ATTCHMENT

Justification for Nationwide Operation

Caterpillar of Delaware, Inc, is requesting renewal of its license for Experimental Radio Service station KM2XFG, currently pending under FCC file number 0191-EX-RR-2001. In connection with the renewal of the license, the FCC has requested information about the need for nationwide operation, the duration of the project and the type of equipment used.

Caterpillar is currently working on a program to develop a system to enhance an operator's vision as he drives an off-highway truck. The plan is to give him a display that will show information about where his truck is with respect to a map of the mine at which the truck is working and where he is specifically with respect to the current route that he is taking. In addition to this, Caterpillar also plans to display a representation of the obstacles in the truck operator's path. In order to do this, Caterpillar plans to use radar at 77 GHz and possibly a lidar (laser based) sensor as well. The experimental license will allow Caterpillar to test the new system at various sites throughout the U.S. and under different terrain and weather conditions.

Originally, we used a 77 GHz radar unit developed by Millitech Corporation. It has no model number since it was an experimental unit. Two units were in service. In 1993, we added a 13.2 GHz proximity sensor, manufactured by Ogden Safety Systems, Inc. These were also experimental units without a model number and six units were in service.

As for requested duration of the experimental license, we are requesting a 2-year renewal. This is an ongoing project that is still very active. We cannot predict how much longer will be necessary to perfect the radar and collision avoidance system for heavy earth moving equipment.