



May 12, 2017

Via Electronic Filing

Federal Communications Commission
Experimental Licensing Branch
MS 1300E1
445 Twelfth Street, S.W.
Washington, DC 20554

**Re: Annual Progress Report of HNS License Sub, LLC Pursuant
to Call Sign WE2XEW**

Dear Sir or Madam:

This Progress Report of HNS License Sub, LLC ("Hughes") is submitted pursuant to the special conditions associated with Hughes' Experimental Radio Service license in Call Sign WE2XEW.

On January 1, 2006, Hughes obtained an authorization under Call Sign WE2XEW to conduct experimental operations with in-motion earth terminals in the fixed-satellite service ("FSS") frequencies at 14-14.5 GHz and 29.5-30 GHz. Subsequent modifications have authorized operations on aeronautical platforms, expanded the bounds of the upper band from 29.5-30 GHz to 29.25-30 GHz, and added additional satellites as points of communication.¹ The experimental operations conducted under this license respond to potential and actual customer requirements, assess or demonstrate the viability of particular equipment and service configurations that are under development, and/or test different antenna products from various manufacturers in order to assess the performance of these products when integrated into the Hughes VSAT system.

This year's experiments have continued study of airborne antennas. Hughes has progressed testing of the engineering and design of aeronautical K_a and K_u band terminals, assessing Doppler shift, beam switching, and satellite switching performance. The terminals provide automatic functions for switching polarization (circular on the K_a band, and linear on the K_u band) and satellites when needed. Hughes plans to continue experimental testing in the 2017-2018 license period with terminals mounted on an airplane and other in-motion platforms, such as ships and vehicles. The WE2XEW license has supported these experiments by providing uplink capabilities for these tests.

¹ Within the previous year, on August 3, 2016, Hughes filed a request (0148-EX-ML-2016) to add Inmarsat-5 F2 as a point of communication. The Commission granted this modification application on August 4, 2016.

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Please let me know if you have any questions regarding this required report or if any additional information is needed.

Respectfully submitted,

/s/ Brennan T. Price

Brennan Price

Senior Principal Engineer, Regulatory Affairs