To: Ricky Perry

E-Mail: rp4473@att.com From: Anthony Serafini Date: October 06, 2016

Subject: Request for Info - File # 0021-EX-CN-2016

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## Message:

We have identified 50 FSS earth stations licenses that operate adjacent to (3700-4200 MHz) the experimental stations within 20km. 25 FSS license E/S within 6 km from the Atlanta fixed station and 6 FSS license E/S from Cumming that are in line of sight.

Our calculations indicate a potential for out-of-band emission interferences to the 50 FSS earth station from the fixed station line of sight (transmitter with altitudes from 80 ft and 176 ft respectively); we will need more detail information to finalize our analysis.

Based on the application exhibit document, there is no antenna pattern available; therefore, we will have to assume worst-case scenario with the information provided.

- 1) From the exhibit document, it is not clear if the antenna is intended to be pointed towards the horizon in the vertical plane. There is mention of a  $\pm$ 10 degrees. Is the  $\pm$ 10 degrees related to the antenna beamwidth in the vertical or azimuth plane?
- There is mention of 10 radio transmitters operating simultaneously.
- 2a) Are all 10 radios operating on the same location on top of the tower or roof top of a building?
- 2b) Will the 10 radios be distributed in a circle to have a 360 coverage?
- 3) For all fixed station we need to know the exact azimuth direction each antenna is pointing towards.
- 4) Will each fixed station antenna be tilted toward the ground? If yes, what is the tilt angle?
- 5) Please provide a spectrum plot of transmit antenna output for each emission (5 MHz, 10 MHz, 20 MHz, 40 MHz).
- 6) What is the power level at 3701 MHz?
- 7) Is filtering used? If yes, what is the filter edge roll-off attenuation in dB per decade?
- 8) Is any interference mitigation technique used? if yes, please provide a detail technical description how it works.

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 30 days of October 06, 2016 may result in application dismissal pursuant to Section 5.67 and forfeiture of the filing fee pursuant to Section 1.1108.

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