

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 to permit BAE Systems to operate the facilities (the “Facilities”) specified in the instant Application.

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.

The purpose of this test is to permit continued demonstration of proof of concept operations as support for the development of a counter-RPG tracking radar for Intelligence and Information Warfare Directorate (I2WD) of the US Army Communications-Electronics Research, Development and Engineering Center (CERDEC), in support of the following government contract and for Internal Research and Development:

Contract Number: W56KGU-15-C-0067
Agency Customer: Intelligence and Information Warfare Directorate (I2WD)
ATTN: RDER-IWR-AS (MAPS)
6003 Combat Drive
APG, MD 21005
Contract POC: Francis (Frank) L. Gillan
Tel: (443) 861-1407

NOTE: The license is requested to permit operation in support of the above contract AND ALSO for Internal Research and Development.

STA is required to include the Austin TX BAE Systems location because critical personnel are located at that site to perform the radar work described above. Part of this critical work involves outdoor experiments to characterize the radar.

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

3. Other Issues

A. Antenna Data

For the convenience of the Commission, the following chart defines certain specifications relating to the antennas that are to be used in the experiment:

Mfg.	Model Number	# Units	Exper. Yes/No	Frequency Range	Gain	Beamwidth
Echodyne	MESA-K-EVU	4 per radar	No	23.7 – 24.5 GHz	21 dBi	2 degrees, E-Plane 7.5 degrees, H-Plane
Fairview Microwave or equivalent	SH142-20	4 per radar	No	18 – 26.5 GHz	20 dBi	17.5 degrees, E-Plane 17.8 degrees, H-Plane

B. RF Sources

The transmitter will be a BAE Systems custom design. The signal is created by a crystal referenced PLL, then amplified and transmitted through an electronically scanned antenna. The waveform is CW, tunable between 23.7 and 24.5 GHz, transmitting a pair of frequencies separated by 50 KHz to 2 MHz; either simultaneously or alternating at a rate between 10 kHz and 70 kHz.

BAE Systems notes that the transmissions will be non-pulsed signals.

The transmitter power will be adjusted to assure that the requested ERP level is not exceeded.

C. Stop Buzzers

Stop Buzzers:

Primary: Eric Rundquist, 603 809-8960

Alternate: Jake Freedman 603 867-1028