

## Exhibit 15:

### Section 2.991

#### Spurious Emissions at Antenna Terminals

Spurious Emissions at the antenna terminals were investigated over the frequency range of 10 MHz to the 10th harmonic of the carrier frequency. The RF output from the transmitter was reduced (to an amplitude usable by the spectrum analyzer) by using an attenuator calibrated over the 10 MHz-20GHz range. The RF power level was continuously monitored via the test setup in Figure 15A.

Measurements were made using a Rohde & Schwarz ESMI EMI Test Receiver, a PC based computer test controller and a TILE™ software program to acquire the test data. This system allows measurement and presentation of the data in an accurate and compact form for FCC review. The volume of collected data is greater than  $2 \times 10^6$  data points over the frequency range of 10 MHz to 20 GHz. The required emission limitation specified in Section 24.238 of the Code was applied to these tests. Based upon the criterion given in Section 24.238 of the Code the required emission limitation is equal to -55 dBc or -13 dBm. The -13 dBm limit holds for all signals when measured with the specified 1MHz bandwidth. The measurements were made using a resolution bandwidth of 30 kHz. Harmonics of the CDMA Carrier must be shown to be lower than  $-13 \text{ dBm} - 16.1 \text{ dB} = -29.1 \text{ dBm}$  per equation (1) in Exhibit 14. The measurement of narrow-band spurious signals, such as clocks, oscillators and other pure tone types of signals are unchanged by variation of the analyzers resolution bandwidth. The -13 dBm limit is therefore appropriate for all narrowband signals

The applied signal met the recommended characteristics per ANSI J-STD-008 section 3.1.4 as defined below.

Type	Number of Channels	Fraction of Power (Linear)	Fraction of Power (dB)	Comments
Pilot	1	0.2000	-7.0	Walsh 0
Sync	1	0.0471	-13.3	Walsh 32, always 1/8 rate
Paging	1	0.1882	-7.3	Walsh 1, full rate only
Traffic	6	0.09412 each	-10.3 each	Variable Walsh Assignments, full rate only

**TABLE 15.1 Base Station Test Model, Nominal**

#### Results:

Measurements were made while transmitting at the upper and lower channels in each PCS Block tested. The attached spectral plots document the typical performance and shows that there are no emissions above the applicable limit of  $-29.1 \text{ dBm}$  for Carrier harmonics and  $-13 \text{ dBm}$  for all narrowband spurious.

Conducted Spurious tests on the Receiver antenna terminal documented compliance with the 2 nW requirement of 47CFR Part 15.

Exhibit 15 continued

