



In response to a request for information from the Air Force pertaining to the experimental license application (File #: 0040-EX-CN-2022), Amazon has performed an assessment of power flux density (PFD) generated by the Aerial Reference Station (“drone”) in the 90 x 90 km area surrounding the Woodinville, WA test site in the 18.3-18.6 and 18.8-19.3 GHz bands. The station considered in this analysis has identical characteristics to that of the Aerial Reference Station included in the prior STA (File #: 1181-EX-ST-2021, Call Sign: WS9XLP), which was granted by the Commission on August 10, 2021.

Similar to the prior STA, the proposed on-site operation of the drone will enable Amazon to continue with the evaluation of prototype earth station and spacecraft antennas for future use with the FCC-licensed Kuiper satellite network (File #: SAT-LOA-20190704-00057). The drone is conservatively assumed to be transmitting a continuous wave (CW) carrier at a maximum altitude above the test site coordinates (400 ft AGL) while applying the maximum specified transmission power and EIRP/ERP in accordance with the license application. The PFD is being computed at each point on the map assuming that the drone’s maximum EIRP is being transmitted to that point.

Radio propagation losses are computed using the ITU-R P.452-16 terrestrial model paired with the Shuttle Radar Topography Mission (SRTM) land elevation dataset at 1 arc-second (30m) resolution. The reference height of the receive antenna is assumed to be 5 meters AGL. This analysis conservatively does not account for any additional losses due to clutter that may be present at the transmitter and/or receiver locations.