

EXHIBIT A

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of TRI-STATE CHRISTIAN TV, licensee of WTCT(TV), Marion, Illinois, in support of this Application for Modification of Construction Permit BPCDT-990803LH, which authorizes maximized operation of digital television facility WTCT-DT on Channel 17. The purpose of this modification is to simply propose the use of a directional antenna. No change in maximum effective radiated power, effective antenna height or site location is proposed herein.

Antenna radiation pattern data are provided in Exhibit B. Exhibit C is a map of the revised digital service contours. Since the Commission has already authorized WTCT-DT with 800 kw omnidirectionally, it should be clear that the newly proposed facility would not increase the amount of interference to any pertinent DTV or Class A LPTV station. Therefore, no interference study is provided herein.

Although it is not expected that this facility would cause objectionable interference to any other authorized broadcast facility located within close proximity, the applicant recognizes its obligation to correct any such interference that may occur.

Since no change in the overall height or location of the WTCT tower is proposed herein, the FAA has not been notified of this application. The FCC issued Antenna Registration Number 1040116 to this structure.

We have studied the RF transmissions of this facility with regard to their environmental effect. Employing the methods set forth in *OET Bulletin No. 65* and considering the elevation pattern of the proposed Andrew antenna, we calculate maximum power density two

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meters above ground from the proposed facility to be  $0.0044 \text{ mw/cm}^2$  at points 31 meters northwest of the tower base. This is 1.3 percent of the  $0.33 \text{ mw/cm}^2$  reference for uncontrolled environments (areas with public access) surrounding stations operating on Channel 17 (488-494 MHz).

With respect to colocated WTCT, we calculate maximum power density two meters above ground to be  $0.15 \text{ mw/cm}^2$  at points located 68 meters west of the tower base. This represents 41.0 percent of the maximum allowable power density for uncontrolled environments surrounding stations operating on Channel 27 (548-554 MHz). Assuming that the maxima for WTCT and WTCT-DT occurred at the same point (which they do not), the combined power density would be only 42.3 percent of the allowable value. Therefore, a grant of this application would not constitute a major environmental action with respect to public exposure to nonionizing electromagnetic radiation.

Further, the applicant will take whatever preventive steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive RF energy. On this basis, a grant of this application would clearly be a minor environmental action with respect to occupational exposure to nonionizing EMR.

I declare under penalty of perjury that the foregoing statements and the attached Engineering Report, which was prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.

  
KEVIN T. FISHER

September 5, 2001

WASHINGTON, D.C.