

NONIONIZING RADIATION COMPLIANCE

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Marquee Broadcasting, Inc.

Dover, DE

The proposed WEVD-LD facilities specified in the attached application will fully comply with the current FCC Standard with regard to human exposure to nonionizing radiation. The proposed facilities will operate on Channel 3 with a maximum average effective radiated power of 550 Watts using a Kathrein/Scala CA-2 directional antenna that will be mounted at the top of a 9.1 Meter pole.

Equation (2), found on Page 30 of Supplement A to FCC OET Bulletin No. 65, details the calculation technique for determining the power density levels for a TV broadcast facility. In this case, however, it is necessary to substitute the proposed average DTV effective radiated power (550 Watts) for the expression $[0.4ERP_V + ERP_A]$ in this equation to compensate for the fact that DTV power levels are expressed in terms of average power, rather than peak power, as is the case for the visual portion of an analog TV signal. Using this equation and the vertical radiation pattern data for this antenna, which was supplied by the manufacturer, yields a maximum predicted power density of 82.5 microwatts/cm² at two meters above ground level, which is predicted to occur at a location 10 meters from the base of this pole. Since the permitted power density for uncontrolled exposure on Channel 3 is 200 microwatts/cm², this amounts to only 41.3% of the permitted level for uncontrolled exposure. There aren't any other non-excluded RF sources on this pole. There is, however, one nearby source that must be included in this analysis. This is WXHM(FM) - Middletown, Delaware, which operates on channel 220A with a vertically polarized effective radiated power of 280 watts ERP using a directional antenna mounted at the 91.4 meter level on a nearby tower. The power density levels at two meters above ground level for WXHM were calculated

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using Equation (9), found on Page 22 of FCC OET Bulletin 65. Based on a effective radiated power of 280 Watts and assuming, as a worst case, 100% downward radiation, it was determined that the maximum predicted power density at two meters above ground level for WXHM is $1.2 \mu\text{W}/\text{cm}^2$. Since the permitted power density for uncontrolled exposure in the FM band is $200 \mu\text{W}/\text{cm}^2$, this amounts to only 0.6% of the permitted level for uncontrolled exposure. Since this value is less than 5% of the permitted level for uncontrolled exposure, WXHM is excluded from environmental processing under this standard and need not be considered in conjunction with the proposed WEVD-LD facilities in evaluating compliance with this FCC Standard. There are no other non-excluded RF sources on this nearby tower. Therefore the proposed WEVD-LD facilities will comply with this exposure standard.

The proposed station will take appropriate steps to insure that workers that must be on this pole will not be exposed to levels of nonionizing radiation that are in excess of the permitted level for controlled exposure. These steps will include the cessation of operation or a reduction in power, as appropriate, when work becomes necessary in areas on this pole where the power density levels are in excess of the permitted level for controlled exposure.