

Exhibit 1

1. Introduction

By the instant application (“Application”), BAE Systems Information and Electronic Systems Integration Inc. (“BAE Systems”) requests that the Commission grant Special Temporary Authority (STA) to operate the facilities (the “Facilities”) specified in the instant application. STA is requested for a period of six (6) months.

2. Purpose of the Operation

The testing conducted by BAE Systems is a critical part of the manufacture and delivery of military systems provided to the Armed Forces in support of Homeland Security as well as war efforts. This STA request is sought to allow BAE Systems to characterize performance for an antenna under development. The purpose of these tests is to measured gain over field of view of an antenna that is a critical part of the system delivered to the customer. This testing is required to verify total system performance.

3. Contract Information

The contract information associated with the operation under this STA is as follows:

Agency/Customer:	US Air Force
Contract Number:	FA8002-18-C-0238
Contract POC:	Maj. Michael Black - (202) 767-3290
	Maj. John Kessler - (202) 767-2663

4. Waiver of Station ID Requirements

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

5. Other Issues

A. Antenna Data

The following information is provided with respect to the directional antennas to be used:

Antenna	Beamwidth at Half-Power Point			Orientation in Horizontal Plane	Orientation in Vertical Plane
Sunol Sciences JB1	Freq	E-Plane	H-Plane	Cross-Polarized	Co-Polarized
	<u>MHz</u>	<u>deg</u>	<u>deg</u>		
	50	90	omni		
	90	90	omni		
	150	80	180		
	200	60	100		
	500	60	100		
	1000	50	100		
Sunol Sciences JB6	Freq	E-Plane	H-Plane	Cross-Polarized	Co-Polarized
	<u>MHz</u>	<u>deg</u>	<u>deg</u>		
	50	90	omni		
	90	90	omni		
	150	80	180		
	200	60	100		
	500	60	100		
	1000	50	100		

B. RF Source

An Agilent N5230A Network Analyzer, E8362B Network Analyzer, or equivalent will be used as the RF Source for these operations.

C. Additional Signal Amplification

Additional signal amplification is necessary to achieve a useful signal to noise ratio for the received signal. The output power of the system will be measured and verified to comply with the radiated output power limits set forth in the license.

Manufacturer	Model Number	Frequency Range	Gain
Ophir	5094	1-1000 MHz	36 dB

6. 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:

- Testing will be limited to ground-based operation with the emitting antenna located on the ground or no higher than 40 feet above the ground on a tower. During all testing, transmissions from the tower will be conducted with the transmit antenna pointed down to the receive antenna located on the ground at a distance of 100 feet from the transmit location.
- Outdoor testing will not be continuous. Operations require rotation of the test article during which time the emissions are turned off while the test article is repositioned for the next data collection point. For a typical 20-minute antenna pattern collection, short-duration transmissions for less than a second are emitted 72 times, spaced out equally across the 20 minutes. The maximum number of pattern collections for any day is 24. The total on-time for any one frequency will be less than 0.5 seconds for each 20 minute test, or less than 1.5 seconds total within any hour, and less than 12 seconds for any day.

7. Stop Buzzer

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

PRIMARY:	George Moynihan - (603) 689-8630
SECONDARY:	BAE Systems Emergency Services Center - (603) 885-3842