

ENGINEERING REPORT

Requesting a Minor
Construction Permit Application
for FM Station:

WYFS(FM) – Savannah, GA
Channel 208C1 (89.5 MHz)
BLED-19890727KA
(Facility ID No. 5163)

May, 2014

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Spacing Requirements	(none)
Grandfathered Short-Spaced Requirements	(none)
Contour Protection Requirements	(none)
TV Channel 6 Protection Requirements	(none)

RF Radiation Study Requirement

- Exhibit 24.1 - RF Compliance Study

(Exhibit Numbering is in response to FCC Online Form 340, Section VII)

DISCUSSION OF REPORT

This firm was retained to prepare the required engineering report in support of a Minor Construction Permit Application for Non-Commercial FM station WYFS(FM) – Savannah, GA, License BLED-19890727KA. Currently WYFS(FM) is licensed to operate with 100 kW at 191 meters AMSL utilizing a directional antenna. This minor change application requests 100.0 kW at 191 meters AMSL utilizing an alternate directional antenna from a (coordinate) corrected site location. The facility will continue to serve Savannah, GA.

The proposed site for the Class C1 operation meets all the contour protection requirements towards other stations in the allocation with the exception of WLFH(FM) – Claxton, GA. A tabulation of the proposed protections to each of the other relevant stations is found in **Exhibit 18.1**. A waiver of §73.509 is requested for received third adjacent contour overlap with WLFH(FM). A waiver request documenting the received contour overlap to be *de minimis* in nature has been included in **Exhibit 18.5**. There are three (3) other facilities which is deemed close enough to require further §73.509 study. Therefore, FMCommander™ maps of the relevant protected and interference contours towards WSCI(FM) – Charleston, SC; WECC-FM – Folkston, GA; and WQAI(FM) – Thomson, GA have been supplied in **Exhibit(s) 18.2 to 18.4**. It is believed there is sufficient clearance to preclude the need for further study with respect to the other protected stations shown in the allocation study.

The transmitter site is not located within 320 km of the common border between the United States and Canada or Mexico, therefore international concurrence need not be sought. The transmitter site proposed in this application is located within the affected radius of one (1) Channel 6 television facility, WCES-TV – Wrens, GA. However full protection will be afforded the station as noted in the **Exhibit 18.1** Allocation Tabulation Study.

The proposed service contours have been calculated in accordance with the Rules, and the data obtained has been tabulated and plotted in this report. The plotted contours are found as **Exhibit 16.5** of this report. This exhibit shows the overall service that is provided by the 1.0 mV/m contour of the facility. The tabulation of the distances to the respective contours shown in this discussion is based on the use of the standard eight cardinal bearings, which were also used for the computation of the HAAT. However, the plotted contours shown in **Exhibit 16.5** are based on the use of a full 360 terrain radials. The applicant would like to note use of the NED 03 Second Terrain Database for all allocation, contour and HAAT calculations contained here-in.

The antenna will be mounted on the existing tower bearing Antenna Structure Registration No. 1002313. A copy of the existing ASR has been included in **Exhibit 16.1**. A vertical antenna plan depicting the placement of the antenna on the tower has been included in **Exhibit 16.3**.

DISCUSSION OF REPORT (continued)

The remainder of the information in this report and exhibit numbering is responsive to the Rules of the Commission, and provides the data for FCC Form 340.

RADIATION PROTECTION: The Commission requires an engineering study regarding compliance with the guidelines for human protection from radiofrequency radiation. This report section is in response to that provision of the Rules. The current Federal Communications Commission guidelines for RF radiation protection are set forth in OET Bulletin No. 65 (Edition 97-01), and the accompanying Supplement A, (Edition 97-01).

The FM Broadcast facility proposed in this application will not result in human exposure to radiofrequency radiation in excess of the applicable safety standards specified in §1.1310 of the Commission's rules. **Exhibit 24.1** provides the details of the study that was made to demonstrate compliance. The facility will be properly marked with signs, and entry will be restricted by means of fencing with locked doors and/or gates. Any other means as may be required to protect employees and the general public will be employed.

In the event work would be required in proximity to the antenna such that the person or persons working in the area would be potentially exposed to fields in excess of the guidelines set forth in OET Bulletin No. 65 (Edition 97-01), the transmitter power will be reduced or the station will cease operation during the critical period.

DISTANCES TO CONTOURS: The table below shows the distances to the 1.0 mV/m contour from the proposed facility using an ERP of 100.0 kW at an HAAT of 183 meters. These distances have been calculated based on the FCC F(50-50) curves.

N. Lat. = 320354 W. Lng. = 812106 HAAT and Distance to Contour, FCC, FM 2-10 Mi, 51 pts Method - NED 03 SEC						
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	11.9	179.1	50.0000	16.99	1.000	55.52
045	5.8	185.2	48.3145	16.84	0.983	55.75
090	4.2	186.8	50.0000	16.99	1.000	56.20
135	3.7	187.3	50.0000	16.99	1.000	56.24
180	3.0	188.0	50.0000	16.99	1.000	56.30
225	6.0	185.0	50.0000	16.99	1.000	56.04
270	14.3	176.7	50.0000	16.99	1.000	55.29
315	11.6	179.4	50.0000	16.99	1.000	55.55
Ave El= 7.54 M HAAT= 183.46 M AMSL= 191 M						