

Engineering Statement
CBS Operations Inc.
WTOG(TV)(STA) St. Petersburg, Florida
Facility ID 74112
Ch. 44 417 kW 452 m

CBS Operations Inc. (CBS) seeks temporary approval to install an interim antenna for WTOG(TV) St. Petersburg, Florida. The proposed facility will operate with a non-directional antenna height 452 meters above average terrain (HAAT) and an effective radiated power (ERP) of 417 kW. The antenna will be utilized for an initial period of 180 days during construction at the main WTOG site required due to the incentive auction repack. This Statement addresses allocations, environmental, and radiofrequency factors related to this proposal.

The attached coverage map **Figure 1** demonstrates that the proposed service contour does not extend beyond that of the main WTOG antenna¹ as required by FCC Rule §73.1675.² There are no AM station transmitter sites within 3 km so FCC Rule §1.30002 is not triggered. The nearest FCC monitoring station is 163 kilometers from the proposed facility at Vero Beach, Florida, well beyond the suggested consultation radius specified in §73.1030(c). Thus, it is believed that the proposed facility satisfies all allocation matters.

The proposed facility uses an existing antenna, transmission line, and tower³ with no change in overall height, marking specifications, or lighting specifications. Because no tower work is required, this application is categorically excluded from environmental processing.

The horizontally polarized antenna is located 450.7 meters above ground level and will have a horizontally polarized ERP of 417 kilowatts. According to the manufacturer, the proposed antenna relative field elevation pattern does not exceed 25 percent relative field at elevation angles from 20 to 90 degrees below the horizon. Therefore, a relative field value of 25 percent was used for this calculation.

¹ See FCC file number BLCDT-20090622ACD.

² §73.1675 specifies an analysis of Grade B contours. Because "Grade B" is not defined in a digital television context, Figure 1 provides dipole-corrected 41 dB μ contours instead.

³ See Antenna Structure Registration 1211242.

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The proposed operation was evaluated for human exposure to radiofrequency energy using equation ten (10) from the Commission's OET Bulletin No. 65. Calculations show that the proposed facility would contribute a power density no greater than $4.3 \mu\text{W}/\text{cm}^2$ at two meters above ground level or 1.0 percent of the FCC's $435.3 \mu\text{W}/\text{cm}^2$ "uncontrolled/general population" exposure limit for UHF Channel 44 (653 MHz). RF power density is expected to be even lower at ground level locations farther away from the base of the tower, due to the increasing distance from the transmitting antenna.

According to §1.1307(b)(3), facilities at locations with multiple emitters are categorically excluded from responsibility for taking corrective action in areas where their contribution is less than five percent of the limit. Since the calculated exposure is less than five percent at all ground level areas, the impact of other possible contributors should not be a factor.

Tower access will continue to be controlled and appropriate RF exposure warning signs will continue to be posted. A site exposure policy is in effect that includes restriction of access, power reduction, or the complete shutdown of facilities when work must be performed where predicted RF levels would otherwise exceed appropriate guidelines. On-site RF exposure measurements may also be undertaken to establish the bounds of safe working areas. The applicant will coordinate exposure procedures with all pertinent stations.

WTOG(Lic) Main Antenna
FCC File BLCDDT-20090622ACD
41 dBμ F(50, 90) Service Contour

Figure 1
Proposed Interim Site
STA Antenna Coverage
WTOG(TV) St. Petersburg, FL
Facility ID 74112
Ch. 44 417 kW 452 m

315°

45°

270°

90°

225°

135°

180°

083-00-00 W
28-00-00 N

082-00-00 W

081-00-00 W

27-00-00 N

