

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 the period of 08/15-12/31/2019.

2. 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. This unit's lines of business include Electronic Warfare/Electronic Protection, Electronic Warfare/Information Warfare, Integrated Defense Solutions, and Mission Electronics with products and services spanning the whole electromagnetic spectrum.

BAE Systems developed and produces SIGINT systems used by US Government military customers. This experiment will involve calibration and testing to enhance the performance, capabilities and accuracy of the subject SIGINT system. This technology will be incorporated into active military weapons systems, which in turn will directly improve the success and utility of the military missions flown by the SIGINT system in the areas of deployment. This request is in direct support of US Army and their contract with BAE Systems, as follows:

Customer:	US Army
Contract No. :	W56KGY-16-D-0013-0002
Customer Contract POC:	Freddie Lee – (443) 861-2309; Freddie.a.lee.ctr@mail.mil

3. Waiver of Station ID

Waiver of the Station ID rules set forth at Section 5.115 is respectfully requested.

4. Stop Buzzer

The designated point-of-contacts to terminate transmissions if interference occurs is:

BAE Systems Stop Buzzers:
Stephen (Speedy) Lang; Transmit Station Engineer; 603-738-7295

Note: Because Dugway Proving Ground is in a very remote area and is surrounded on three sides by mountain ranges, cell coverage may be limited. Accordingly, the following additional “Stop Buzzers” are provided, with their landline numbers, who are located on site

DPG RIAC Test Facility Test Leads
Doug McDaniel; 256-759-7642; 435-831-7841; Nate Critchlow; 435-841-1474

DPG Spectrum Manager
Jason Straughan; 435-831-3411

Antenna #1 (DDSI):

Purpose/Description:

The operations under this antenna registration will enable the SIGINT system to quickly and accurately locate targets directly under the aircraft.

Frequency Requirements:

Although the frequencies for this antenna are listed as ranges (698-752 MHz; 801.5-960 MHz; 1711.2-1984.75 MHz; 2110.2-2169.8 MHz; 2502.2-2531.8 MHz), at any given time, BAE Systems will not occupy the entirety of the bands listed in the Application. In fact, at any given time, within each of the band segments specified on the Application BAE Systems will only be transmitting within a 30 MHz sub-band for a very brief duration on only a select group of frequencies. Specifically, within each such 30 MHz sub-band, BAE Systems will operate as follows:

- Operation will occur on 165 frequencies (32 “groups” of 5 frequencies)
- Each of the 5 frequencies in each “group” will be separated by 5 KHz frequency spacing
- Operation will occur within the 30 MHz sub-band for up to 25msec, then operation will move to the next 30 MHz sub-band.

Additional information regarding specific discrete frequency requirements can be supplied upon request.

Directionality/Orientation:

Width of beam in degrees at the half power point: 30

Station Orientation: 30 degrees off Zenith in the direction of 210 degrees.

Transmitting Equipment

<u>Manufacturer</u>	<u>Model</u>	<u>Quantity</u>	<u>Experimental (Yes/No)</u>
Agilent Signal Generator	MXG N5182A	2	No

Antenna #2 (Standoff):

Purpose/Description:

The operations under this antenna registration will enable the SIGINT system to locate horizontally relative to the aircraft.

Frequency Requirements:

Although the frequencies for this antenna are listed as ranges (20.010-99.250 MHz; 100.250-755.825 MHz; 798.450-959.925 MHz; 1704-1785 MHz; 1800-2936.425 MHz), at any given time, BAE Systems will not occupy the entirety of the bands listed in the Application. In fact, at any given time, within each of the band segments specified on the Application BAE Systems will only be transmitting within a 30 MHz sub-band for a very brief duration on only a select group of frequencies. Specifically, within each such 30 MHz sub-band, BAE Systems will operate as follows:

- Operation will occur on 396 frequencies in groups of up to 4 frequencies.
- Each of the 4 frequencies in each “group” will be separated by between 10 KHz and 30 MHz frequency spacing.
- Operation will occur within the 30 MHz sub-band for up to 25msec, then operation will move to the next 30 MHz sub-band.

Additional information regarding specific discrete frequency requirements can be supplied upon request.

Transmitting Equipment and Directionality/Orientation:

Make	Model	QTY	1/2 Pwr BeamWidth	Horizontal Orientation	Vertical Orientation	Experimental
LOW BAND						Y
Agilent	N5182A	2	n/a			
Empower	2108	2	n/a			
Signal Antenna	SA LP20DP	1	60°	+210°	Horizon + 30°	
MID BAND						Y
Agilent	N5182A	2	n/a			
Empower	2108	2	n/a			
Scientific Atlanta	29-0.1	1	60°	+210°	Horizon + 30°	
HIGH BAND						Y
Agilent	N5182A	2	n/a			
Amplifier Research	175S1G4	2	n/a			
Ant. Des. & Mfg.	LPDA-13/ADP	1	65°	+210°	Horizon + 30°	