Response to FCC Reference No. 81720

The requested modification is to add one new location centered on Georgetown, DE, to be used for flight tests for development and test work underway at the fixed location in Linithicum, MD, already authorized by WJ2XEG. The work at both locations is for the purpose of developing and testing an improved radar system by modifying an existing 5th generation radar system (including the AESA antenna, radar receiver, and exciter) and integrating it with frequency agile waveforms. The end goal is to achieve and demonstrate operational performance over a wide band of frequencies. When developed, the intended customers are U.S. Government agencies.

- The radar will be frequency agile with center frequencies spanning 16.220 GHz to 17.280 GHz. Transmissions are channelized based on separations of 20 MHz. Wide band waveforms will be centered to restrict emissions to the band from 16.210 GHz to 17.290 GHz.

- The waveform will utilize pulse widths of 2 µsec to 100 µsec. PRFs will be from 500 to 125,000 Hz. Barker Phase Code and Linear FM will be employed. The Active Electronically Scanned Array (AESA) has 33.1 dBi of gain. The beam width of the antenna is 2.7 degrees horizontal and 4.9 degrees vertical at the 3 dB points and will utilize vertical polarization. The antenna will be fixed at the given location with the main beam centered on an azimuth of 230 degrees relative to true north and scan limits of +/- 40 degrees.

Stop buzzer is Sarah Girardi at 410-993-7017.