

Explanation of Application

By the instant application ("Application for Permanent Authority"), BAE SYSTEMS Information and Electronic Systems Integration Inc. ("BAE SYSTEMS") requests that the Commission grant a new experimental license to BAE SYSTEMS to permit it to operate -- on a permanent basis -- the facilities (the "Facilities") specified in the instant FCC Form 442, which (except for changes in certain frequency, ERP and emissions designations identified in Section 3 below) are the same technical parameters previously authorized to Lockheed Martin Corporation ("Lockheed") under the now-expired Experimental license WA2XSS (the "Station").

It is noted that prior to the filing of the instant Application for Permanent Authority, BAE SYSTEMS submitted to the Commission a request ("STA Request") which seeks Commission grant of special temporary authority ("STA") to BAE SYSTEMS to permit BAE SYSTEMS to continue operation of the Facilities for a period of six (6) months, or until such time as the Commission acts upon the instant Application for Permanent Authority. The STA Request is currently pending before the Commission under File No. 0120-EX-ST-2003.

1. **Purpose of the Operation**

Generally, the subject Facilities are used for active, radiating testing at the AIMS Antenna Test Range located in Lebanon, NJ, as part of the performance of U.S. Navy Contract No. N00019-99-C-1663. These facilities have been used for decades under a variety of Navy contracts, which have been continuously renewed. The Navy contact person for this Contract is Roy S. Chesley, NAVAIR PMA 2133D (Tel: 301-995-6319).

More specifically, the OE-120/UPX is an advanced electronically steered circular antenna system developed for the U. S. Navy. It is part of the AEGIS battle control system installed on Navy destroyers, cruisers, amphibious assault, and aircraft carrier platforms. Its primary purpose is to provide IFF (Identification Friend or Foe) data to the battle control system with a secondary purpose of providing fire control data to the AEGIS system if main radar is degraded. The AIMS antenna is used as the passive transmit/receive element of the shipboard antenna system that operates with the IFF system in all military IFF modes or in military and commercial air traffic control radar beacon system (ATCRBS) equipment.

There are over 100 OE-120/UPX AIMS antenna systems in Navy service. The current and follow-on production contract will be active through 2008 in support of the Navy shipbuilding program. In addition, the AIMS IFF antenna is being considered for use by the Coast Guard for Homeland Security.

BAE SYSTEMS manufactures and tests each OE-120/UPX Antenna using various Navy Acceptance Test Procedures. The testing involves both passive, non-radiating and active, radiating testing. The passive, non-radiating testing takes place at the BAE SYSTEMS manufacturing facility in South Nashua, NH. The active, radiating testing, using the Facilities that are the subject of this STA Request, takes place at the AIMS Antenna Test Range located in

Lebanon, NJ. The division of these two test areas can be seen in Acceptance Test Procedure ATP06009346. The non-radiating tests are grouped in sections 6 and 7 of this ATP with the radiating testing grouped in section 8. The ATP document is property of NAVAIR.

2. Why Grant of a New License is Necessary

The Station was originally authorized to, and operated by, Lockheed Martin Corporation ("Lockheed"), first under the call sign KK2XGG and then subsequently under the call sign WA2XSS (for the purpose of this Application for Permanent Authority, the subject Facilities will be referred to as the Station although they have been previously authorized under these two different call signs).

In connection with a transaction, completed on November 27, 2000, BAE SYSTEMS acquired, and assumed day-to-day operation of, the Facilities authorized under the Station's license. BAE SYSTEMS and Lockheed will be referred to herein collectively as the "Parties".

Although BAE SYSTEMS acquired the Facilities effective November 27, 2000, and has operated the Facilities since that time, prior Commission approval inadvertently was not obtained by Lockheed and BAE SYSTEMS for the assignment of the Station's license to BAE SYSTEMS. The failure to obtain Commission consent for the assignment of the Station's license was completely unintentional and BAE SYSTEMS apologizes for the delay in the filing of the STA Request and the Application for Permanent Authority. In this regard, BAE SYSTEMS hereby advises the Commission that it has reviewed its internal regulatory and transactional procedures and it is taking appropriate steps to ensure that such errors will not re-occur with respect to this license, or any other licenses it holds. To ensure future compliance, BAE SYSTEMS has authorized outside counsel to assist it in establishing and maintaining a licensing compliance program to ensure future compliance with Commission rules and procedures.

Although BAE SYSTEMS previously operated the Facilities while they were authorized under the call sign WA2XSS, the license was inadvertently not timely renewed and has, therefore, expired.

Accordingly, because BAE SYSTEMS continues to operate the Facilities, it is necessary that the company obtain from the Commission (i) STA to operate the Facilities in light of the expiration of the license of Station WA2XSS, pursuant to the previously-filed STA Request; and (ii) permanent authority from the Commission to operate the Facilities, pursuant to the instant Application for Permanent Authority.

The testing at the AIMS Antenna Test Range is a critical part of the manufacture and delivery of antennas to the Navy. The active range transmission parameters have been designed, tested and verified so as not to impact the operation of commercial FAA air traffic control radar beacon systems located in the area. Continued operation of the AIMS Antenna Range in support of the contract delivery to the Navy of OE-120/UPX IFF Antenna systems is required to meet existing and planned Navy ship delivery schedules and mission requirements.

Accordingly, approval of this Application for Permanent Authority, along with the STA Request, is in the public interest, convenience and necessity.

3. Technical Issues

The frequencies on which the Station was previously authorized under Call Sign WA2XSS to operate were as follows:

<u>Frequencies</u>	<u>Authorized Power (ERP)</u>	<u>Emission Designator</u>
1025-1035 MHz	20 W	N0N
1030 MHz	2 kW	1M00P0N
1084-1093 MHz	20 W	N0N

In December, 1999, the FAA contacted Lockheed to resolve an IFF interference issue involving apparent interference with IFF interrogations from Newark (EWR) or Kennedy (JFK) airports. Specifically, the FAA had determined that Lockheed's 1030 MHz (2 kW) operations was the source of such interference. As a result, Lockheed and the FAA agreed to modify the Station's authorized frequencies as follows to avoid such interference:

<u>Frequencies</u>	<u>Authorized Power (ERP)</u>	<u>Emission Designator</u>
1025-1035 MHz	1 W	N0N
1055-1065 MHz	10 kW	N0N
1087-1093 MHz	1 W	N0N

Attached hereto is a copy of an e-mail message dated February 22, 2000, from then-Lockheed employee, Eugene Curtis, to the FAA's Don Nellis confirming the agreed-upon frequency and power change to resolve the interference problem. Although the Parties recall having sent paperwork to the FAA for processing this change, such paperwork does not appear to have been processed by the FAA or the FCC.

As a result of the above-described agreement with the FAA, on or about March, 2000, the Facilities have been operated at the new, agreed-upon frequencies, power and emissions. BAE SYSTEMS has, similarly, operated the Facilities at these modified parameters since its acquisition of the Facilities in November, 2000. Other than the changed parameters above-described, BAE SYSTEMS is seeking authorization under the same parameters previously authorized under call sign WA2XSS.

4. Equipment List

For the convenience of the Commission, the following is a list of the equipment being used to implement this program at the AIMS Antenna Test Range located in Lebanon, NJ, under U.S. Navy Contract No. N00019-99-C-1663:

<u>Description</u>	<u>Manufacturer</u>	<u>Model</u>
Transmit Antenna	Electronic Specialties	
Synthesized Signal Generator	Hewlett-Packard	8660C
RF Section Plug In	Hewlett-Packard	86602B
Frequency Extension Module	Hewlett-Packard	11661B
Microwave Amplifier	Servo Microwave Amplifier	2112
Frequency Counter	Hewlett-Packard	5245L with 5245B plug in
Directional Coupler	Narda	3002-30
Directional Coupler	Narda	3002-20
Antenna Support Fixture		
Three Axis Positioner	Scientific Atlanta	55290
Positioner Control Unit	Scientific Atlanta	4161
Receiver	Scientific Atlanta	1774
Digital Amplitude Display and Ratiometer	Scientific Atlanta	1833A-20-4
Pattern Recorder	Scientific Atlanta	1520
Position Indicator Unit	Scientific Atlanta	4423-325
Digital Frequency Display	Scientific Atlanta	1871A-1
BSC Tester		06010388
Standard Gain Horn		
RF Switch	Transco Products Inc.	919C70100
Dual Directional Coupler	Hewlett-Packard	776D
Waveguide to Coax Adapters (2)	BFXR, Inc.	600L
Crystal Detector	Hewlett-Packard	423A
Oscilloscope	Philips	PM3262
Pulse Generator	Wavetek	166
TWT Amplifier	Hewlett-Packard	489A
Fixed Attenuators 3dB	Hewlett-Packard	8491A (003)

6dB (2)
10dB
30dB

8491A (006)
8491A (010)
8491A (030)

Precision Variable Attenuator

Arra Inc.

3617-20

Antenna Range, Towers and
Support Equipment

Termination, 75 Ohm, BNC

-----Original Message-----

From: Curtis, Eugene C
Sent: Tuesday, February 22, 2000 3:33 PM
To: 'Don Nellis at the FAA'
Cc: Wells, Claude
Subject: Modification to FCC Licensee Renewal Application for KK2XGG

Don,

As we previously discussed, you said you were able to modify the existing application for renewal of the subject license. The existing renewal currently reflects the historical license parameters. These parameters should be modified as follows:

Frequency MHz	ERP dBm	Emission Designator
1025-1035	30	NON
1055-1065	70	NON
1087-1093	30	NON

These values have been shown to be non interfering with your operations.

Let me know when you will be processing this documentation back to the FCC as I need to let my corporate radio frequency management office and my customer know what is happening. The corporate office controls the license. We are in process of revising our ATP to change the high power testing to use the 1060 MHz frequency. Our customer has verbally concurred with the change.

Let me know if there are any questions.

Gene Curtis
AIMS OE-120/UPX IFF
Program Engineer
603-885-7023 (V)
603-885-7653 (F)