

Engineering Statement

CBS Broadcasting Inc.

WCBS-TV(Aux) New York, New York

Facility ID 9610

Ch. 36 (Post Transition) 241 kW 495 m

CBS Broadcasting Inc. (“*CBS*”) proposes a new auxiliary antenna for WCBS-TV New York, NY. The proposed facility is intended for emergency, maintenance and test purposes only and will operate on post-transition channel 36 following the repack Phase 4 completion.¹ An existing RFS model PEP96L broadband antenna located at the licensed WCBS-TV site 495 meters above average terrain (HAAT) will be utilized with an effective radiated power (ERP) of 241 kW. 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 either the WCBS-TV licensed, pre-transition antenna as required by FCC Rule §73.1675² or the authorized, post-transition antenna.³ Because there are no AM transmitter sites within 3 kilometers of the proposed facility, FCC Rule §1.30002 will not be triggered. The nearest FCC monitoring station is 299 kilometers away at Laurel, Maryland, well beyond the protection radius specified in §73.1690(c). Thus, it is believed that the proposed facility satisfies all allocation matters.

The proposed facility uses an existing tower⁴ and antenna so no construction is required. Because there will be no change in overall height, marking specifications, or lighting specifications, this application is categorically excluded from environmental processing.

The existing elliptically polarized antenna is located 501.7 meters above ground level and will operate with an elliptical ERP of 241 kilowatts (H-Pol) and 60.25 kilowatts (V-Pol). According to the manufacturer, the antenna relative field pattern is less than 15 percent at angles ten

¹ The existing WCBS-TV auxiliary facility at West Orange, NJ (LMS File Number 0000004179) will be transitioned and retained for use when both the main the proposed auxiliary facility are unavailable.

² FCC Rule §73.1675 requires a comparison of Grade B contour locations. Because “Grade B” is not defined in a digital television context, Figure 1 provides 41 dBμ dipole-corrected contours instead.

³ See FCC LMS File Number 0000033867.

⁴ See Antenna Structure Registration 1055009.

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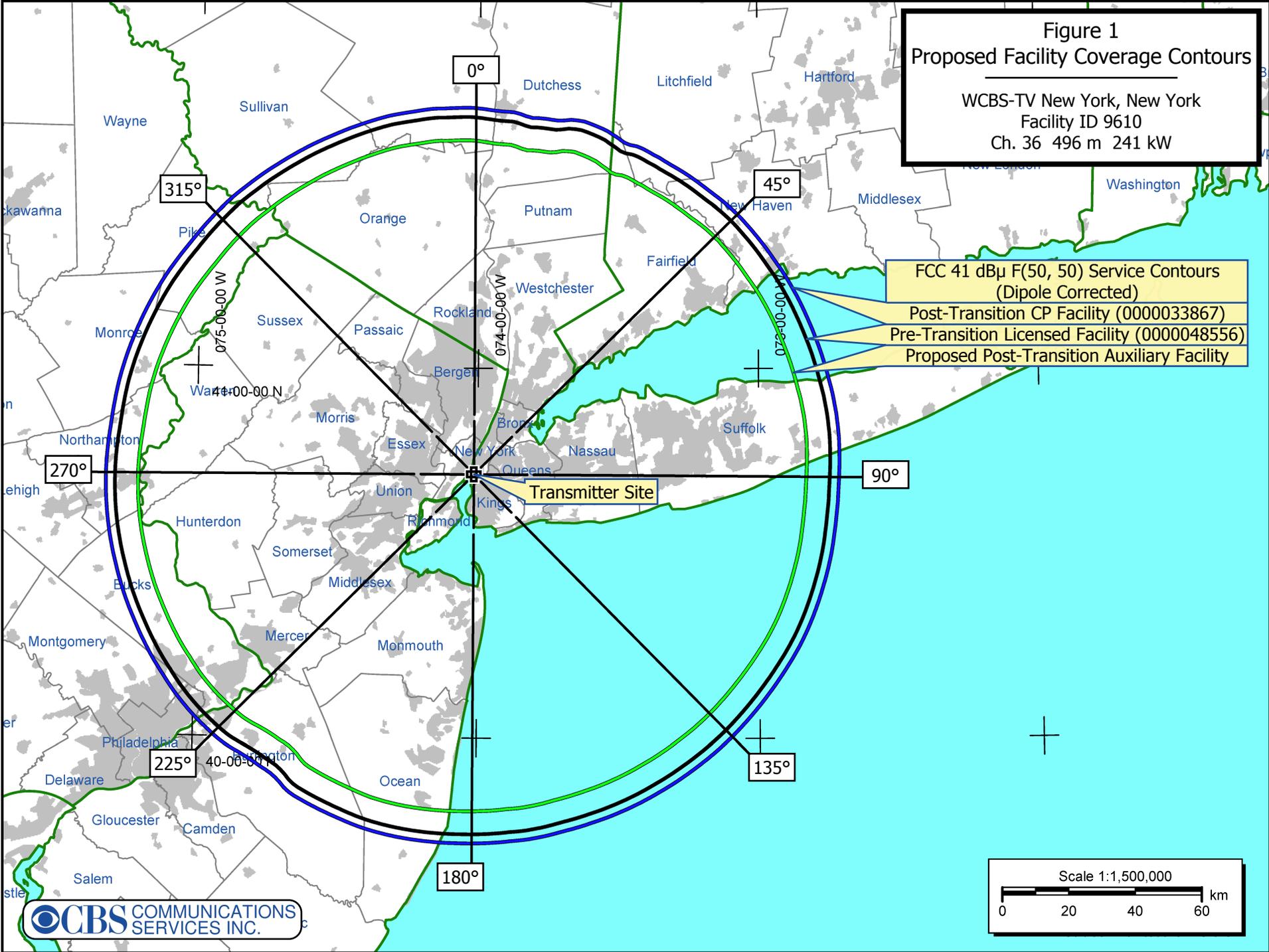
more degrees below the horizon. Thus, a relative field value of 15 percent was used for these calculations.

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 of $0.9 \mu\text{W}/\text{cm}^2$ at two meters above ground level near the antenna support structure or 0.2 percent of the FCC's $403.3 \mu\text{W}/\text{cm}^2$ "uncontrolled/general population" exposure limit for UHF Channel 36 (605 MHz). As would be expected from an auxiliary antenna with a lower ERP, this calculated power density is less than that of the main antenna. RF power density is expected to be even lower at ground level locations away from the base of the support structure 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. Calculations using the same methodology confirm that this five percent threshold will not be exceeded at elevations ranging from ground level to 393.7 meters above ground. At present, One World Trade Center is thought to be the only building in Lower Manhattan at or above this height. Therefore, the impact of other possible RF contributors should not be a factor at publicly accessible locations in other buildings near the proposed facility.

Tower and rooftop access will continue to be strictly controlled by the building owner. CBS will continue to participate in the building owner's RF exposure safety program that, in cooperation with other broadcasters, includes restriction of access, power reduction, or shutdown of facilities when predicted or measured RF exposure would otherwise be exceeded.

Figure 1
Proposed Facility Coverage Contours
 WCBS-TV New York, New York
 Facility ID 9610
 Ch. 36 496 m 241 kW



FCC 41 dBu F(50, 50) Service Contours
 (Dipole Corrected)
 Post-Transition CP Facility (0000033867)
 Pre-Transition Licensed Facility (0000048556)
 Proposed Post-Transition Auxiliary Facility

Transmitter Site

