

Exhibit 1

1. Introduction

By the instant application (“Application”), BAE Systems Information and Electronic Systems Integration Inc. (“BAE Systems”) requests that the Commission grant a 2 year experimental license to permit BAE Systems to operate the facilities (the “Facilities”) specified in the instant application.

2. Purpose of the Operation

The testing at the Merrimack Antenna Test Facilities 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. The research development testing for which authority is requested in this Application will involve putting a transmit source at elevated height to enable BAE to collect conical antenna patterns. At this time, there is currently no government contract information specifically associated with the requested frequency request. If and when the facilities are to be used to implement the requirements of a specific government contract, BAE Systems will notify the Commission, or seek any necessary approvals, at such time.

3. Other Issues

A. Antenna Data. The following is provided with respect to the experimental antennas to be used in this experiment.

i. Directional Antennas

Certain of the Antennas to be used in connection with this experiment are directional in nature. Directional antennas will transmit along a 215.6 deg line of bearing and be tilted downward as much as 30 deg towards fixed target on the ground. The angle of declination will vary with height of transmit antenna to remain aimed at fixed point. For the convenience of the Commission, the chart below defines certain specifications relating to the directional antennas that are intended to be used in the requested experiment:

Mfg.	Model Number	Frequency Range	Gain	BW		
Sunol Sciences	JB-1	30 – 2000 MHz	<0 dBi below 100 MHz, <5 dBi below 200 MHz, 7 dBi max 200 – 2000 MHz	Freq <u>MHz</u> 30 200 1000 2000	E- <u>Plane</u> 90° 60° 50° 50°	H- <u>Plane</u> Omni 100° 100° 100°
Emco	3106	100 – 2000 MHz	13 dBi max across band	Freq <u>MHz</u> 200 1000 2000	E- <u>Plane</u> 90° 65° 55°	H- <u>Plane</u> 80° 40° 40°

ii. Non-Directional (OMNI) Antennas

Certain of the Antennas to be used in connection with this experiment are non-directional in nature. For the convenience of the Commission, the chart below defines certain specifications relating to the non-directional antennas that are intended to be used in the requested experiment:

Mfg.	Model Number	Frequency Range	Gain	BW
Shakespeare	Style 120	0.850 – 30 MHz	0 dBi	Omni
RF Harris	RF-1930CHD	1.6 – 30 MHz	0 dBi	Omni

B. Additional Signal Amplification

Due to the low gain of the transmit antennas, an additional signal amplification is to be utilized.

Mfg.	Model Number	Frequency Range	Gain (Nom.)
HP	8347A	100 KHz – 3 GHz	20 dBm

C. RF Source

Agilent N5230A PNA-L Network Analyzer 300 KHz to 13.5 GHz.

D. Variable Height of Transmit Antenna

This experiment will involve raising a transmit antenna above the ground to characterize the elevation response of a fixed target. The transmit antenna height will vary between 0 and 19.5 meters. The maximum antenna length will be 9.75 meters resulting in the tip of the tallest antenna to be located between 9.75 and 29.25 meters above the ground. At Figure 1 attached hereto, a visual depiction of the variable height of the transmit antenna is provided.

E. Prevention of Interference

BAE Systems hereby advises the Commission that the tests to be conducted under the requested Commission authorization are to be conducted near the center of BAE Systems' Merrimack, New Hampshire facilities. Such location will result in the separation of the test facilities from other existing transmit or receive facilities. BAE Systems' Brian Egan will be personally conducting the test and will be available by telephone at (603) 885-3173. Mr. Egan will act as a "stop buzzer" if any issues regarding interference arise during testing.

F. Note Regarding Conditions Applicable to Frequency Requests

It is noted that the facilities specified herein were previously granted by the Commission under STA under File No. 0098-EX-ST-2008. In order to help expedite processing and grant of this Application, BAE Systems confirms that it will accept the same Special Conditions imposed with respect to the grant issued under File No. 0098-EX-ST-2008.

FIGURE 1 – DEPICTION OF VARIABLE HEIGHT OF TRANSMIT ANTENNAS

