

**DELAWDER COMMUNICATIONS, INC.**

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**ENGINEERING REPORT**

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**W24EX-D, Florence, SC LPTV Minor**

**ENGINEERING STATEMENT**

This is a site-move minor change of a CP facility. W24EX-D is a licensed station.

An elliptical pattern is proposed. A showing from Dielectric is included that demonstrates that the vertically-polarized pattern is completely inside of the horizontally-polarized pattern. (14.2 kW ERP is proposed instead of 15 kW ERP as shown in the Dielectric attachment. The 70%/30% H/V split will be maintained at the lower 14.2 kW ERP level.)

(It is noted that this pattern is similar to the PSI "AER" pattern, not the "BA" pattern.)

**INTERFERENCE PROTECTION RESULTS**

The output from the FCC's current "TVStudy" software is attached demonstrating full compliance with the FCC's protection requirements.

A 0.1 kilometer step is requested and used for the TVStudy run.

Consent Agreements required for grant of this application: NONE

The applicant accepts any interference that is predicted to exist to the proposed facility by any licensed, authorized or previously proposed primary TV station. The applicant also accepts any interference that is predicted to exist to the proposed facility by any secondary TV facility that is given preferential status by the FCC over the Applicant's herein proposed facility.

**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 14.2 kilowatts. Assuming: (a) a maximum ERP of 28.4 kilowatts (for the use of circular or elliptical polarization); (b) a relative field of less than 0.3 in the critical downward angles; and (c) a distance of at least 80 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/cm<sup>2</sup>  
 F equals the relative field factor  
 ERP equals the effective radiate power in watts  
 R equals the distance in meters

$$= 33.4 (0.3)(0.3)(28,400) / [(80)(80)]$$

$$= 13.3 \text{ uW/cm}^2$$

13.3 uW/cm<sup>2</sup> represents less than the uncontrolled power density limit (315.3 uW/cm<sup>2</sup> for channel 14—channel 14 being the worst-case UHF channel or 200 uW/cm<sup>2</sup> 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.