

Highlights for Request for Special Temporary Authority

On July 30, 2004, HNS submitted an application to modify existing experimental license (Call Sign WD2XFP) for the testing of various small SpaceWay earth stations operating in the frequency bands 19.7-20.2 GHz and 29.5-30.0 GHz. The modification application proposes to include additional earth stations of 1.2, 1.8 and 3.5 meters. Testing of these terminals with a terrestrial satellite simulator is required because the DirecTV SpaceWay satellites have not yet been launched.

In its application, HNS would like to highlight the following technical points:

- a. The power transmitted by the satellite simulator terminal at 19.95 GHz is limited in order to simulate the free space loss from a satellite in space. The transmitted power at the flange of the 98 cm antenna will be of 10 nanowatts. For the 1.8 meter antenna, the power at the flange is of 5 milliWatts in the band 19.95 GHz.
- b. For the band from 29.5 to 30.0 GHz, the power at the antenna flange for the various terminals will be restricted to comply with FCC 25.138 based on the emission designators. In all case, the earth stations will be pointed away from the GSO arc. The maximum elevation angle will be 2 degrees.
- c. The band 29.5-30.0 GHz is assigned exclusively to the Fixed Satellite Service. To date, the only operational commercial payloads in this band are on Echostar IX at 121° WL and the recently launched Anik F2 at 111.1° WL. Given the large separation angle between the test earth station antenna boresight and these satellites, no interference to these satellites is anticipated.
- d. The operation of these transmit/receive terminals at the HNS satellite simulation test facility will be in full compliance with the Commission's radio frequency (RF) exposure guidelines, pursuant to Section 1.1307(b)(1) through (b)(3) of the Commission's rules.