

ENGINEERING STATEMENT  
AMENDMENT TO APPLICATION FOR  
CONSTRUCTION PERMIT  
WEIGEL BROADCASTING CO.  
STATION WFBT-CA  
CHICAGO, ILLINOIS

This Engineering Statement has been prepared on behalf of Weigel Broadcasting Co., licensee of low power television broadcast station WFBT-CA, Chicago, Illinois. Station WFBT-CA, which operates on television channel 23, has an application pending with the FCC requesting an increase in effective radiated power, File No. BPTTA-20030617AAJ.

The FCC, *In the Matter of Amendment of Parts 73 and 74 of the Commission's Rules to Establish Rules for Digital Low Power Television, Television Translator, and Television Booster Stations and to Amend Rules for Digital Class A Television Stations*, MB Docket No. 03-185, expressed the concern of the NTIA for the potential for harmonic emissions from digital low power television operations to radio navigation satellite service operations within the 1559-1610 MHz, 1215-1240 MHz, and 1164-1188 MHz bands. It was further indicated in the Docket that the third harmonic of a channel 23 visual carrier for analog operation is 1575.42 MHz, within one of the bands listed.

The Docket also indicates a DTV emission mask requiring signal attenuation of 110 dB below average transmitted power at frequencies more than 6 MHz removed

from the channel edge. Although the proposed WFBT-CA operation employs analog modulation, it is understood that current television transmitters with the addition of an additional filter can attenuate harmonics and other out of band signals to a level below 110 dB.

The Comark television transmitter proposed for use by WFBT-CA will employ a standard coaxial low pass filter to act as the initial harmonic filter at the output of the IOT. The manufacturer indicates that this filter will provide for a minimum attenuation of 40 dB at harmonic frequencies. In order to exceed normal requirements, a waveguide filter would also be used. The minimum expected attenuation for the waveguide filter is 50 dB at harmonic frequencies.

In addition to these filters, a standard elliptical function constant impedance filter will also be included in the system. This filter is designed to reduce intermodulation products near the operating frequency and will often provide additional attenuation to harmonic frequencies.

The manufacturer states, "A properly designed system with the inclusions (sic) of these components will meet the required 110 dB output emission".

The proposed operation of WFBT-CA is expected to meet all rules of the FCC in addition to the potential for

increased attenuation in frequency bands set aside for the  
radio navigation satellite service.



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