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ENGINEERING REPORT

W33ER-D, Augusta, GA LPTV Channel Change Minor Minor

ENGINEERING STATEMENT

This minor change proposal is a simple substitution to a Dielectric DLP-12M/VP model antenna. Vertical polarization is being added for an elliptical polarization proposal. Attached is the data sheet from Dielectric for the proposed antenna that demonstrates that the vertical polarization horizontal plane pattern does not extend beyond the horizontally-polarized horizontal plane pattern.

INTERFERENCE PROTECTION STATEMENT

It is noted that the horizontally-polarized pattern of the proposed Dielectric antenna is unchanged from that of the authorized horizontally-polarized pattern. Therefore, the predicted interference is unchanged by this application.

ENVIRONMENTAL STATEMENT

This proposal does not involve a site location specified under Section 1.1307(a) through (a)(8) of the FCC Rules.

The proposed LPTV produces an ERP that is equal to or less than 15 kilowatts. Assuming: (a) a maximum ERP of 30 kilowatts (twice 15 kW ERP to account for elliptical or circular polarization); (b) a relative field of less than 0.3 in the critical downward angles; and (c) a distance of at least 115 meters from the lowest antenna element to 2 meters above ground level, the maximum power density is calculated as follows:

S = 33.4 (F)(F)(ERP) / [(R)(R)]

Where, S equals power density in uW/cm2
F equals the relative field factor
ERP equals the effective radiate power in watts
R equals the distance in meters

= 33.4 (0.3)(0.3)(30,000) / [(115)(115)]

= 6.8 uW/cm2

6.8 uW/cm2 represents less than the uncontrolled power density limit (315.3 uW/cm2 for channel 14—channel 14 being the worst-case UHF channel or 200 uW/cm2 for VHF). The electromagnetic radiation from this proposed operation will not produce a value in excess of the radiation standard. The electromagnetic radiation from the proposed operation will not combine with other facilities on or near the structure to produce a significant change in value.

If this is a structure that may support various other operations, the applicant will cooperate with the other operators in establishing a plan for work done on the structure in close proximity to the existing antenna.