

Exhibit 1

1. Introduction

By the instant application ("Application"), General Dynamics Armament and Technical Products, Inc. (GDATP) requests that the Commission grant a two year experimental license to GDATP to operate the facilities (the "Facilities") specified in the instant Form 442.

2. Purpose of the Operation

The testing specified in this Application will be conducted by General Dynamics Armament and Technical Products (GDATP), a business unit of General Dynamics. GDATP, a major producer of radomes for the Armed Forces of the United States, manufactures and tests radomes for varied customers.

In general, the testing performed at the Marion Test Range Facilities in Marion, VA involves active, radiating testing related to GDATP's contracts with various defense contractors and the United States Government for the development, manufacture, characterization, and acceptance testing of military and commercial radomes. The testing at the Marion Test Facilities is a critical part of the development and manufacture of military radomes supplied to the Armed Forces of the United States.

This specific Application relates to a number of activities, including ongoing internal range development and characterization, and Independent Research and Development (IR&D) for the development, characterization, and testing of antennas and radomes. Although originally anticipated to conclude around May, 2007, such IR&D efforts were delayed by funding requirements, as well as long lead time delays with respect to equipment orders. Accordingly, additional time is required to complete these IR&D efforts and it remains critical that this range be granted a license to radiate on this basis. In addition to these IR&D efforts, the authority requested in this Application is associated with the following government contracts:

Customer/Agency Name: Boeing St. Louis/US Navy
Customer Contact: Dennis McMenamy (314) 232-8646
Contract Number: N00019-04-C-0014
Contract DPAS Rating: DO-A1

Customer/Agency Name: Boeing St. Louis/US Navy
Customer Contact: Hugh Bell (314) 232-2048
Contract Number: N00383-06-D-001J
Contract DPAS Rating: DO-A1

Customer/Agency Name: Boeing St. Louis/US Navy
Customer Contact: Dennis McMenamy (314) 232-8646
Contract Number: N00019-03-C-0054
Contract DPAS Rating: DO-A1

Customer/Agency Name: Galileo Avionica/Brazil Air Force
Customer Contact: Mario Zucchelli (39-02-357901)
Contract Number: P.O. 4521000052

In addition to including the same frequency specifications previously granted at this range under STA pursuant to File No. 0828-EX-ST-2006 (7.125-10.55 GHz; 11.7-12.2 GHz; 12.75-14.47 GHz; 14.5-15.35 GHz; 15.4-17.7 GHz; 31.8-36 GHz), this Application requests authority for a somewhat broader frequency set, including but not limited to those frequencies that were granted to GDATP at an adjacent range under File No. 0697-EX-ST-2006 (8-10.6 GHz; 10.7-14.47 GHz; 14.5-15.35 GHz; 15.4-18 GHz).

3. Blanking Capabilities

GDATP understands that FAA or other stakeholders may require certain frequency blanking, or certain limited azimuth and/or elevation blanking in order to ensure that the Facilities do not pose a threat of interference to adjacent emitters. This is to confirm that the subject system has such blanking capabilities and that GDATP stands ready to work with the Commission to identify and implement any reasonable restrictions that may be required.

4. Other Issues

A. Transmitting Equipment

Manufacturer	Model	Frequency Band	Quantity	Experimental
Microwave Power, Inc.	L0618-32	6 to 18 GHz	1	Yes
Agilent	E8257D Analog Signal Generator	6 to 18 GHz	1	No
Microwave Power, Inc.	L3236-34	31.8 to 36 GHz	1	Yes
Agilent	E8257D Analog Signal Generator	31.8 to 36 GHz	1	No

B. Directionality/Orientation of Antennas

Band	Elevation (Vertical)	Azimuth (Horizontal)
All Bands	-2.5°	230° SW

3dB Beamwidth of Antennas (widest beam/worst case)

Band	3dB BW E (Vertical)	3dB BW H (Horizontal)
6 to 18 GHz	5.8°	5.8°
31.8 to 36 GHz	3.0°	3.0°

The ERP entered in our application gives the impression of high power, but the actual power into the transmit antenna is about 1 watt (less than many walkie-talkies). The ERP is deceptive because we are using an antenna with a very narrow beamwidth (35 dBi gain at 18 GHz). The ERP is the Equivalent or Effective Radiated Power. It is how much power would have to be input into a dipole antenna (very broad beamwidth) to equal the power density in the peak of the beam of our very narrow beam antenna. 1700 watts into a dipole would melt most dipoles. By using such a narrow beam antenna, we are greatly reducing the emissions in all directions except where we are measuring. Additionally, our receive area contains large amounts of RF absorber with over 35 dB of attenuation. The narrow beam of our antenna and the absorber in the receive area reduce our stray emissions greatly. Our test range is a very contained environment, and probably has significantly lower stray emission levels than if we hooked up our 1 Watt transmitter to a dipole and had an ERP of 1 Watt. It should be noted also that the ERP entered in our submission is for the worst case of the highest frequency/narrowest beamwidth.

C. Prevention of Interference

GDATEP hereby advises the Commission that the tests to be conducted under the requested Commission authorization are to be conducted on GDATEP's Marion, Virginia facilities. The test range is designed such that the transmitting antennas are pointed directly at the radome under test which is located 330 feet away on an elevated roofed porch with three walls. The walls have 6 inch broadband pyramidal RF absorber on them to absorb the RF energy from the transmitting antenna. Additional RF absorber covered panels will be used to further absorb the RF energy. The 3 dB beamwidth of the 6 to 18 GHz transmit antenna is contained within the porch area for the upper half of the band. The 3 dB beamwidth of the Ka Band (31.8 to 36 GHz) transmit antenna is mostly contained within the porch area. The range is located in a low area surrounded mostly by hills and trees. The range configuration is designed to minimize RF energy propagation outside of the actual test area. Please refer to the attached diagram of the range (Figure 1).

D. Stop Buzzer

The range shift supervisor, Gerald Hicks, will be personally supervising the testing and will be available by telephone at (276) 783-3121 x 1392. Mr. Hicks will act as a "stop buzzer" if any issues regarding interference arise during testing. The range operator will also be available by telephone at (276) 783-3121 x 1393 if Mr. Hicks cannot be reached.

Radar 4 Northeast Range

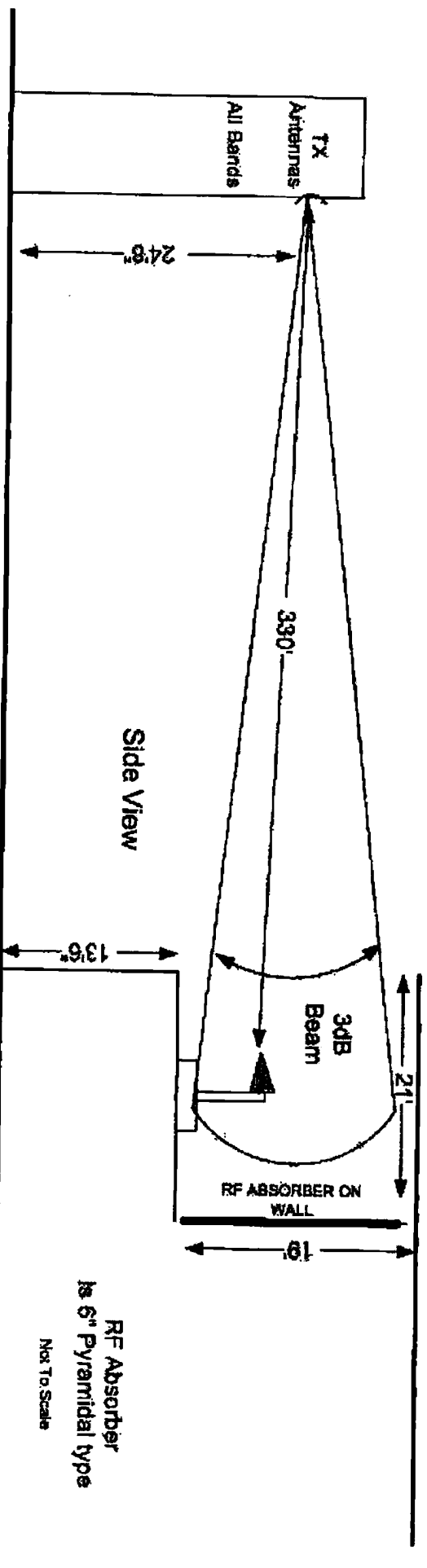
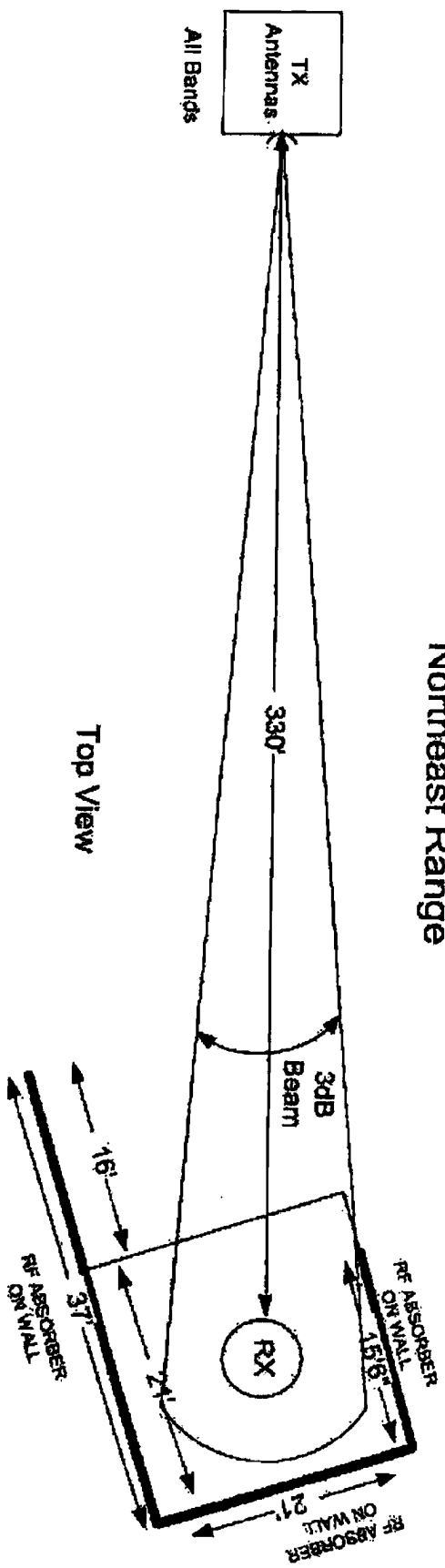


Figure 1

RF Absorber
Is 6" Pyramidal type
Not To Scale