

REQUEST FOR SPECIAL TEMPORARY AUTHORIZATION

prepared February 2024 for

Atlantic Gateway Communications, Inc.

WGTS(FM) Tacoma Park, Maryland



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Introduction

Atlantic Gateway Communications, Inc. (“Atlantic”), is the licensee of WGTS(FM), Takoma Park, Maryland (file number BMLED-20070501AAA). The instant application is being filed to request Special Temporary Authority (“STA”) to operate from a different existing antenna at the same site as the main WGTS facility. In particular, *Atlantic* proposes to use registered tower (ASR Number 1018169) with coordinates of Latitude 38° 53’ 30.0”N, and Longitude 77° 07’ 54.0”W (NAD 83). The proposed antenna will be omnidirectional, circularly polarized and mounted at 117 meters AGL. An ERP of 6 kW and an antenna height above average terrain (“HAAT”) of 164 meters is being specified.

Allocation Considerations

The standard 8-radial HAAT calculation for this site is 164 meters per §73.313(d).¹ **Figure 1** is provided to demonstrate that the 60 dBμ (1 mV/m) contour of the proposed STA facility will not extend beyond the bounds of the 60 dBμ contour of the authorized main facility, in compliance with §73.1675(a)(1). Because minimum distance spacing and contour protection rules do not apply to STA facilities, the instant proposal is believed to comply with all pertinent FCC allocations requirements.

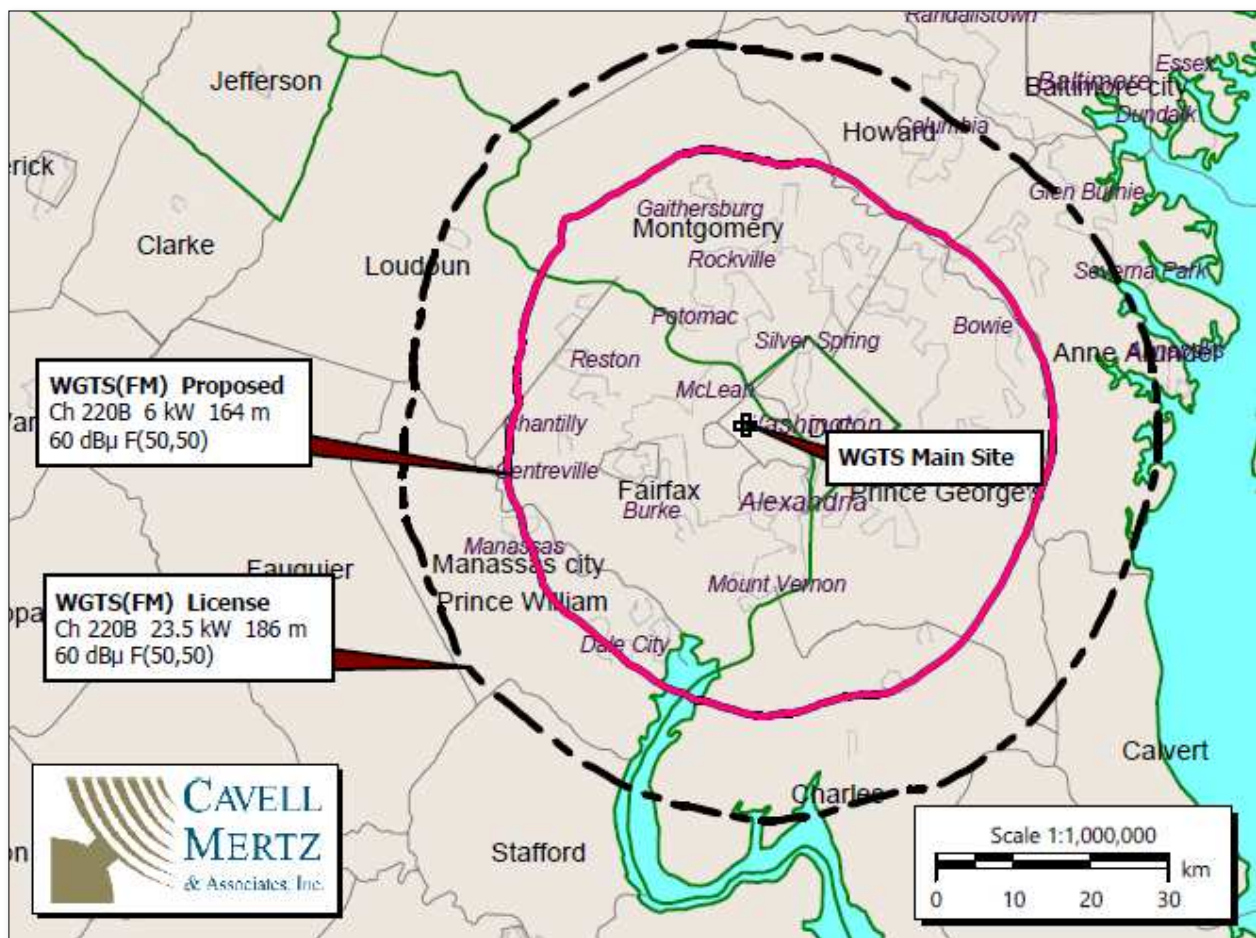


Figure 1 – WGTS(FM) Contour Comparison

¹ Details of the HAAT calculation procedure will be made available upon request.

Based on data extracted from the FCC's CDBS database, the nearest AM broadcast station is WFAX(AM) (1220 kHz, Falls Church, VA) at 3.72 km from the proposed site. The WFAX operation is non-directional, with a calculated wavelength of 245.7 meters. The proposed operation is not within the required coordination distance of WFAX's day or nighttime operation as specified in § 1.30002(a) of the Rules. Thus, the proposed support structure and construction will not be a consideration with regard to WFAX. The nearest FCC monitoring station is at Laurel, Maryland at a distance of 40.6 km from the proposed site. This exceeds the minimum distance specified in §73.1030(c)(3)(iii) that would suggest consideration of the monitoring station.

It is therefore believed that the proposed facility satisfies all pertinent Commission Rules and Policies now in effect regarding allocation matters for an auxiliary facility.

Environmental Considerations

The proposed antenna is an existing Shively 6814BB-2D, circularly polarized 2-bay, full wavelength spaced omni-directional antenna (EPA Type 1: Ring-and-Stub or "Other") at 117 meters AGL on the registered ASRN 1018169 tower. An ERP of 6 kW is specified. 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. Because no change in structure height is proposed, no change in current structure marking and lighting requirements is anticipated. 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 Electromagnetic Field

The proposed operation was evaluated for human exposure to radiofrequency electromagnetic field using the procedures outlined in the Commission's OET Bulletin 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 that methodology, and as demonstrated in the following, the proposed transmitting system will comply with the cited adopted guidelines.

The general population/uncontrolled maximum permitted exposure ("MPE") limit specified in §1.1310 for the entire FM broadcast band is $200 \mu\text{W}/\text{cm}^2$. For the purpose of this study, "public access" will be considered at the base of the tower at locations two-meters above ground. Using the FCC's FM Model program and specifying a worst-case EPA Type 1 antenna, it was determined that the proposed facility would contribute an RF power density of $18.1 \mu\text{W}/\text{cm}^2$ at two meters above ground level near the antenna support structure, or 9.1 percent of the general population/uncontrolled limit.

Table I - Summary of Radiofrequency Radiation Calculations - Nearby Facilities

Station	Channel	ERP (kW)	Polarization	Field	Distance (meters)	S - Calculated ($\mu\text{W}/\text{cm}^2$)	S - Limit ($\mu\text{W}/\text{cm}^2$)	% of Limit
WGTS(STA)*	220B	6.0	C	FMM	--	18.1	200.0	9.1
WAMU(FM)	203B	13.5	C	FMM	--	0.3	200.0	0.2
WAVA-FM	286B	33	C	FMM	--	10.2	200.0	5.1
WETA(FM)	215B	75	C	FMM	--	2.6	200.0	1.3
WCSP-FM	211B	0.6	C	FMM	--	0.4	200.0	0.2
WMAL-FM	290B	40.0	C	FMM	--	35.4	200.0	17.7
WMZQ-FM	254B	15.0	C	1.000	0.49	4.1	200.0	2.1
W252DC	252D	0.15	C	1.000	0.56	0.0	200.0	0.0
W284CQ	284D	0.099	C	FMM	--	0.1	200.0	0.0
WCDN-LD App	6	3.0	H	1.00	550	0.2	200.0	0.1
WETA-TV*	26	240	H	0.116	148	4.9	383.3	1.3
Total Calculated Signal Density(%):								37.1

ERP: Effective Radiated Power
Polarization: C - Circular; H - Horizontal; V - Vertical
Field: Vertical Plane Field Value (from antenna manufacturer's data)²
Height: Height of radiation center above ground level
S-Calculated: Calculated value of signal density at two meters above ground level (from formulae in [OET-65](#))
S-Limit: §1.1310 uncontrolled/general population limit for signal density

*Notes: "FMM" in the Field column refers to the use of the FCC's FM Model to calculate peak exposure levels from each source in the table. Co-located facilities KVEJ and KMBV are configured to specify the actual antennas in use, while the distant facilities assume a single bay (relative field value of 1.000) at the distance and ERP listed.

WETA-TV calculations (last line) are based on an actual elevation pattern. The maximum calculated exposure occurs at a distance of 80 meters horizontally, or 148 meters slant distance from the antenna.

² For simplicity, circular polarization is assumed for FM and for Television facilities with Elliptical polarization. The FCC's FM Model was used to calculate RF exposure levels near the proposal from other nearby FM stations, assuming a single-bay antenna at the authorized ERP and distance listed in the table.

Table I above provides a summary of the worst-case conditions of RF exposure levels at the proposed WGTS(FM) STA site. Where antenna make and models are known, the FCC's FM Model was used to calculate exposure. FM stations at sites nearby were calculated assuming a relative field value of 1.000 and the slant distance from the antenna to the base of the proposed support structure. Based on the calculations, the total combined calculated exposure level is 37.1 percent of the General Population limit. This is still conservative because the peak calculated values were used. Most peaks are at varying distances from the tower, so actual levels would be lower. Accordingly, it is believed that the impact of the proposed operation should not be considered a factor at ground level as defined under §1.1307(b).

Safety of Tower Workers and the General Public

As demonstrated herein, excessive levels of RF energy will not be caused by the proposal 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 be restricted and controlled through the use of a locked gate.

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

Conclusion

Based on the preceding, it is believed that the instant proposal complies with all Commission Rules and policies.