

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 permit BAE Systems 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 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 STA Request 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. STA is requested because the specified testing is anticipated to be completed within 6 months of grant

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 Nos. 0202-EX-PL-2005, 0168-EX-ST-2006, 0542-EX-ST-2006, 0060-EX-ST-2006, and 0154-EX-PL-2005 for a transmit antenna height at less than 6 meters off the ground. The purpose of this application is to request a transmit antenna height of up to 29.25 meters above the ground, with a slightly expanded mobile area of operation of .20 km radius around the specified centerpoint. (File Nos. 0202-EX-PL-2005, 0168-EX-ST-2006, 0542-EX-ST-2006, and 0154-EX-PL-2005 were granted on a fixed basis at the same centerpoint specified in the instant STA Request. File No. 0060-EX-ST-2006 was granted with an area of operation which includes the area of operation specified in this STA Request).

In order to help expedite processing and grant of this STA Request, BAE Systems confirms that it will accept any previously-imposed “frequency carve-outs” or other restrictions imposed with respect to the grants issued under File Nos. 0202-EX-PL-2005, 0168-EX-ST-2006, 0542-EX-ST-2006, 0060-EX-ST-2006, and 0154-EX-PL-2005. Those carve-outs are listed below for the convenience of the Commission staff:

Frequency/Band Specified on Instant STA Request	Previously-Imposed Carve-Out or Restriction
2 – 5 MHz	No Operation on: 2.1834 ± 0.0015 MHz 3.0244 ± 0.0015 MHz 4.1264 ± 0.0015 MHz Operation not allowed at 5 W, but pending request at 0.1 W 2.850 - 3.025 MHz 3.400 - 3.500 MHz 4.650 - 4.700 MHz See Applicable Conditions in: File Nos. 0542-EX-ST-2006; 0168-EX-ST-2006
5 – 74.8 MHz	No Operation on: Operation not allowed at 5 W, but pending request at 0.1 W 5.450 - 5.680 MHz 6.525 - 6.685 MHz 8.815 - 8.965 MHz 10.005 - 10.100 MHz 11.275 - 11.400 MHz 13.260 - 13.360 MHz See Applicable Conditions in: File Nos. 0542-EX-ST-2006, 0168-EX-ST-2006

228.8 – 328.6 MHz	No Operation on: 228.900 ± 0.0125 MHz 239.025 ± 0.0125 MHz 243.000 ± 0.050 MHz 244.875 MHz 254.250 ± 0.0125 MHz 255.400 ± 0.0125 MHz 260.900 ± 0.0125 MHz 263.050 ± 0.0125 MHz 279.600 ± 0.0125 MHz 281.475 MHz 307.900 ± 0.0125 MHz Operation not allowed at 0.5 W, but allowed at 0.00316 W 257.800 ± 0.0125 MHz 263.000 ± 0.0125 MHz 263.100 ± 0.0125 MHz 269.300 ± 0.025 MHz 269.400 ± 0.0125 MHz 273.450 ± 0.0125 MHz 277.400 ± 0.025 MHz 282.200 ± 0.025 MHz 284.750 ± 0.025 MHz See Applicable Conditions in: File Nos. 0010-EX-ST-2005, 0154-EX-PL-2005, 0060-EX-ST-2006, 0221-EX-ST-2005, 0293-EX-PL-2007 FAA Coordination Letter: February 7, 2008
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335.4 – 454 MHz	No Operation on: 338.20 ± 0.010 MHz 348.70 ± 0.010 MHz 350.350 MHz 353.850 MHz 360.60 ± 0.010 MHz 364.20 ± 0.010 MHz 370.90 ± 0.010 MHz 380.250 MHz 381.40 ± 0.010 MHz 385.45 ± 0.010 MHz 387.000 MHz 406.10 ± 0.010 MHz Operation not allowed at 0.5 W, but allowed at 0.00316 W 269.30 ± 0.025 MHz 341.70 ± 0.025 MHz 343.60 ± 0.025 MHz 353.70 ± 0.025 MHz 354.10 ± 0.025 MHz 370.00 ± 0.025 MHz 381.65 ± 0.025 MHz 382.00 ± 0.025 MHz See Applicable Conditions in: File Nos. 0010-EX-ST-2005, 0060-EX-ST-2006, 0221-EX-ST-2005, 0154-EX-PL-2005
456 – 470 MHz	Avoid Harmful Interference with Medical Equipment Comms: 462.95-463.175 MHz See Applicable Conditions in: File No. 0816-EX-ST-2006
933 – 1200 MHz	No Operation on: 962 ± 1.0 MHz 1000 MHz 1082.375 MHz 1100 MHz 1148 ± 1.0 MHz 1200 MHz See Applicable Conditions in: File Nos. 0060-EX-ST-2006, 0293-EX-PL-2007 FAA Coordination Letter: February 7, 2008

FIGURE 1 – DEPICTION OF VARIABLE HEIGHT OF TRANSMIT ANTENNAS

