

From: Joseph Essex

To: Jose Trevino

Date: January 18, 2008

Subject: FCC file number 0547-EX-PL-2007

Message:

I will have Cam Martell of CAMTEK Electronics contact you to better explain the type of testing we wish to perform. He has an existing license to perform this testing from the FCC which he has maintained for several years. We expect to broadcast at low power, near the ground, intermittently, and using frequencies which do not have any traffic at the time of the testing. We will be transmitting the amplified output of signal generators with no modulation so we will be extremely narrow band and capable of moving to an unused frequency as needed. In our application I list the approximate test frequencies, we would test at a single frequency inside the designated band.

Please provide the ?Emission Designator? and a description of the operation to be conducted and its purpose in more details.

The testing to be performed measures the shielding effectiveness of EMI shielded shelters and the shielding effectiveness of test materials. We would be broadcasting a signal at or near a designated test frequency (the frequencies of interest are listed in our application) and measuring the attenuation of the signal as it passes through the shielding. This testing is to measure the effectiveness of different methods for shielding and to perform end-of-line testing of shelters to ensure the quality of the shielding we provide to customers.

Also the Federal Aviation Administration (FAA) operates in the frequency band 5000-5250 MHz. We will coordinate with the FAA and our local airport to avoid any interference of used frequencies. The 5 GHz testing uses directional horns to produce plane waves which will be directed at the unit under test.

Please obtain the NGT number(s) from the FAA Regional Office at the completion of the coordination and report it in your response to this correspondence. Please report the parameter below in your coordination with the FAA Regional Office: In process

- Peak envelope power (PEP); As required, limited by amplifier and antenna capabilities.
- Type of antenna; Resonate coils for magnetic waves, dipole or horn antennas for plane waves.
- Transmit antenna gain; Depends on antenna used, several used as required.
- Elevation above sea level of the antenna site; ~1300 ft
- Height above ground of the focal point of the antenna; 2-8 ft
- Antenna polarization; Vertical & Horizontal
- The azimuth that the antenna is pointed or appropriate designator to indicate whether the antenna is rotating, non-directional, etc.; Antennas will be mounted on tripods which will be moved as needed to test shelter surfaces. At various times they will point in any direction.
- Pulse repetition rate (PRR) that the equipment is capable of operating on to include PRR stagger sequences if appropriate, whether the PRR is adjustable and what PRR's the equipment can accept, and any other information that would be helpful in understanding the pulse characteristics of the equipment; The signal will not be pulsed, it will be a steady non-modulated sine wave.
- Pulse width; N/A
- Equipment nomenclatures; Can provide once equipment purchased.
- Whether the equipment is capable of blanking transmissions in certain azimuths and any limitations with respect to blanking;
- Radius of operations if appropriate; Testing will be performed in or near Cadillac MI, the test location has not yet been selected. Shelters will need to be transported from our manufacturing facility to the test location so this location will be located as near as practical to 1405 6th Ave. Cadillac MI 49601.
- Detailed description of the proposed operation to include any technical parameters that will be altered

during operations.

The specifications I attached to our application give a detailed description of each test to be performed.

I hope this helps. Please let me know if you need any more information.

Joseph Essex
Sr. Electrical Engineer
AAR Mobility Systems