NONIONIZING RADIATION COMPLIANCE
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Gethsemane Baptist Church
Concord, VA

The proposed W33AD digital facilities will fully comply with the current FCC standard with regard to human exposure to nonionizing radiation. These proposed digital facilities will utilize W33AD's presently licensed analog antenna, which is a horizontally polarized Scala SL8 nondirectional antenna which will operate with an effective radiated power of 6.0 kilowatts. This antenna is mounted with its center of radiation located 36.6 meters above ground on an existing tower. Equation (2), found on Page 30 of Supplement A to OET Bulletin 65, details the calculation technique used to determine the power density at the base of a TV broadcast tower. In this case, however, it is necessary to substitute the total proposed average DTV effective radiated power (6000 watts) for the expression [0.4ERPv + $ERP_A$] 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. Assuming, as a worst case, 100% downward radiation and substituting these values into this equation yields a predicted maximum power density at two meters above ground level of 167.3 $\mu W/cm^2$. Since the maximum permitted power density for uncontrolled exposure on TV Channel 33 is 389.3 $\mu W/cm^2$, this constitutes only 43.0% of the permitted level for uncontrolled exposure.

W33AD will continue to take appropriate steps to insure that workers who must climb this tower will not be exposed to power densities exceeding the permitted levels for controlled exposure. This will include a reduction in power or the cessation of operation, as appropriate, at any time that workers must be on this tower in any area where the total power density exceeds the permitted level for controlled exposure.

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Because the modifications proposed in the attached application will fully comply with the FCC standard regarding human exposure to nonionizing radiation and don't involve any tower modifications, it isn't necessary to undertake any further environmental studies or submit an environ mental assessment for these proposed facilities.