Exhibit 8 – Engineering Statement

CBS Radio Stations Inc.

WWMX(FM) Baltimore, Maryland

Facility ID 74196

Ch. 293B 16 kW (Max-DA) 264 m

CBS Radio Stations Inc. ("CBS Radio") has completed construction of the WWMX(FM) Baltimore, Maryland directional auxiliary antenna. This Statement, along with the instant License Application and attached exhibits demonstrate compliance with Special Operating Conditions and Restrictions shown on the Construction Permit.[1] *CBS Radio* seeks a license and authorization for full power, program test operations for this facility.

With one minor exception, the proposed facility was constructed as authorized. In order to circumvent a guy-wire incursion, it was necessary to install the proposed antenna four meters below the authorized height pursuant to §73.1690(c)(2). No commensurate increase in ERP is permissible after accounting for the proposed contour locations and rounding to the nearest 0.5 kW. A revised radiofrequency exposure study is provided below.

The calculated antenna system gains and losses are provided in Exhibit 7. The Antenna Proof-of-Performance, Surveyor Certification, and Supervising Engineer's Affidavit, provided as Exhibits 9A-9C respectively, demonstrate compliance with Special Operating Conditions 1, 2, and 3. The Antenna Proof-of-Performance shows compliance with the power maxima and minima specified in Condition 4.

Due to the proximity of the WNST(AM) Towson, MD transmitter site, Condition 5 requires notification and analysis in cases where "significant modification" of an existing tower is proposed. Because the new WWMX facility does not alter the existing tower's physical height and the existing structure is neither detuned nor base-insulated, the modification is not significant as defined by §1.30002(d). Further, a 2014 Method of Moments analysis determined that the entire tower contributed a maximum WNST pattern distortion of only 1.05 dB, approximately half the amount that triggers remediation. This study is provided as Exhibit 9D.

[1] *See* FCC File Number BXPH-20170217AAH.

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The proposed operation was evaluated for radiofrequency exposure using the FCC Office of Engineering and Technology's updated *FMModel* software[2] which calculates RF power density at ground level given the height, power, and type of FM broadcast antenna. As demonstrated in the following, the proposed transmitting system complies with the FCC's general population/uncontrolled maximum permitted exposure (MPE) exposure guideline of 200 $\mu W/cm^2$ for the FM broadcast band.

An ERI four-bay, 0.5 wavelength-spaced circularly-polarized "Rototiller" antenna was installed for WWMX.[3] Using this antenna type, a height above ground of 229 meters, and WWMX's proposed parameters as input values, *FMModel* predicts a maximum, ground-level power density of 0.5 $\mu W/cm^2$ or 0.25 percent of the MPE; well less than the FCC limit.[4]

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 MPE limit. Since the instant situation meets the five percent exclusion test at all ground level areas, the impact of any other facilities may be considered independently from this proposal. Thus, the impact of the proposed operation should not be considered to be a factor at ground level locations.

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 as required by Special Condition 6.

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[2] *See* FCC Public Notice DA 16-340, Released March 31, 2016 and updated May 18, 2017.

[3] This is an EPA "Type 3 – Opposed U Dipole" antenna.

[4] The results shown here are inconsistent with predictions provided in the original Application for Construction Permit. This inconsistency may be a consequence of the May 18, 2017 update to the *FMModel* program.