

R.F. RADIATION COMPLIANCE STATEMENT

Cadillac, Michigan
Roy Henderson

November 11/23/2020
Existing Tower # 1002422

Channel 31 (proposed)

This proposed 15 kW digital LPTV station will operate with its high-gain horizontally polarized antenna at a height of 213 meters above ground and using a field of 0.1 toward the nadir. Using the OET 65 formulas we can show that at head height (2 meters) this station will produce a power density of 0.18 microwatts per square centimeter which amounts to 0.00578 for a controlled environment and 0.056% for an uncontrolled environment.

WFQX-TV (CP)

WFQX-TV operates on channel 32 from the applicant's proposed tower with a licensed ERP of 200 kW, using a high gain antenna, polarized horizontally, at an antenna height of 305 meters above ground. Using the OET 65 formulas and a field of 0.1 in toward the nadir, we can show that at head height (2 meters) this station will produce a power density of 0.728 microwatts per square centimeter which amounts to 0.0375% for a controlled environment and 0.364% for an uncontrolled environment.

WWTV-TV (CP)

WWTV-TV is licensed on channel 9 from the applicant's proposed tower with an ERP of 45 kW (and a CP for 51.8 kW), polarized horizontally, at an antenna height of 376 meters above ground. Using the OET 65 formulas, with a field toward the ground of 0.2, we can show that at head height (2 meters) this station will produce a "licensed" power density of 0.43 microwatts per square centimeter which amounts to 0.043% for a controlled environment and 0.215% for an uncontrolled environment.

Combined Total:

Together, all five stations will produce a total of 0.635 percent of the maximum for an uncontrolled environment. Therefore, the proposed LPTV station will not cause an over the limit power density at head height at the tower base.

The applicant will reduce power to safe levels or terminate transmissions in the

event a worker must go on to the tower and be at a distance from one or more of the radiators such that over exposure would result.

Consequently, it appears that the proposed transmitter site will be in full compliance with the Commission's human exposure to radio frequency electromagnetic field rules and regulations.

Doug Vernier