

Exhibit 44 - Statement B  
**ENVIRONMENTAL CONSIDERATIONS**  
prepared for  
**Jefferson-Pilot Communications Company of Virginia**  
WWBT-DT Richmond, Virginia  
Facility ID 30833  
Ch. 54 1000 kW 211.0 m

The instant proposal is not believed to have a significant environmental impact as defined under Section 1.1306 of the Commission's Rules. Consequently, preparation of an Environmental Assessment is not required.

**Nature of The Proposal**

*Jefferson-Pilot Communications Company of Virginia ("Jefferson-Pilot")* herein proposes to increase the effective radiated power ("ERP") of the WWBT-DT, Richmond, Virginia, Channel 54 digital television ("DTV") facility from 860 kW to 1000 kW. *Jefferson-Pilot* will continue to employ the existing licensed antenna (see BLCDT-20020204ABB) currently in service at the same developed communications which is also co-located with the "paired" WWBT(TV), NTSC Channel 12 facility.

The proposed facility will be located at an existing site approved by the FAA, and registered with the FCC (ASR number 1015246). The use of existing transmitting locations has been characterized as being environmentally preferable by the Commission, according to Note 1 of §1.1306 of the FCC Rules. Since no change in overall structure height is proposed, no change in current structure marking and lighting requirements is anticipated. Further, the existing WWBT-DT antenna will be employed, thus, no actual tower construction or antenna installation is required. Therefore, it is believed that this application may be categorically excluded from environmental processing pursuant to §1.1306 of the Commission's rules.

**Human Exposure to Radiofrequency Radiation**

The proposed operation was evaluated for human exposure to radiofrequency energy using the procedures outlined in the Commission's OET Bulletin No. 65 ("OET 65"). OET 65 describes a means of determining whether a proposed facility exceeds the radiofrequency exposure guidelines adopted in §1.1310. Under present Commission policy, a facility may be presumed to comply with the limits specified in §1.1310 if it satisfies the exposure criteria set forth in OET 65. Based upon

## Exhibit 44 - Statement B

(Page 2 of 4)

that methodology, and as demonstrated in the following, the proposed transmitting system will comply with the cited adopted guidelines.

The proposed WWBT-DT antenna will continue to have a center of radiation 200 meters above ground level. The transmitter facility is also co-located with its studio / office operation. The studio / office building is located adjacent to the WWBT tower. Based on information provided by representatives of the applicant, the building roof is 38 feet above ground level. Several air conditioner units for the building are located on the roof. Service personnel occasionally require access to the building roof to service these units. Thus, for this evaluation, the distance of interest to the highest accessible location considers the potential for RF exposure to workers on the roof. Therefore, an additional 7 feet when added to the roof height above ground, for a total of 45 feet or 13.7 meters, yields the location elevation above ground to be evaluated. This value is then subtracted from the WWBT-DT antenna center of radiation above ground to determine the distance for the study.

An ERP of 1000 kilowatts, horizontally polarized, will be employed. According to elevation pattern data provided by the antenna manufacturer, the WWBT-DT antenna has a relative field of 14 percent or less from 10 to 90 degrees below the horizontal plane (i.e.: below the antenna). Thus, a value of 14 percent relative field is used for this calculation. The “uncontrolled/general population” limit specified in §1.1310 for Channel 54 (center frequency 713 MHz) is  $475.3 \mu\text{W}/\text{cm}^2$ .

OET-65's formula for television transmitting antennas is based on the NTSC transmission standards, where the average power is normally much less than the peak power. For the DTV facility in the instant proposal, the peak-to-average ratio is different than the NTSC ratio. The DTV ERP figure herein refers to the *average* power level. The formula used for calculating DTV signal density in this analysis is essentially the same as equation (9) in OET-65.

$$S = (33.4098) (F^2) (ERP) / D^2$$

Where:

$S$	=	power density in microwatts/cm <sup>2</sup>
$ERP$	=	total (average) ERP in Watts
$F$	=	relative field factor

**Cavell, Mertz & Davis, Inc.**

$D$  = distance in meters

Using this formula, the proposed facility would contribute a power density of  $18.9 \mu\text{W}/\text{cm}^2$  at two meters above ground level near antenna support structure, or 4.0 percent of the general population/uncontrolled limit. At ground level locations away from the base of the tower, the calculated RF power density is even lower, due to the increasing distance from the transmitting antenna.

§1.1307(b)(3) states that facilities contributing less than five percent of the exposure limit at locations with multiple transmitters (such as the case at hand) are categorically excluded from responsibility for taking any corrective action in the areas where their contribution is less than five percent. Since the instant situation meets the five percent exclusion test at all ground level areas, the impact of the any other facilities using this site may be considered independently from this proposal. Accordingly, it is believed that the impact of the proposed operation should not be considered to be a factor at or near ground level as defined under §1.1307(b).

### **Safety of Tower Workers and the General Public**

As demonstrated herein, excessive levels of RF energy attributable to the proposal will not be caused at publicly accessible areas at ground level near the antenna supporting structure. Consequently, members of the general public will not be exposed to RF levels in excess of the Commission's guidelines. Nevertheless, tower access will continue to be restricted and controlled through the use of a locked fence. Additionally, appropriate RF exposure warning signs will continue to be posted.

With respect to worker safety, it is believed that based on the preceding analysis, excessive exposure would not occur in areas at ground level. A site exposure policy will continue to be employed protecting maintenance workers from excessive exposure when work must be performed on the tower in areas where high RF levels may be present. Such protective measures may include, but will not be limited to, restriction of access to areas where levels in excess of the guidelines may be expected, power reduction, or the complete shutdown of facilities when work or inspections must be performed in areas where the exposure guidelines will be exceeded. On-site RF exposure

Exhibit 44 - Statement B

(Page 4 of 4)

measurements may also be undertaken to establish the bounds of safe working areas. The applicant will coordinate exposure procedures with all pertinent stations.

**Conclusion**

Based on the preceding, it is believed that the instant proposal may be categorically excluded from environmental processing under Section 1.1306 of the Rules, hence preparation of an Environmental Assessment is not required.