



B. W. St. Clair

ENGINEERING STATEMENT IN SUPPORT OF THE DIGITAL APPLICATION OF KTWO, CASPER, WY

This engineering statement is in response to FCC staff inquires and examines the predicted coverage of KTWO-DT, as proposed in application BMPCDT-20080124ABB including the coverage expected from the rebroadcast of KTWO-DT on translator K11RM, Douglas, WY after its “flash cut” to digital operation.¹ The planning factors have been adjusted to take account of typical fringe area home reception installations. The digital coverage is 81,837 compared to 80,000 specified in Appendix B.²

Methodology

Beyond Casper, WY, its city of license, KTWO serves mostly very small communities and open rural areas. The residents of the areas outside the city of license are accustomed to using substantial outside antennas and preamplifiers. Any differences in coverage resulting from transmitting power or antenna pattern changes come from corresponding changes in fringe area coverage. Accordingly new minimum field strengths for KTWO-DT (application) and K11RN (flash cut to digital) have been calculated based on adjusting the planning factors in OET Bulletin 69³ to reflect typical fringe area home reception practices.

In particular the new minimum field strength values are based on the use of an outdoor antenna and a preamplifier with a conservative noise figure of 3 dB. When a preamplifier is used the loss of the downlead from the antenna is not significant and has been eliminated in calculating the minimum useable field strength. The FCC OET Bulletin 69 values, shown for comparison, are adjusted for the specific channel.

Channel	FCC Planning Factors	Adjusted for fringe reception
Ch 11 Digital	35.6 dB μ	22.9 dB μ
Ch 17 Digital	39.0 dB μ	29.6 dB μ

¹ It is anticipated that the flash cut application for K11RM will be filed within the week of the instant filing.

² Appendix B, Table of Digital Allotments, FCC 08-72.

³ OET Bulletin 69, Table 3.

The population was counted using the “Longley-Rice Terrain Dependent Algorithm” in accordance with OET Bulletin 69 out to a distance of 160 km (100 miles).

The combined population count of KTWO-DT (application) and K11RN (flash cut) is a net count with all duplication removed.

Results

KTWO-DT Application:	78,139
K11RN “Flash cut” to digital	10,324
Combined as “Superstation”	81,782
Appendix B ⁴	80,000

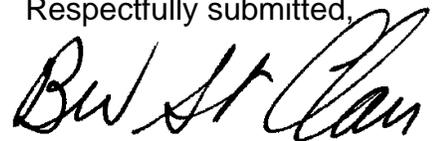
Conclusion

The combined net population coverage of KTWO-DT (application) and K11RN (digital) provides comparable coverage to that specified in Appendix B.

Engineer’s Statement

This Engineering Statement is based on the contents of application BMPCDT-20080124ABB, my understanding of the FCC’s rules and policies and my knowledge of receiving practices in fringe portions of the KTWO service areas. It is true and correct to the best of my knowledge and belief.

Respectfully submitted,



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Engineering Consultant
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⁴ See Third Report and Order, MB Docket 07-91 para 140(2) which establishes a requirement for at least 95% population coverage based on the population in Appendix B which percentage is exceeded. Also note that the predicted population for KTWO Ch 02 analog is 84,709 and the “Superstation” predicted population of 81,782 is 96.5% of the analog coverage.