

**DELAUDER COMMUNICATIONS, INC.**

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**ENGINEERING REPORT**

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**K38LC-D, Olivia, MN LPTV (Proposing Channel 21)**

**ENGINEERING STATEMENT**

**DISPLACEMENT QUALIFICATION**

This licensed LPTV station qualifies for channel displacement due to its currently-licensed channel being above TV channel 36.

**INTERFERENCE PROTECTION RESULTS ON NEW CHANNEL**

With the interference consent agreement, listed below, the output from the FCC's current "TVStudy" software is attached demonstrating full compliance with the FCC's protection requirements.

Consent Agreements required for grant of this application:

K21LF-D, Granite Falls, MN 21D (facility 42992), 6.36% increased interference

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. Additionally, as deemed necessary, the applicant may agree to consent to interference (either by a separate statement submitted with this initial application or by an amendment to this application) from another LPTV displacement application that has been submitted in the same filing window.

**ENVIRONMENTAL STATEMENT**

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

All digital LPTVs at this location combine to produce an ERP that is less than 10 kilowatts. Assuming: (a) a maximum ERP of 10 kilowatts; (b) a relative field of less than 0.3 in the critical downward angles; and (c) a distance of 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

$$= 33.4 (0.3)(0.3)(10,000) / [(80)(80)]$$

$$= 4.7 \text{ uW/cm}^2 \text{ (combined worst-case for all LPTVs at this site)}$$

4.7 uW/cm<sup>2</sup> represents less than 5% the uncontrolled power density limit (315.3 uW/cm<sup>2</sup> for channel 14—channel 14 being the worst-case UHF channel). (This site supports LPTVs located within the UHF TV spectrum.) 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.