

PROPOSED FREQUENCY USE

This application requests an experimental license to operate communications and radar equipment associated with the testing for the United States Government of an Aerostat Surveillance System in the vicinity of Elizabeth City, NC. The communications equipment is operated on the ground (uplink frequencies) and on the aerostat (downlink frequencies) located at an approximate 15,000 ft. altitude and tethered to the ground so as to function within an approximate 2.5 km radius of the ground station coordinates. Both uplink and downlink channels are transmitted on a directional point-to-point basis.

The following frequencies are requested for uplink and downlink communication purposes:

1. Three S-band (2200.5-2299.5 MHz) frequencies are requested: two for base-to-mobile communications and one for mobile-to-base communications. The three frequencies can be any frequency in 1 MHz increments in the stated band. (Example, 2201.5, 2202.5, etc.) It is requested that as much spacing as possible be provided between assigned frequencies.

Requested frequencies if available:

Uplink: 2210.5 MHz
 2202.5 MHz

Downlink: 2280.5 MHz

2. Three C-band (4500-4775) frequencies are requested. All three frequencies will be used for mobile-to-base communications. The three frequencies can be any frequency in 25 MHz increments in the stated band. (Example, 4525.0, 4550.0, etc.) It is requested that as much spacing as possible be provided between assigned frequencies.

Requested frequencies if available:

Downlink: 4575.0 MHz
 4650.0 MHz
 4725.0 MHz

The radar used in the testing program is a Westinghouse Electric Corporation APG-66SR Radar which we understand has been previously licensed by the FCC for experimental purposes.

NATURE OF PROJECT

This application requests an experimental license for communications and radar equipment associated with a U.S. Department of Defense Joint Task Force Exercise/Test Program utilizing an airborne aerostat based surveillance system flying at an altitude of approximately 10,000 feet above ground level in the vicinity of Elizabeth City, NC. This project is in response to a request from CINCUSACOM, Theater Missile Defense Cell (Code J33) in conjunction with the Ballistic Missile Defense Organization (BMDO). The communication equipment is operated in three basic modes: air-to-air/ground (radar), air-to-ground (communication and data downlinks from the aerostat to a ground based control center), and ground-to-air (command link from control center to aerostat). The aerostat is tethered to a fixed mooring point on the ground and operates at all time within an 8,000 foot radius of this point (in the downwind direction). Both uplink and downlink channels are transmitted on a directional, point-to-point basis. The government executing point of contact for this project is Mr. Jonathan Blincoe (703-602-7413, ext. 290). The sponsoring point of contact at CINCUSACOM is Lt. Cdr. J. Briggs or Lt. Col. S. Bialis (804-445-8686).

*proposed
test;
authority for
3000' alt.*

*Submitted
D21) - M. Hughes
F-1962897-D-0027*

The Joint Task Force Exercise/Test Program is scheduled for mid-July, 1995. The expeditious processing of this application is requested prior to the planned test date.

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OBSTRUCTION CLEARANCE

The site where experimental operation will take place is the TCOM, L.P. aerostat site where aerostats have been fabricated and flown since 1972. Since that time, arrangements have been made with the Federal Aviation Administration (FAA) and the U.S. Coast Guard concerning aerostat operations inside the Airport Traffic Area (ATA) for the Coast Guard Air Station (CGAS) at Elizabeth City, NC. Following is a synopsis of the current arrangement permitting operation up to 3,000 ft.:

1. The applicable aeronautical charts (Washington sectional and the World Aeronautical Chart (CG-21)) have been marked with a note concerning aerostat operation.
2. All airborne aerostats continuously illuminate the air with strobe lights visible to aircraft from any aspect angle.
3. Prior to outhaul of the aerostat, the CGAS Elizabeth City control tower is notified telephonically that an aerostat flight is about to commence. At the conclusion of the inhaul process, the tower is again notified that the aerostat is no longer airborne. The control tower personnel relay the advisory of a tethered balloon to all inbound and outbound aircraft which are also operating in the ATA during the time when the aerostat is aloft.

Discussions are currently underway with FAA representatives to obtain necessary FAA clearance to permit operation at higher altitudes for this test program.