



W230CW Exhibit

The specified transmitter power output produces the authorized effective radiated power. Working backwards from the specified antenna to the transmitter, this exhibit will provide the basis for this statement.

The antenna utilized is an SWR FMEC/1 Plus single bay antenna. The specified antenna has a power gain of 0.442 as specified by the manufacturer. The antenna input power to achieve the authorized effective radiated power of 250 Watts is 566 Watts.

The transmission line utilized by this facility consists of 350 feet of Commscope Andrew HJ5-50. For this length of line total line loss is -1.250648dB and the fractional efficiency is 0.749782 based on frequency.

Directly preceding this is a Kintronic Labs ISO-170-FM-DIN-RU Isolation Coil with 0.9dB Insertion Loss and a fractional efficiency of 0.812831

Prior to the Isolation Coil is another transmission line run that consists of 90 feet of Commscope Andrew HJ5-50. For this length of line total line loss is - 0.3215952dB and the fractional efficiency is 0.928625 based on frequency. This is the transmission line that travels from the base of the tower to the interior of the transmitter building.

The next element in the transmission system is the Shively Labs 2604-3A band pass filter with and insertion loss of 0.5dB or a fractional efficiency of 0.891251.

Directly following the band pass filter is 10' Andrew Super Flex LDF4-50A Jumper assembly with a total of -0.0661 dB per 100ft and a fractional efficiency of 0.984895

This therefore results in an input power and a transmitter power output to the transmission line of 1,142 Watts.



BNPFT-20171219ACV Special Operating Condition Number Two

Prior to commencement of the installation for W230CW Tower Resistance and Reactance measurements were made for WDWS with a Delta OIB-3 operating impedance bridge and Delta Model RG-4B Receiver/Generator. Before use, tests of known impedances were made to verify operation. Schematics are on file at the station that indicate the impedance measurement locations. Measurements were taken prior to installation and after installation. All measurements were taken by PME personnel Peter Femal.

Premeasurement

Impedance = $50.0 + j 4.0$ Ohms

Post measurement

Impedance = $50.0 + j 4.0$ Ohms

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