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ENGINEERING REPORT

W34FL-D, Harrisburg-Lancaster, PA LPTV Channel 34D Minor

ENGINEERING STATEMENT

This minor modification replaces the 12 bay omnioid elliptical antenna with a 4 bay omnioid elliptical antenna. The centerline, horizontal plane pattern and ERP are unchanged.

INTERFERENCE PROTECTION RESULTS

Since there is no change in the horizontal plane ERP by the proposed antenna substitution, all protection requirements of the licensed facility are unchanged by this minor modification.

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 (for circular or elliptical polarization consideration); (b) a relative field of less than 0.3 in the critical downward angles; and (c) a distance of at least 130 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

$$= 33.4 \, (0.3)(0.3)(30,000) / [(130)(130)]$$

$$= 5.3 \text{ uW/cm2}$$

5.3 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.