

Engineering Statement

CBS LITV LLC

WLNY-TV(Aux) Riverhead, New York

Facility ID 73206

Ch. 29 139 kW(Max-DA) 190.6 m

CBS LITV LLC (CBS) proposes to install an auxiliary antenna for WLNY-TV Riverhead, New York. The proposed facility will operate with a directional, elliptically-polarized antenna height 186.2 meters above ground level and 190.6 meters above average terrain (HAAT). The antenna will operate with a maximum horizontally-polarized effective radiated power (ERP) of 139 kW and a vertically polarized ERP of 59.6 kW. The antenna will be required briefly on August 2, 2019 to permit reconfiguration of the primary antenna system as part of the DTV repack. This post-transition facility will be retained as a permanent auxiliary antenna.¹ 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 over land areas beyond that of the main WLNY-TV antenna² as required by FCC Rule §73.1675.³ Because no AM transmitter sites are within 3 kilometers of the proposed facility and no “significant modification” is proposed, the WLNY-TV auxiliary antenna is expected to have no significant effect on any AM station antenna system.⁴ The nearest FCC monitoring station is 385 kilometers from the proposed facility at Laurel, Maryland, well beyond the coordination radius specified in §73.1030(c). Thus, it is believed that the proposed facility satisfies all allocation matters.

The proposed facility uses an existing tower⁵ with no change in overall height, marking specifications, or lighting specifications. Consequently, this application is categorically excluded from environmental processing.

¹ Notably, although this application seeks a post-transition channel 29 facility, the FCC’s filing system incorrectly shows a grayed-out channel 47 that cannot be corrected.

² See FCC file number 0000034023 for the post-transition WLNY-TV Construction Permit. The only contour extension shown is over the Atlantic Ocean where Bermuda, the nearest land mass, is more than 1,200 kilometers away.

³ §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.

⁴ Please See FCC Rule §1.30002.

⁵ See Antenna Structure Registration 1006717.

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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 using a typical UHF antenna elevation pattern field value of 15 percent or less toward angles 20 degrees or more below the horizon.⁶ This study shows that the proposed facility would contribute a power density of 4.4 $\mu\text{W}/\text{cm}^2$ at two meters above ground level near antenna support structure, or 1.2 percent of the FCC's 375.3 $\mu\text{W}/\text{cm}^2$ "uncontrolled/general population" exposure limit for UHF Channel 29 (563 MHz). RF power density is expected to be even lower at ground level locations 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.

⁶ See page 31, FCC OET Bulletin 65 Supplement A, August 1997.

Figure 1
Proposed Facility Coverage Contours
 WLNY-TV(CP) Riverhead, NY
 Facility ID 73206
 Ch. 29 139 kW(Max-DA) 190.6 m

WLNY-TV(CP) Post-Transition Facility
 Ch. 29 1000 kW(Max-DA) 193.9 m
 41 dBμ F(50, 90) Service Contour *

WLNY-TV Proposed Aux Facility
 41 dBμ F(50, 90) Service Contour *
 48 dBμ F(50, 90) Principal Community

No Land Area
 Contour Overlap

* - Dipole Corrected

