

October 7, 2005

VIA EMAIL AND ELECTRONIC SYSTEM

James Burtle
Chief, Experimental Licensing Branch
Office of Engineering and Technology
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: The Boeing Company, Progress Report, Experimental Radio Station Construction Permit and License, Call Sign WC2XVE, File No. 0021-EX-ML-2005

Dear Mr. Burtle:

On behalf of The Boeing Company ("Boeing"), attached please find a copy of the progress report for the experimental radio station construction permit and license Call Sign WC2XVE, File No. 0021-EX-ML-2005. The progress report describes the operations Boeing has conducted under its experimental authority and is required under Special Condition 8 of the authorization.

A copy of this progress report is being filed through the FCC's electronic filing system for experimental licensing. Please let us know if you have any questions.

Sincerely,

/s/
Carlos M. Nalda
Christopher R. Bjornson
Counsel to The Boeing Company

Attachment

WDC 376155v.1

EXPERIMENTAL PROGRESS REPORT

October 7, 2005

The Boeing Company (“Boeing”), licensee of the Connexion by BoeingSM (“Connexion”) Aeronautical Mobile-Satellite Service (“AMSS”) system, in accordance with Special Condition 8 of experimental license Call Sign WC2XVE, File No. 0021-EX-ML-2005, hereby files this Experimental Progress Report to describe the operations conducted under experimental authority.

Experimental license Call Sign WC2XVE authorizes Boeing to test and demonstrate aircraft earth station (“AES”) antennas -- including the Block 1 phased-array AES, the reflector AES (the Next Generation Antenna or “NGA”) and the eXchange (small business jet) AES -- at Boeing’s Systems Integration Facility (“SIF”) in Kent, Washington, as well as throughout the continental United States, Alaska, Hawaii and in international airspace. In addition, the experimental license authorizes Boeing to conduct limited market studies and provide service to the U.S. Government under government contract (File No. 0032-EX-ML-2002). Finally, the experimental license includes authority to operate two Block 1 antennas on HMMWVs (“HumVees”) to demonstrate Connexion system capabilities in the land mobile context (File No. 0038-EX-ML-2003).

Boeing is authorized by the Commission to operate its Block 1 and NGA AESs on a commercial basis throughout the United States.¹ Because domestic operations of these antennas are conducted under regular commercial authority, this Experimental Progress Report focuses on these AES operations outside the United States and its territorial waters. In addition, the reporting requirement of Special Condition 8 was imposed as part of the modification of experimental license Call Sign WC2XVE granted on April 7, 2005. Accordingly, this Experimental Progress Report focuses on operations since that date.

¹ See The Boeing Company, File No. SES-MOD-20030512-00639, Call Sign E000723 (granted November 14, 2003); The Boeing Company, File No. SES-MOD-20020308-00429, Call Sign E000723 (granted September 26, 2002); The Boeing Company, *Order and Authorization*, 16 FCC Rcd 22645 (2001).

International Block 1 and NGA Operations

During the relevant period, Boeing operated Block One and NGA AESs outside the United States on the Connexion One testbed aircraft (both AESs are mounted on the aircraft) over two periods of time. First, during May-June 2005, Connexion One flew over international waters off the coast of Washington State to test transponder coverage and antenna performance as part of the rollout of Boeing's interim Pacific Ocean Region ("IPOR") service. Boeing also utilized the AESs on the Connexion One aircraft to test the performance of its latest network control software and other system components to ensure seamless service for end-user customers.

Second, during September-October 2005, the Connexion One aircraft was flown on a "World Tour" to several Asian and European countries to demonstrate the Connexion service to potential customers. During these country visits, the NGA antenna was employed to demonstrate the broadband data capabilities of the Connexion system while the aircraft was in flight. During the European leg of the World Tour, in addition to providing broadband data service, the Connexion system served as the off-board link to the terrestrial network in the context of testing an onboard GSM picocell system to provide wireless voice communications services onboard the aircraft while in flight over international waters (see Call Sign WC9XCX, File No. 0559-EX-ST-2005).

eXchange AES Testing

Boeing has conducted and is continuing to conduct tests to verify the operational characteristics of the eXchange AES at its SIF in Kent, Washington. These tests include fixed, static operations (where the antenna is pointed at the target satellite and does not move), as well as tests with the antenna mounted on a 3-axis positioner that is used to simulate the movement of aircraft in flight to test the tracking capabilities of the AES. Boeing has not yet tested the eXchange AES while mounted on an aircraft.

Boeing does not yet have regular commercial authority to operate the eXchange antenna, although an application to modify its AES blanket license to add the eXchange antenna is pending with the Commission.²

² The Boeing Company, File No. SES-MFS-20050701-00853, Call Sign E000723 (filed July 1, 2005). An amendment to this application was filed on October 4, 2005. The Boeing Company, File No. SES-AFS-20051004-01365, Call Sign E000723 (filed October 4, 2005).

Services Provided Pursuant to Government Contract

Boeing currently has a contract with the U.S. Air Force Materiel Command (“AFMC”), Contract No. F33657-01-D-0013, to provide, among other things, broadband communications to U.S. Government aircraft. Pursuant to this contract, Boeing has provisioned Block 1 antennas on eleven VIP/SAM (Very Important Personnel/Special Air Mission) aircraft operated by the U.S. Air Force Air Mobility Command to transport senior leadership of the U.S. Government and the Department of Defense. Three additional aircraft are under contract to be provisioned.

The U.S. government aircraft to which Boeing provides Connexion service regularly travel outside the United States, and thus operate under experimental license Call Sign WC2XVE. Boeing does not yet have regular commercial authority to operate Connexion AESs on U.S.-registered aircraft outside the United States, although an application to add such authority is pending with the Commission.³

HMMWV Operations with Block 1 Antennas

Boeing did not operate HMMWVs with Block 1 antennas during the relevant period. Boeing successfully tested and demonstrated the Block 1 antenna and Connexion system capabilities in the land mobile context prior to that time. Boeing now holds experimental special temporary authority to test and demonstrate the Seatel 0.6m antenna on two HMMWVs (see Call Sign WC9XHF, File No. 0540-EX-ST-2005).

³ *Id.*; The Boeing Company, File No. SES-MOD-20040301-00304, Call Sign 000723 (filed March 1, 2004).