

PUBLIC INTEREST STATEMENT

1. Introduction

By the instant request (“STA Request”), BAE Systems Controls Inc. (“BAE Systems”) requests that the Commission grant to BAE Systems Special Temporary Authority (“STA”) to operate the facilities (the “Facilities”) specified in the instant STA Request. A Start Date of June 15, 2009 is respectfully requested.

2. Purpose and Nature of the Operation

The testing specified in this STA Request will be conducted by the Platform Solutions business unit of BAE Systems Controls, Inc. (“BAE Systems”), which is a subsidiary of BAE Systems Inc. BAE Systems manufactures and tests antennas as well as RF systems for DOD as well as other governmental customers. This unit’s lines of business include integrated flight control and navigation systems. The Controls unit also provides Unmanned Aircraft Systems (UAS). STA is requested because the specified testing is anticipated to be completed within 6 months of grant.

The testing to be conducted pursuant to this STA Request involves the integration, verification, and validation of a new datalink for the Skyeeye® Unmanned Aircraft System being supplied by BAE Systems to the Government of Egypt. The test will verify the performance of the command uplinks and the video/telemetry downlinks using a general aviation aircraft (Cessna 182).

The test is in support of a US Government Funded contract with the Government of Egypt. The end user of the datalink is the Reconnaissance Department.

The experiment is in support of the following contract:

Customer: Egyptian Ministry of Defense Armament Authority
Contract: Foreign Military Financed (FMF) Direct Commercial Contract
Contract Number: CAIRO/F/ST/BAE/2007/3
Point of
Contact: Maj. Gen. Haysam M. Hammouda
Embassy of the Arab Republic of Egypt
Procurement Office
5500 16th Street, NW
Washington DC, 20011
Telephone: (202) 829-4909

3. **Descriptions of Ground-Based and Airborne Transmissions**

Transmissions will originate from the ground and the air, as follows:

A. **Ground-Based Transmissions:**

Temporary-fixed ground-based locations within a 5 km radius around one or both of the following centerpoint coordinates (less than 6 m above ground):

Primary Ground Location:

Hansen Airfield (Adelanto, CA)
Near El Mirage Dry Lake; Approx. 25 mi E of Palmdale
34-38-17 N.Lat.; 117-39-59 W.Long. (.5 km radius)

Alternate Ground Location:

9 mi E of Hansen Airfield
34-40-23 N.Lat.; 117-31-23 W.Long. (1 km radius)

B. **Airborne Transmissions:**

Mobile airborne transmissions originating from a Cessna 182 aircraft, within a 110 km radius around the centerpoint coordinates of 34-48-00 N. Lat; 116-45-00 W. Long. Maximum flight ceiling planned is 2,725 m above ground level. The nearest airport to the centerpoint coordinates is Barstow-Daggett which is 9 km away from the flight path centerpoint coordinates. Ground elevation above sea level is 1,123 m at the centerpoint coordinates.

See attached map specifying the airborne area of operations. The coordinates of the boundaries of the flight path are:

West Corner: 34-39-00 N.Lat.; 117-48-00 W.Long.
NE Corner: 35-28-00 N.Lat.; 115-42-00 W.Long.
SE Corner: 34-44-30 N.Lat.; 115-30-00 W.Long.

For the C-band Airborne transmissions (5675-5850 MHz), the antenna will be located at the bottom of the aircraft just aft of the main gear, pointing down. For the S-band Airborne transmissions (2010-2100 MHz), the antenna will be located on the aircraft strut, pointing up.

Prior to each flight BAE Systems will coordinate with the FAA and the Western Area Frequency Manager. The FAA High Desert TRACON, based at Edwards Air Force Base will be provided with a flight plan. The Western Area Frequency Manager will be provided with specific frequencies to be used on each flight to ensure our operations do not interfere with the operations in the area's test ranges.

4. **Transmitting Equipment**

Manufacturer	Model	Quantity	Experimental?
Broadcast Microwave Services, Inc.	BMT85-7ANS-14-DD	1	N
Broadcast Microwave Services, Inc.	BMT85-6ANS-20-DD	1	N
Broadcast Microwave Services, Inc.	BMU85-1ADSS	1	N
Broadcast Microwave Services, Inc.	BMU85-6ADSS	1	N
ICOM	IC-A200	1	N

5. **Directionality of Ground-Based Antennas**

The Antenna Registration for the ground-based transmissions specifies “Yes” in response to the question: “Is a directional antenna used?”. This is to clarify that – for the Ground-Based transmissions, the 118-136.975 MHz band employs omnidirectional antennas. However, the antennas used for the 1433 MHz and 5250-5475 MHz transmissions are directional, with the following characteristics:

Band/Antenna	Gain (Nominal)	Width of Beam in Degrees at half- power point
1433 MHz BMU85-1ADSS	13 dBi	22° Azimuth 60° Elevation
5250-5475 MHz BMU85-6ADSS	34.5 dBi	at 5.5 GHz 3.8° Azimuth 6.8° Elevation

6. Frequency Tolerances

Ground-Based Transmissions:

122.7 and 122.8 MHz – Tolerance: Tuning Steps 25 kHz, 50 kHz or 1 MHz
Freq. Stability - .0015% $\approx$ 2 kHz

1433 MHz – Tolerance: $\pm$ 1PPM (6 kHz); Bandwidth = 20 MHz

5250-5475 MHz – Tolerance: $\pm$ 1PPM (6 kHz); Bandwidth = 20 MHz

Airborne Transmissions:

2010-2100 MHz – Tolerance: $\pm$ 5PPM (30 kHz); Bandwidth = 15 MHz

5675-5850 MHz – Tolerance: $\pm$ 5PPM (30 kHz); Bandwidth = 15 MHz

7. Stop Buzzer.

BAE Systems hereby advises that Keith Dock will be available by wireless telephone at (909) 957-0238 and will act as a “stop buzzer” if any issues regarding interference arise during testing

For the foregoing reasons, BAE Systems respectfully submits that approval of this STA Request is in the public interest, convenience and necessity.

[illegible]

SE Corner: 34-44-30 N. East

West Corner: 34-39-00 N.Lat.; 117-48-00 W.Long.

Approximate Airborne Center Point

Hansen Field	Alternate Site
1. Location: Hansen Field, located at the intersection of [Address] and [Address] in [City, State, ZIP]. 2. Access: Access is provided via [Access Details]. 3. Facilities: The site includes [Facilities List]. 4. Utilities: Available utilities include [Utilities List]. 5. Security: Security measures include [Security Measures]. 6. Environmental: Environmental considerations include [Environmental Factors]. 7. Costs: Estimated costs for the site are [Costs]. 8. Other: Other relevant information includes [Other Information].	1. Location: Alternate Site, located at [Address] in [City, State, ZIP]. 2. Access: Access is provided via [Access Details]. 3. Facilities: The site includes [Facilities List]. 4. Utilities: Available utilities include [Utilities List]. 5. Security: Security measures include [Security Measures]. 6. Environmental: Environmental considerations include [Environmental Factors]. 7. Costs: Estimated costs for the site are [Costs]. 8. Other: Other relevant information includes [Other Information].