

Calvary Broadcasting Inc

Greer, SC

Technical Certifications

The proposed facility is 0.41 km SSW of the currently licensed site, which is no longer available for the licensee to operate from. Current operation is authorized under a Supplemental Temporary Authorization ("STA") co-located with the proposed site. The applicant proposes an effective radiated power of 0.025kW that results in a reference contour distance just below the maximum of 5.6 km allowed for the LPFM service.

As shown below, the proposed facility meets the applicable engineering standards and assignment requirements of 47 CFR §73.807(a) through (g), §73.825, §73.827(a). Two facilities, WSHP-FM and W283CG are short-spaced and are discussed in more detail below.

WCGF-LP Channel Analysis Calvary Broadcasting, Inc.

REFERENCE		CLASS = L1	DISPLAY DATES
34 56 08.00 N.			DATA 10-24-22
82 13 37.10 W.	Current Spacings to 2nd Adj.		SEARCH 10-24-22
----- Channel 282 - 104.3 MHz -----			

Call	Channel	Location	Azi	Dist	FCC	Margin
WCGF-LP	STA 282L1	Greer	SC 90.0	0.00	23.5	-23.5
WCGF-LP	LIC 282L1	Greer	SC 23.9	0.41	23.5	-23.1
WSHP-FM	LIC-N 280C3	Easley	SC 248.7	29.40	39.5	-10.1
WSHP-FM	CP -N 280C3	Easley	SC 248.7	29.40	39.5	-10.1
W283CG	LIC-D 283D	Inman	SC 76.9	22.57	27.5	-4.9
WQNO	LIC 282A	Fletcher	NC 339.7	70.12	66.5	3.6
WYCJ-LP	LIC 283L1	Simpsonville	SC 176.0	20.06	13.5	6.6
W282CL	LIC-D 282D	Easley	SC 254.3	39.12	31.5	7.6
WHRZ-LP	LIC 281L1	Spartanburg	SC 86.5	27.42	13.5	13.9
W282AX	LIC 282D	Gaffney	SC 72.1	55.82	31.5	24.3
W281BX	LIC 281D	Laurens	SC 158.4	51.44	20.5	30.9
WHLC	LIC 283A	Highlands	NC 279.4	88.52	55.5	33.0
WFOX-LP	LIC 282L1	Sandy Springs	SC 231.6	61.24	23.5	37.7
WOVE-LP	LIC 281L1	Forest City	NC 35.5	54.05	13.5	40.6
W284CZ	LIC-D 284D	Anderson	SC 223.7	61.84	13.5	48.3

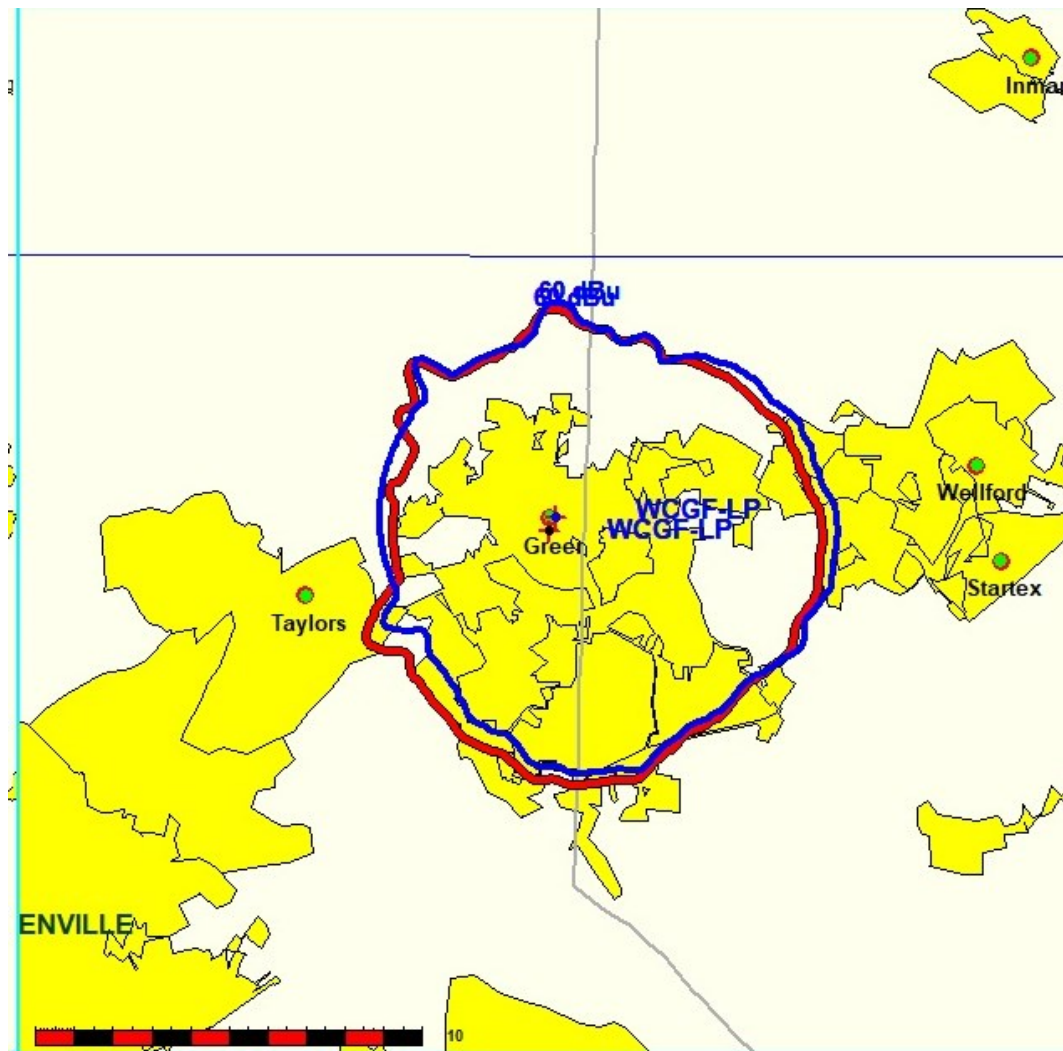
All separation margins include rounding

As noted above, the proposed facility is short-spaced to WSHP-FM (Facility ID 73239) and W283CG (Facility ID 156119). The currently licensed facility is also short spaced to both of these facilities.

With respect to WSHP (2nd adjacent), the applicant requests a waiver of second adjacent channel separation per 47 CFR §73.807(e)(1). At the applicant's proposed transmitter site, using NTIA Longley-Rice ("ITM") calculations, the signal from WSHP is estimated to have a field strength of 85 dBμ/m. The interfering signal from the proposed facility would be 40 dB stronger, or 125 dBμ/m. With an ERP of 0.025 kW, the interfering signal would be 20 m from the proposed antenna using free space calculations. The proposed antenna would be 30m above the ground, making the zone of interference 10m AGL. Thus, no interference would exist for any population served by WSHP.

With respect to W283CG, the proposed facility is being relocated farther from that facility, meeting the requirement of 47 CFR §73.807(d).

In the map below, the 60 dBμ contours of the proposed (in red) and currently licensed (in blue) facilities overlap, meeting the requirements of a minor change in an LPFM facility.



Environmental Effect

The proposed facility is excluded from environmental processing under 47 CFR §1.1306 (i.e., the facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments).

The proposed site is not in an officially designated wilderness area, wildlife preserve, flood plain, or near a site that is either listed or eligible for listing in the National Register of Historic Places. The proposed construction will not adversely affect any listed or proposed threatened or endangered species or their critical habitats, or any sites significant to Native American Religious practice, and will not involve any significant change in surface features. The applicant does not propose to light the antenna support structure with high intensity white lighting.

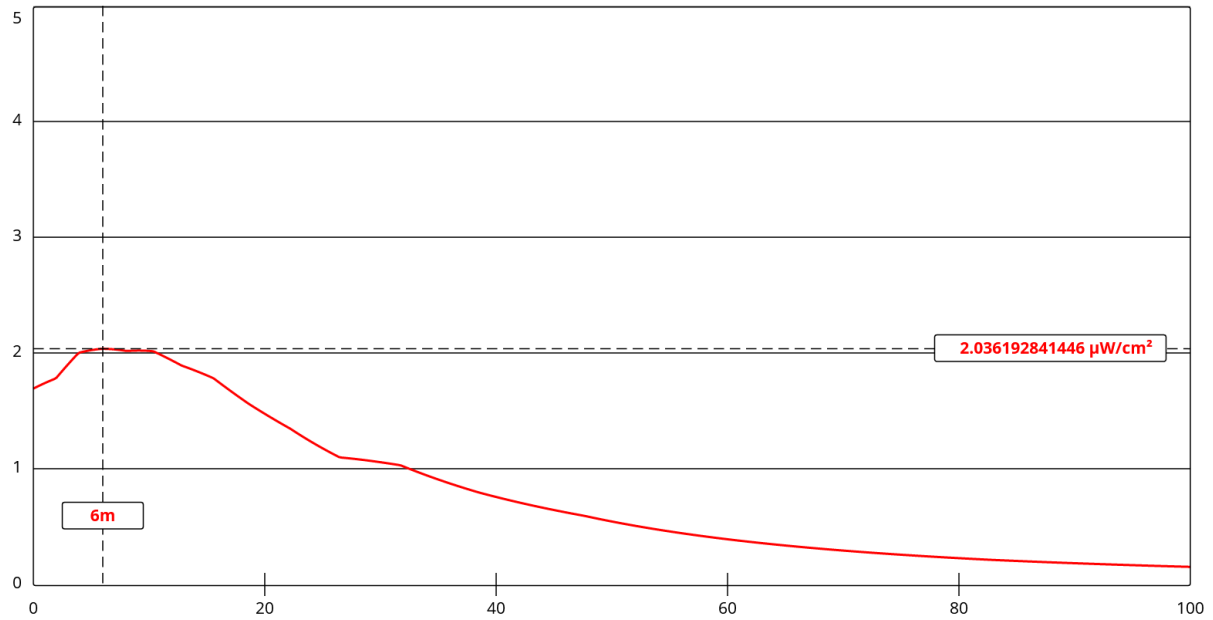
The proposed facility is located on an existing ASRN tower (1203659), which has fencing with a locked gate preventing public access. The applicant proposes a 1 bay full-wave spaced circularly polarized antenna. No other broadcast emitters are located on this tower.

Shown below is the output of the Commission's FM Model program, using the maximum effective radiated power of 0.025 kW for this facility's HAAT, resulting in a maximum calculated exposure of 1.25 $\mu\text{W}/\text{cm}^2$, well below the maximum permissible exposure for the general public, or 0.63% of the limit of 200 $\mu\text{W}/\text{cm}^2$.

The applicant is cognizant of its responsibility to protect those workers whose duties require that they be in the vicinity of the antenna from exposure to radio frequency fields in excess of those outlined above. To that end, signage will be attached to the base of the antenna support structure warning all workers of the potential for harmful exposure and directing them to contact the responsible person at the broadcast station. That person will ascertain whether the worker will be in areas where there is an exposure hazard, and if so, arrange to shut down the transmitter(s). The permittee/licensee will also coordinate with other users of the site to reduce power or cease operation in order to protect persons having access to the site, tower or antenna from radiofrequency radiation in excess of Commission guidelines.

For these reasons, the applicant believes that a Commission grant of this application would not have a significant environmental impact.

FM Model for WCGF-LP:



[View Tabular Results +](#)

Channel Selection	Channel 282 (104.3 MHz) ▾		
Antenna Type +	EPA Type 1: Ring-and-Stub or "Other" ▾		
Height (m)	<input type="text" value="24.22"/>	Distance (m)	<input type="text" value="100"/>
ERP-H (W)	<input type="text" value="25"/>	ERP-V (W)	<input type="text" value="25"/>
Num of Elements	<input type="text" value="1"/>	λ	<input type="text" value="1"/>
Num of Points	<input type="text" value="500"/>	<input type="button" value="Apply"/>	