

From: Chris Cook

To: Hung Le

Date: June 21, 2021

Subject: Request for Info - File # 0676-EX-ST-2021

Message:

Please provide the following:

1. Please provide detail description about the automatically disabled capability and pointing accuracy to avoid pointing within +/- 2 Degrees of the geosynchronous satellite orbital arc. Does earth station design to be self-monitoring and be monitored and controlled by a network control and monitoring center (NMC) for the "disable transmission" command? And when (within time limit) the cease transmissions will be activated when the earth station is misaligned that caused the emission transmitting into adjacent GSO satellites ?

The automatic disable / mute circuit for the transmitter receives it enable command from the antenna control system. The transmitters, as designed, require a contact closure to transmit. Any interruption in the disable / mute circuit will mute the RF. The antenna control system that has a pointing accuracy of 0.027 degrees, worst case , and 0.0135 degrees while in predictive track mode will provide a contact closure from the normally open circuit to allow the amplifiers to transmit. At the point at which the antenna is tracked within +/- 2 degrees of the geosynchronous satellite orbital arc the circuit will open and the RF signal will be muted. With this design any loss of power or communications to the antenna control system will also open the disable / mute circuit disabling the amplifiers. The mute circuit is independent of the NMC.

2. Will the return signal transmit back into the 32 meters earth station or anywhere on surface of the earth?

The extremely weak return signal will be received by the 32m earth station antenna. However, other locations with sufficiently large enough antennas pointed at the moon could potentially receive the signal as well.

3. Please provide the Off-axis EIRP density envelopes for the 32 meters FSS earth stations?
See attachments.