

EXHIBIT 1
Experimental License Renewal
Form 405 File # 0085-EX-CR-2018
Call Sign: WH2XAH

Overview

Raytheon Company (“Raytheon”) is filing this application to renew its experimental license for continued testing of antennas on an outdoor antenna range. This testing is specifically for advanced communications on the U.S. Air Force F-15 fighter. No changes have been made to the experiment since the last application.

Description of Experiment

Raytheon has established an outdoor RF testing range at its facility located at 6125 E 21st Street, Indianapolis, IN 46219. The test setup uses commercial test equipment to transmit a signal through the antenna to a network analyzer approximately 250’ away. The test measures the phase response of the antenna over several discrete frequencies. The testing includes directional antennas that have a narrow beamwidth. Specifications are below:

Frequencies: 9.31, 9.5, 9.7, 9.9 GHz (continuous wave – no modulation)
Power Amp Output: +10 dBm
Antenna Type: Log periodic with an 18” dish reflector
3 dB Beamwidth: 4 degrees vertical, 12 degrees horizontal
Gain: 28 dB (6.3 watts ERP)
Polarization: Linear
Antenna Height: 22’ above ground level (850’ above mean sea level)
Antenna Location: 39° 47’ 32.40” N, 86° 3’ 23.20” W

Stop Buzzer Point of Contact

Brian R. Kavalal, Spectrum Manager
Tel: (317) 306-7793
brian_r_kavalal@raytheon.com

License Contact Information

For questions about this license, please contact:

Brian R. Kavalal, Spectrum Manager
Tel: (317) 306-7793
brian_r_kavalal@raytheon.com

Thomas A. Voltero, Jr., Counsel
Tel: (781) 522-5843
thomas.a.voltero@raytheon.com

OUTDOOR RF TEST RANGE

