

Exhibit 1

I. Introduction

By the instant application ("STA Request"), BAE Systems Information and Electronic Systems Integration Inc. ("BAE Systems") requests that the Commission grant Special Temporary Authority ("STA") to permit BAE Systems to operate the facilities (the "Facilities") specified in the instant STA Request.

II. Purpose and Nature of the Operation

BAE Systems manufactures and tests RF systems as well as antennas for DOD as well as other governmental customers. The testing specified in this Application will be conducted by BAE Systems Information and Electronic Systems Integration Inc., which is a major producer of electronic warfare systems, protection systems, and tactical surveillance and intelligence systems for all branches of the armed forces.

In support of Internal Research and Development, the purpose of this authority is to perform developmental/prototype testing on a new radar.

A waiver of the Station ID requirements of 47 CFR §5.115(a) is respectfully requested.

Temporary-fixed and airborne operations will occur as follows:

St. Louis, MO – area operations:

- Temporary-fixed operations within 2 km of the specified center point coordinates
 - o Vandalia Airport, Bear Grove, IL 38° 59' 16"N; 89° 9' 55"W
- Mobile airborne operations with the furthest waypoints lying on a radius of 28 km from the specified centerpoint coordinates. The maximum flight ceiling planned is 3,657 meters (12,000 ft) above ground level (AGL).
 - o ST. Charles, Mo., 38° 55' 34"N; 90° 25' 23"W
Ground elevation above sea level at the center point coordinates is 131 m (429.79 ft.) at this location. The nearest airport to the center point coordinates is 0 km from the center point coordinates.
 - o Valmeyer, IL., 38° 18' 9"N; 90° 18' 32"W
Ground elevation above sea level at the center point coordinates is 129 m (423.2 ft.) at this location. The nearest airport to the center point coordinates is 7.8 km from the center point coordinates.
 - o Vandalia Airport, Bear Grove, IL 38° 59' 16"N; 89° 9' 55"W
Ground elevation above sea level at the center point coordinates is 160 m (524.9 ft.) at this location. The nearest airport to the center point coordinates is 0 km from the center point coordinates.

Galveston, TX – area operations:

- Temporary-fixed operations within 2 km of the specified center point coordinates 29° 16' 5"N; 94° 51' 21"W" (Galveston Aviation Services 2115 Terminal Dr, Galveston, TX)
- Mobile airborne operations with the furthest waypoints lying on a radius of 48 km from the three specified centerpoint coordinates below. The maximum flight ceiling planned is 3,657 meters (12,000 ft) above ground level (AGL).
 - o Galveston, Tx., 29° 16' 5"N; 94° 51' 21"W
Ground elevation above sea level at the center point coordinates is 160 m (524.9 ft) at this location. The nearest airport to the center point coordinates is 0 km from the center point coordinates
 - o Freeport, Tx., 28° 56' 9"N; 95° 17' 49"W
Ground elevation above sea level at the center point coordinates is 1 m (3.2 ft) at this location. The nearest airport to the center point coordinates is 0 km from the center point coordinates
 - o Sea Rim, State Park, Tx., 29° 40' 36"N; 94° 2' 40"W
Ground elevation above sea level at the center point coordinates is 1 m (3.2 ft) at this location. The nearest airport to the center point coordinates is 14.8 km from the center point coordinates

III. Directionality/Orientation

At each location, a “Yes” reply has been inserted in response to the question “Is a directional antenna (other than radar) used?” because in each scenario there will be a mix of directional and non-directions antennas used. The following information is provided with respect to the directional antennas to be used at each location:

St. Louis, MO – area operations:

Directional Antennas used for Ground-Based Transmissions:

Antenna	Beamwidth at Half-Power Point	Orientation in Horizontal Plane	Orientation in Vertical Plane
2x2 Horn Array	8°	Horizontal	Horizontal

Directional Antennas used for Airborne Transmissions:

Antenna	Beamwidth at Half-Power Point	Orientation in Horizontal Plane	Orientation in Vertical Plane
2x2 Horn Array	8°	Horizontal	Horizontal

Galveston, TX – area operations:

Directional Antennas used for Ground-Based Transmissions:

Antenna	Beamwidth at Half-Power Point	Orientation in Horizontal Plane	Orientation in Vertical Plane
2x2 Horn Array	8°	Horizontal	Horizontal

Directional Antennas used for Airborne Transmissions:

Antenna	Beamwidth at Half-Power Point	Orientation in Horizontal Plane	Orientation in Vertical Plane
2x2 Horn Array	8°	Horizontal	Horizontal

IV. **Interference Mitigation**

BAE Systems is well aware of its obligations under Part 5 of the Commission's rules to avoid interference to co-channel licensees in non-experimental services, and will take all steps to ensure compliance with this obligation. In addition, the following factors will help mitigate any interference issues:

- The antenna under test has an 8-degree beamwidth in both azimuth and elevation. It has an electronically steerable beam with -9 dB first sidelobe, all others 20 dB or lower. Generally during testing, emission will be limited to short periods of less than 5 minutes, and only periodically with an overall duty cycle of less than 10% during tests. During testing, targets will primarily be located on the ground and emission will be typically limited to no more than 10 degrees above the horizon. These typical test conditions will represent 90% or more of the testing done under this license.
- Most testing will be limited to ground-based operation with the emitting antenna generally located no higher than 10 feet from the ground and the elevation of the main beam not exceeding +10 degrees elevation. Other tests, from a tower, will have the antenna directed down toward the ground.
- Testing will be sporadically planned and executed throughout the course of this license, typically for one to three days at a time at an expected frequency of several times a month. Testing will typically only occur between the hours of 8AM and 6PM EST on week days.
- Outdoor testing will not be continuous. Emissions will be active for short durations no longer than 5 minutes at a time (maximum) with an average on-time more on the order of 2-5 minutes. During a test, emissions will be activated for these durations periodically with several minutes between emissions at a minimum, if not longer. Overall, during a full day of testing the expected total time spent emitting would be on the order of 30 to 60 minutes on average.

V. Stop Buzzer

The following will be available by wireless telephone and will act as the “stop buzzer” if any issues arise during testing:

PRIMARY:	Todd Beard (C) 603-508-8234
SECONDARY:	Jason Stockwell (C) 603-459-4458