Fox unmanned aircraft, pursuant to government contractual requirements, at the company's manufacturing plant in Tucson, Arizona. All testing is to be conducted at ground level – this experiment will not involve airborne transmissions.

The test is in support of the following government contracts:

Contract Number: W15P7T-09-C-S007: CONTRACTING POC: Giorgio Bertoli Giorgio.Bertoli@us.army.mil TECHNICAL POC is: Bing Mak bing.mak@us.army.mil

Contract Number: FA8650-10-C-7037: CONTRACTING POC: Melinda K. Voiles melinda.voiles@wpafb.af.mil TECHNICAL POC: Vince Parisi vincent.parisi@wpafb.af.mil 937-853-3031 (O); 937-829-4600 (C); 937-904-9846 (O)

#### 3. Minimum Frequency Requirements

While the Application seeks authority for 1370-1390 MHz, this is to confirm that BAE Systems' minimum frequency requirements are a single 300 kHz block, comprised of a center frequency plus 150 kHz below and above the center frequency, to allow for a 20 decibel drop in the radio signal from the center frequency to ensure non-interference.

## 4. <u>Mitigation of Interference/Stop Buzzer</u>.

# A. <u>Mitigation of Interference</u>

Authority is requested for only limited and sporadic operation of the facilities during the authorized timeframe. Specifically, operation of the facilities will occur only from 7:00 am -5:00 pm local time. The majority of operations of the facilities will be conducted inside the laboratory. In addition, during those hours, operation will be sporadic, not continuous. In fact, there may be extended periods of non-operation during the authorized period, while other non-RF transmission aspects of the experiment are conducted.

BAE Systems understands that FAA (or other stakeholders) may require certain limited azimuth and/or elevation blanking in order to ensure that the proposed facilities do not pose a threat of interference to adjacent emitters. Accordingly, this is to confirm that the subject system does have such blanking capabilities and that BAE Systems stands ready to work with FAA to identify any reasonably necessary azimuth and/or elevation restrictions for the system.

Based on the location of the experiment, the technical parameters of the operation, and the manner in which the experiment will be conducted, interference to any co-channel or adjacent channel operations (including for example radio astronomy) is mitigated. For example, the site of this experiment is 40 miles from Kitt Peak, and the elevation at Kitt Peak is approximately 4000 feet higher than the proposed site for this experiment.

# B. Stop Buzzer

BAE Systems advises that Christopher Troudt will be available by wireless telephone at 520-240-2974 and will act as a "stop buzzer" if any issues regarding interference arise during testing.

For the foregoing reasons, BAE Systems respectfully submits that approval of this Application is in the public interest, convenience and necessity.