

NEW FM TRANSLATOR APPLICATION
JAMES L. OREBAUGH
NEW FM TRANSLATOR
CH 246D - 97.1 MHZ - 0.02 KW
HILLSBORO, OHIO
April 2009

EXHIBIT C

Radio Frequency Assessment

A study has been made to determine whether this proposal is in compliance with 47 C.F.R. §1.1307 of the Commission's rules and with OET Bulletin #65, dated August 1997 ("Bulletin"), regarding human exposure to radio frequency radiation in the vicinity of broadcast towers. This study, considered all nearby broadcast facilities, and utilizes the appropriate formulas contained in the OET Bulletin.¹

The proposed translator antenna will be mounted on a pole mounted to the side of an existing water tank. The pole will suspend the antenna 3.1 meters above the top of the tank. The antenna will be mounted 6.1 meters above the ground. Access to the top of the tank is restricted. At any times when maintenance workers are required access to the top of the tank, Orebaugh will reduce the power of the proposed translator or cease operation so as not to expose the public to levels in excess of the uncontrolled levels. Therefore, the controlled environment calculations will be made at the top of the tank. The uncontrolled levels will be calculated at ground level at the base of the tank.

1) The contributions of the FM stations were calculated with the FM Model program. The EPA single bay dipole antenna was used for calculations unless otherwise noted.

The proposed translator antenna system will be mounted with its center of radiation 3.0 meters (10.0 feet) above the top of the water tank and 6.1 meters (20.0 feet) above ground at the base of the water tower and will operate with an effective radiated power of 0.020 kilowatt (20 watts) in the horizontal and vertical planes (circularly polarized). At 2.0 meters above the top of the tank, the height of an average person, the level for controlled environments is 0.668 mw/cm², or 66.8% of the controlled limit. At 2.0 meters above ground at the base of the tank, the height of an average person, the proposed translator antenna system will contribute 0.0477 mw/cm².² For the uncontrolled environment, this is 23.9% of the allowable ANSI limit.

Since the level for uncontrolled environments is well below the limit defined by the Commission, the proposed translator facility is believed to be in compliance with the radio frequency radiation exposure limits, as required by the Federal Communications Commission. Further, Orebaugh will post warning signs in the vicinity of the tower warning of potential radio frequency radiation hazards at the site. In addition, Orebaugh will reduce the power of the facility or cease operation, in cooperation and coordination with other tower users, as necessary, to protect persons having access to the site, tower or antenna from radio frequency radiation in excess of FCC guidelines.

2) This level occurs at 1.0 meter out from the base of the tower and is considered worst case.