

KWML (AM) Base Impedance Measurements

K228FI Las Cruces, NM

FIN: 139209

93.5 MHz

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Introduction

The permittee for the K228FI Construction Permit (file number BMPFT-20150729ABT) is Educational Media Foundation. David Grice is a Consulting Engineer employed by Advanced Broadcast Services, LLC. David Grice completed the KWML (AM) antenna base impedance measurements per special operating condition # 1.

Test Equipment

- Delta Electronics OIB-3 Impedance Bridge

Summary

During the installation of the K228FI circuit the power of the KWML (AM) was determined by the indirect method per FCC section 73.51. Prior to and upon completion of the K228FI antenna installation the KWML(AM) antenna base impedance measurements were completed. The resistance of the KWML (AM) Antenna base impedance has not changed by more than two percent from the licensed value. Therefore, K228FI fully complies with the special operating conditions of CP file number BMPFT-20150729ABT.

Resistance Measurements

Licensed Resistance Value: 48 Ohms

Final Measurement Resistance Value: 47.6 Ohms

Power Calculations:

Final Daytime Indirect Power Calculation:

Current: $\sqrt{(5000/50.5)} = 10.2490\text{Amps}$

Power: $47.6 * 10.2490^2 = 4999.999\text{Watts}$

Final Nighttime Indirect Power Calculation:

Current: $\sqrt{(155/47.6)} = 1.8045\text{Amps}$

Power: $47.6 * 1.8045^2 = 154.9960\text{Watts}$