

Exhibit A
HNS License Sub, LLC
Call Sign E990170
Modification of License Application
February 2013

Narrative Exhibit

Description of Application

HNS License Sub, LLC (“Hughes”) hereby requests a modification to its Southfield, MI-based VSAT network earth station license, Call Sign E990170, for addition of a transportable/temporary fixed hub earth station antenna to the Network. This transportable/temporary fixed hub station will be used by Hughes to:

- a. conduct demonstrations of VSAT network capabilities to potential customers;
- b. facilitate Hughes or customer hub upgrades by providing a temporary alternate RF chain during the upgrade; and
- c. provide an alternate hub in the event of a catastrophic hub failure.

The proposed new hub antenna consists of a 2.4 meter Andrew vehicle-mounted transmit/receive antenna in the 14.0-14.5 GHz and 11.7-12.2 GHz bands. This antenna was designed for digital audio and video broadcast and is mounted on a service truck for easy relocation. The antenna complies with Section 25.209 of the Commission’s Rules and is thus eligible for “ALSAT” status.

Operations in the Vicinity of Radioastronomy Service Observatories

Even though this earth station is mounted on a vehicle, its intended use is as a fixed temporary station. No coordination is required for fixed temporary station transmissions. There will be no in-motion operation, and operators will be instructed not to drive the vehicle while the transmitter is in active mode. Hughes will not operate near the Table Mountain Radio Receiving

Zone in Boulder, Colorado, or the National Radio Astronomy Observatory site in Greenbank, WV.

CFR Part 25.209 Compliance

The vehicle in question is equipped with an Andrews 2.4 meter transportable SNG antenna system that complies with 47 CFR §§ 25.209 (a) and (b).¹

FAA Notification

This antenna is exempt from FAA notification per 47 CFR § 17.14(b), as its height will not exceed 6.10 meters.

Radiation Hazard Analysis

A radiation hazard analysis was done for the 2.4 meter antenna, with a maximum possible 300 Watts of power applied at the flange, using the methodology from OET Bulletin 65. Due to the uplink power control (UPC) system installed on this vehicle, the peak power value at the flange of 300 Watts will only be reached for short periods of time during heavy rain.

The results of this analysis, which was done using the maximum power range of the UPC, can be seen in Exhibit C. This analysis shows that the maximum permissible exposure limit (MPE) for protection to the general public of 1 mW/cm² is exceeded in all areas. The maximum permissible exposure limit (MPE) for protection of trained personnel of 5 mW/cm² is also always exceeded. Protection of the general public and Hughes staff will be assured by means of i) a careful selection of the vehicle location so as to ensure that the volume in the cylinder radiating from the antenna towards the satellite cannot be reached by any accessible areas, ii) blocking access to the roof of the vehicle while the transmitter is in operation, iii) personnel training, and iv) the use of caution signs.

¹ See Exhibit B

Form 312 (Schedule B)

In the Form 312 modification application to which this exhibit is attached, Hughes provides only the information it needs to add the additional transportable/temporary fixed hub earth station antenna. There are no technical changes to any of the currently-authorized antennas, and all existing authorized information is incorporated by reference.