WC2XVZ Post Grant Document
For
0065-EX-PL-2002 Experimental License
0239-EX-ST-2004 Special Temporary Authority

Mesa, AZ
Antenna Range D

4/20/04

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Gentlemen,

This document is in response to the Commission's questions about the calculation for effective radiated power, antenna types and direction of antennas at the Mesa, AZ Antenna Range D.

Where 10 watts ERP is indicated:

The 10 watts ERP is indeed the maximum effective radiated power across the respective frequencies as noted on the above Experimental License and subsequent STA. This means that the RF power from the signal source is adjusted, the loss of the transmission cable to the antenna and the gain of the antennas are considered, such that the maximum radiated power from the antenna will not exceed 10 watts at any time. The signal source sweeps through the frequencies as such that the instantaneous power will not exceed 10 watts. The dwell time on a single frequency as it sweeps is a few nanoseconds. The signal source is controlled such that the frequency is not constant and always sweeping. At the end of each band sweep the signal sweep stops on the last frequency and the transmission is immediately terminated. This method is used for both the Experimental License and the STA. This method is used for the horn antennas and the Bi-Log antenna as noted on the respective applications.

The Bi-Log is the only antenna that should be described and used for the Special Temporary Authority. The Bi-Log is a Schaffner-Chase EMC Ltd. Model CBL6112B. Antenna height for the Bi-Log antenna varies with frequency from 1 meter to 13.7 meters. This antenna points north.

The AEL H-1734 horn antenna for 500 to 6,000 MHz points north for the Experimental License and is not described or used for the Special Temporary Authority.

The Condor A6100 horn antenna for 2,000 to 18,000 MHz is for the Experimental License only and is mounted at 25 feet above the ground, points east and is not described or used for the Special Temporary Authority.

Where 1 watt ERP is indicated:

Where 1 watt is used as noted in only the Experimental License for different frequencies, then 1 watt is the maximum under the same conditions described as above.
