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August 25, 2004

BY HAND DELIVERY

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

RECEIVED

AUG 25 2005

Federal Communications Commission
Office of Secretary

Attention: Experimental Licensing Branch
Office of Engineering and Technology
MS 1300E1
445 12th Street, S.W.
Washington, D.C. 20554

**Re: Experimental License Progress Report
AirCell, Inc., Call Sign WD2XEW
FRN: 0005-8845-31**

Dear Ms. Dortch:

On behalf of AirCell, Inc. ("AirCell"), I am attaching an original and four copies of AirCell's progress report on its activities under its experimental license, WD2XEW, for the twelve-month period ending July 30, 2005. Please contact me if you have any questions.

Sincerely,

David L. Martin
Counsel to AirCell, Inc.

Enclosure

Report to the

**Federal Communications Commission
Office of Engineering and Technology
Experimental Licensing Branch**

Radio Station WD2XEW

July 30, 2005

**AirCell, Inc.
1172 Century Drive
Building B, Suite 280
Louisville, CO 80027**

AirCell, Inc.
Radio Station WD2XEW

Experimental License
Progress Report
July 30, 2005

Introduction

AirCell, Inc. ("AirCell") submits this report to the Federal Communications Commission ("FCC") in accordance with the terms and conditions of its grant of authority to investigate new digital technologies for air-to-ground and in-cabin communications. The information below reflects AirCell's past 12 months of operation under the experimental license referenced above.

Current Status and New Developments

AirCell has conducted numerous flight tests this year to advance its progress towards evolution to a digital air-to-ground network architecture.

Many of these test flights were designed to identify the digital technologies that can offer the fastest data speeds in an airborne environment, and to test the operation of various cell phone handsets and data devices through an onboard pico cell.

Tests were conducted to verify operation of digital broadband technology including CDMA (EvDO) and IS-95x in an air-to-ground communication environment. The tests were conducted using a belly-mounted antenna on an aircraft, and with standard terrestrial BTS antennas and infrastructure. Tests were performed to verify the operation of technology/communication links at various altitudes up to 40,000 feet, at various speeds up to 500 MPH, and at distances from the BTS of up to 200 miles. Computers equipped with wireless cards were used. The test setup included equipment on-board the aircraft that communicated with a server on the ground, so that data rates in the forward and reverse link could be studied. Additional test equipment was used on-board the aircraft to study in detail various parameters of the communication link such as Ec/Io, mobile transmit and receive powers, frame error rates, active pilots, etc.

As a result of AirCell's continuing test program, AirCell will be running demonstrations of airborne cellular phone and data connectivity during the next several months. Members of the press and aviation and wireless industries will be on-board a jet aircraft to see first-hand the operation of actual consumer cell phones and data devices while flying.