

ENGINEERING STATEMENT
OF
JOHN F.X. BROWNE, P.E.
IN SUPPORT OF
APPLICATION FOR MINOR MODIFICATION CONSTRUCTION PERMIT
WPTO-DT
OXFORD, OH

Background

Greater Dayton Public Television, Inc. (GDPT) is the permittee of non-commercial WPTO-DT, Channel 28, Oxford, OH. GDPT now holds a construction permit (BPEDT-20000428ACS, Facility ID No. 25065) to build-out the DTV station at the site of its NTSC station, WPTO-TV. It now proposes to relocate the DTV facility to the WXIX-TV tower near Cincinnati, OH.

Site & Tower

The proposed site coordinates are:

39° 07' 19 " NL
84° 32' 52" WL

The tower is registered (ASR No. 1012088). The antenna will be side-mounted on the existing tower and will not increase its overall height; therefore, no notification to the FAA or revision of the Antenna Structure Registration is required.

Antenna & ERP

The proposed directional antenna is a Dielectric TFU-24DSB-H(C). The azimuth and elevation pattern tabulations are included as engineering Exhibit E1a-b and Exhibit E2a-b. The relative field / dBk table is included as Table 1. The proposed maximum ERP is 400 kW. The predicted 48 dBu contour will completely encompass the city of Oxford, OH, using the proposed parameters.

Interference

The proposed station was studied using software that emulates the Commission's processing software in accordance with OET-69. These studies indicate that there will be more than 2% interference to the construction permit for WTTE-TV, Channel 28, Columbus, OH (BPCT-20011018AGK). WTTE-TV applied for this construction permit after the present WPTO-DT construction permit was granted; in doing so it accepted predicted interference of 3.5-4.8% ^{1/} from the WPTO-DT facility. This proposal will reduce that interference to 2.3-3.2%; in each scenario the interference to WTTE-TV would be less than that caused by the authorized WPTO-DT facility.

^{1/} Range due to various interference scenarios involving effects of other (third party) stations or proposals.

The proposed station will also reduce the interference to adjacent-channel WXIX-DT from more than 2% to 0% due to the proposed co-location ^{2/}.

The proposed facilities will produce a contour overlap with WBKI-LP, a Class "A" station on Channel 28 at Louisville, KY. However, as can be seen in Figure 1, the interfering contour of the proposed facilities overlaps WBKI-LP to a lesser degree than that from the facilities authorized in the present construction permit and, therefore, there will be an overall reduction in the predicted interference to WBKI-LP.

The studies also show that WBQC, a Class "A" station on Channel 25 in Cincinnati, OH, is inside the proposed contour. Further examination reveals that this station has been issued a construction permit to modify its facilities to operate on Channel 38 and, therefore, the Channel 25 issue is moot.

All interference scenarios involving other stations meet the Commission's de minimis standards.

Environmental / RFR Considerations

The proposed construction does not involve any of the conditions specified in Section 1.1306 and, therefore, preparation of an Environmental Assessment is not required.

^{2/} While not an issue for the purposes of obtaining an authorization, the interference to WPTO-DT caused by the adjacent-channel relationship of WXIX-DT is well in excess of 2% with the currently authorized facilities. The proposed co-location reduces this to zero also.

The proposed DTV operation will add to the existing Radio Frequency Radiation (RFR) scenario at the transmission site. The RFR from the proposed WPTO-DT facility at ground level is estimated to be 0.00183 mW/cm^2 or significantly less than 1% of the MPE for public exposure (0.371 mW / cm^2).

There is, however, the possibility for exposing workers on the structure to levels in excess of the occupational limit. WPTO-DT will cooperate with other tenants and will reduce power as required to provide a compliant environment for workers. All workers will be encouraged to wear personal RF monitoring devices while on the tower structure.

The tower base is enclosed by a locked security fence to limit access by authorized persons only and appropriate signage is in-place to warn of the RFR hazard potential on the structure.

Certification

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.

John F.X. Browne, P.E.
April 23, 2002