

RADIOFREQUENCY ELECTROMAGNETIC FIELD HUMAN EXPOSURE SHOWING

KSLS DICKINSON, ND

BETHESDA CHRISTIAN BROADCASTING

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INTRODUCTION

The purpose of this report is to show that KSLS Dickinson, ND (Facility ID #174276) would continue to operate within FCC guidelines concerning non-ionizing uncontrolled human exposure under the proposed changes to the facility.

KSLS will continue to utilize its existing Bext TFC2K, 4-section antenna. The antenna is electrically equivalent to the Jampro Double-V antenna. Because of the broadband design, the manufacturer's suggested spacing of 0.85 will be utilized.

RF HUMAN EXPOSURE ANALYSIS

The antenna is centered at 45 meters above ground level. The ground surrounding the tower is relatively flat, and there are no publically accessible tall buildings within the analysis area of 600 meters surrounding the tower. Therefore, the calculations will assume level ground in every direction around the tower. Calculations will be based on a worst-case human height of 2 meters above the ground.

Using the included data for a Jampro Double-V antenna, the FCC's FM Model program was used to plot the power density of the RF field created by KSLS's proposed operation along the ground from 0 to 600 meters away from the tower. The resulting graph is shown in Figure 1. The maximum power density is predicted to be $2.73 \mu\text{W}/\text{cm}^2$ at a distance of 6.0 meters from the tower. From FCC OET Bulletin 65, Appendix A, Table 1B, the maximum allowed power density allowed for uncontrolled human exposure at 90.7 MHz is $200 \mu\text{W}/\text{cm}^2$. Therefore, the predicted maximum power density is just 1.36% of the maximum allowed power density. Since this value is less than 5% of the permitted level, the proposed facilities are excluded from environmental processing under this standard and need not be considered in conjunction with any other nearby facilities in evaluating compliance with this FCC Standard.

CONTROLLED ACCESS

Should access to the tower site be necessary in a way that will expose personnel to RF exposure limits beyond the specified limits, WMSJ will reduce power or cease operation in coordination with other users of the site.

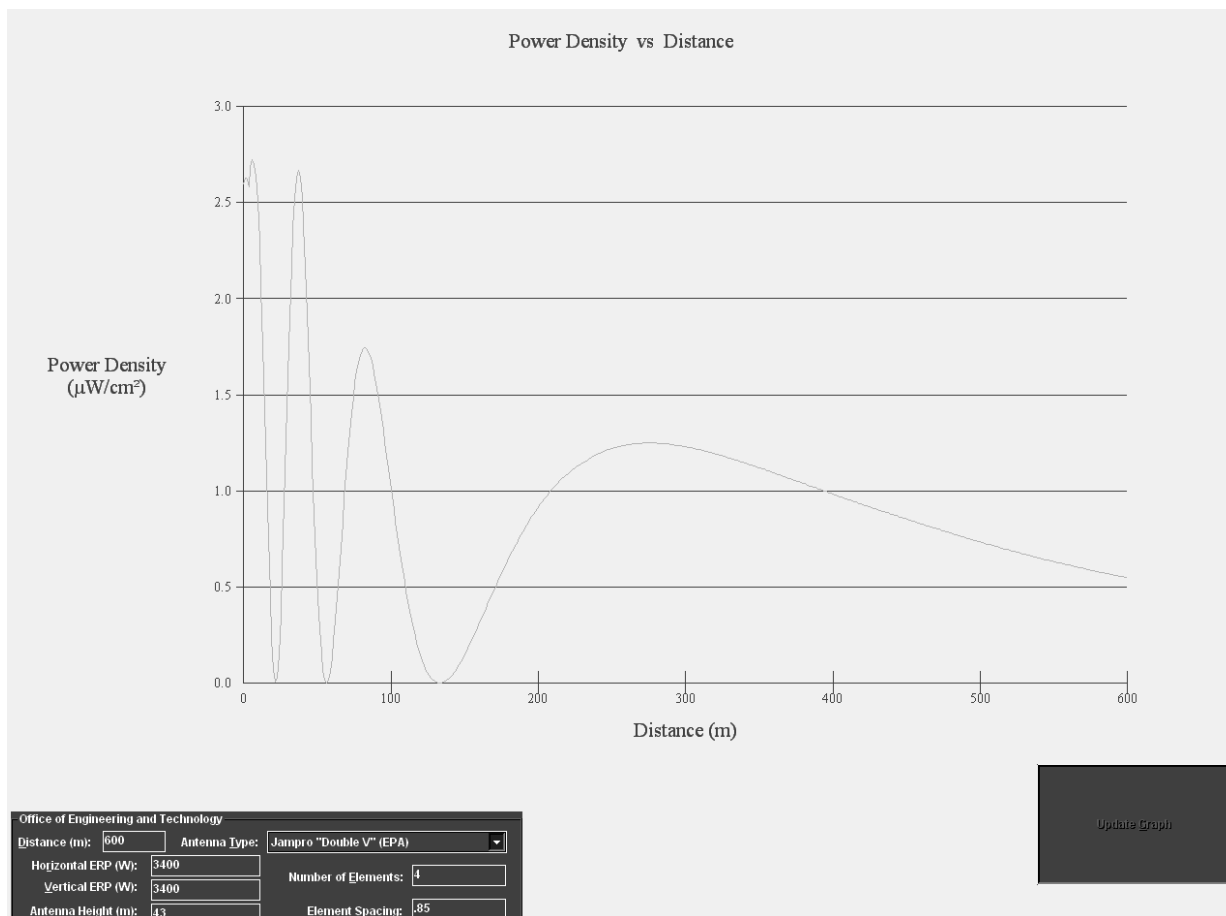


Figure 1. Power density vs. distance.