

# SOUTHWEST RESEARCH INSTITUTE

6220 CULEBRA ROAD • POST OFFICE DRAWER 28510 • SAN ANTONIO, TEXAS, USA 78228-0510 • (210) 684-5111 • TELEX 244846

November 11, 1999

**Via Federal Express**  
**Tracking No. 5244595440**

*0358-EX-ST-1999*  
*WB2XCQ*

Federal Communications Commission  
c/o Mellon Bank  
Three Mellon Back Center  
525 William Penn Way  
27<sup>th</sup> Floor, Room 153-2713  
Pittsburgh, PA 15219-0001

Attn: Wholesale Lockbox Shift Supervisor

**Subject: Application for Special Temporary Authorization (STA)**

Dear Sir/Madam:

On behalf of Southwest Research Institute (SwRI), enclosed you will find a Request for Special Temporary Authorization (STA). This request is made subsequent to SwRI filing an Application for a 2 year Experimental License (FCC Form 442). This Application was received by the FCC on August 2, 1999 (file number 0211-EX-PL-1999). A copy of the Application is also enclosed for your review.

*(280199)*

As I have been informed, this Application for Experimental License may not be approved for several months. Therefore, in order for SwRI to commence testing and development using certain frequencies, it is necessary to file and obtain approval of the above STA pending the approval of the Experimental License. Upon approval of the Experimental License, SwRI would no longer use the STA and operate pursuant to the Experimental License.

Further, enclosed you will find one (1) FCC form 159 plus one (1) check in the amount of FORTY FIVE AND NO/100 DOLLARS (\$45.00) for filing fees as required by the FCC.

Thank you in advance for your prompt attention in this matter. Should you have any questions, please contact Monica Trollinger, Attorney at (210) 522-6024.

Very truly yours,

*John W. McLeod*  
John W. McLeod  
General Counsel

enclosures



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**Subject: Application for Special Temporary Authorization (STA)**

The information contained herein is provided as an informal application to obtain a special temporary authorization (STA), as required in the Code of Federal Regulations 47 (CFR 47), sections 5.55(g) and 5.56.

- (1) NAME AND ADDRESS: SOUTHWEST RESEARCH INSTITUTE  
6220 Culebra Road  
San Antonio, Texas 78238
- (2) NEED FOR SPECIAL ACTION: Temporary authorization is required so that we may perform operational tests on experimental equipment to meet U.S. military client demands.
- (3) TYPE OF OPERATION TO BE CONDUCTED: Experimental transmission of video and data from the experimental aircraft to the ground.
- (4) PURPOSE OF OPERATION: The operation is performed as part of a development program that will result in an unmanned aerial vehicle for the military services.
- (5) TIME AND DATE OF PROPOSED OPERATION: The tests will be performed during the time period of December 1, 1999 through March 31, 2000. *4 mos.*
- (6) CLASS OF STATION: Experimental  
CALL SIGN OF STATION: ~~K02XDM~~ *WB2XCA*  
NATURE OF SERVICE: Communications Research
- (7) LOCATION OF OPERATION: The operation will be conducted at two locations. The operation at Southwest Research Institute will be within a circular area having a radius of 1/8 km. The center of this area has coordinates 29° 26.6240 N. Latitude and 98° 36.3490 W. Longitude. This center point is 10 km Northwest of Kelly AFB, Texas. The field operation will be within a circular area having a radius of 4 km. The center of this area has coordinates of 28° 58.4800 N. Latitude and 98° 14 W. Longitude. This center point is 31 km Northeast of Pleasanton, Texas.



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(8) EQUIPMENT TO BE USED, INCLUDING NAME OF MANUFACTURE, MODEL AND NUMBER OF UNITS:

EQUIPMENT	MANUFACTURER	MODEL	QTY.
(a) Transmitter	AeroComm Inc.	50457TX	1
(b) Receiver	AeroComm Inc.	50455RX	1
(c) Transmitter	AeroComm Inc.	50407LT-10W	1
(d) Receive	AeroComm Inc.	50457RX	1

(9) FREQUENCY(IES) DESIRED:

- (a) 436.25 MHZ
- (b) 1900 MHZ

(10) PLATE POWER INPUT TO FINAL RADIO FREQUENCY STAGE:

- (a) 10 watts
- (b) 10 watts

(11) TYPE OF EMISSION:

- (a) 15 F3
- (b) 13M1A8W

(12) OVERALL HEIGHT OF ANTENNA STRUCTURE ABOVE GROUND:

The ground antenna will be limited to 40 feet in height. The antenna installation is temporary, for day use only.

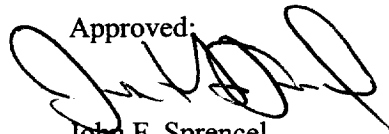
Attached to this application is FCC form 159, along with a check in the amount of FORTY-FIVE AND NO/100 DOLLARS (\$45.00) for filing fees as required by the FCC. If additional information is required, or should you have any question, please contact Carl Bargainer at (210) 522-5656. Thank you for your prompt attention to this matter.

Sincerely,



Carl Bargainer  
Avionics and Support Systems Dept

Approved:



John F. Sprenzel  
Vice President- Finance