

# Engineering Statement: RF Exposure Measurements for KRTZ-FM

Cortez, CO.

December 10, 2012

**BACKGROUND.** Radio Station KRTZ-FM, licensed to Winton Road Broadcasting Co., LLC. had been utilizing the original Phelps Dodge 5 bay circularly polarized antenna which exhibited known excessive downward RF radiation when operating at full licensed power of 27 KW ERP. Aware of this condition, the station has been operating under Special Temporary Authority at a reduced power level.

The site is located at the pinnacle of a mountain with only enough flat ground for the tower and buildings. Access to the site is through a secure locked gate across the road, and rugged terrain making access by the general public very difficult, power levels consistent with predicted Public Exposure Limits were maintained. A new 6 bay custom spaced antenna was just installed, creating the need for filing an FCC Form 302-FM. Due to the short tower and custom bay spacing the standard worksheets used to evaluate compliance were not applicable. Actual measurements were made to demonstrate compliance.

**METHODS OF MEASUREMENTS.** On December 5, 2012 direct field measurements were made using a properly operating Narda model 8718B handheld meter, serial number 01505, paired with an 8742D Probe serial number 13002. Both meter and probe were recently calibration on September 6, 2012. All measurements were made by the undersigned, having knowledge of the operation of the meter as well as field experience making such measurements.

To begin with, the meter along with the 8742D probe was zeroed and set to make measurements as described in the instruction manual. The transmitter TPO was then set to the level calculated to produce 100% of the stations' licensed ERP. Beginning at the door of the transmitter building systematic measurements were made all around the site, including around the self supporting tower supporting the new antenna as well as along the road leading to the site. At no time was a level measured in excess of 25% of the Maximum Permissible General Population/Uncontrolled standard as defined in FCC OET Bulletin 65 (appendix A).

**CONCLUSION.** Based on the results of the measurements performed, it can be concluded that the above referenced tower site more than conforms with the General Population/Uncontrolled standard, and is safe for general population.

**CERTIFICATION.** I, James R Burt, a broadcast technical specialist, and President of BTA, Inc. made all measurements described above, and prepared this report.

I declare under penalty of perjury that the contents of this report are true and accurate to the best of my knowledge and belief.

By



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