

ENGINEERING REPORT

Requesting a Minor Amendment to
a Pending Construction Permit
Modification for FM Station

WCWB(FM) – Coldwater, MI
Construction Permit
No. BMPED-20070731EFG
Channel 211B1 (90.1 MHz)

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RF Radiation Study Requirement (See Discussion)

(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 change amendment to pending construction permit application BMPED-20070731EFG for Non-Commercial FM station WCWB(FM), Coldwater, MI. WCWB(FM) holds a granted Construction Permit, BMPED-20060601BCP, which authorizes operation on Channel 211B1, 90.1 MHz with 6.2 kW vertical and 0.001 kW horizontal at 93 meters HAAT utilizing a non-directional antenna with elliptical polarization. WCWB(FM) also possesses BMPED-20070731EFG for a power increase and site change. This amendment will modify BMPED-20070731EFG and request a new transmitter location and increase power to 25 kW vertical and 0.001 kW horizontal at 85 meters employing a directional antenna. The facility will continue to serve Coldwater, MI.

The proposed operation will not result in prohibited contour overlap with any other authorized or protected facility—either domestic or Canadian. A tabulation of the proposed allocation is found in **Exhibit 16.1**. Besides WOCR, there are four other stations close enough to the transmitter site to require further study. FMCommander™ maps and tabulations of the relevant protected and interference contours towards these facilities have been included in **Exhibit 16.2** to **16.6**. 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. Tabulations for each contour employed will be supplied to the FCC upon request.

The proposed service contour has been calculated in accordance with the Rules, and the data obtained has been tabulated and plotted in this report. The present and proposed service contours are shown in **Exhibit 13.4**. The proposed contour overlaps the present contour as required for a minor change application. This exhibit shows the overall service that is provided by the 1.0 mV/m contour of the proposed facility. The tabulation of the distances to the proposed service contour 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 13.4** are based on the use of a full 360 terrain radials and the NGDC 30 Second Terrain Database.

The antenna will be mounted on a proposed 91.1 meter tower. Filing with the Federal Aviation Administration (FAA) will be done concurrently with this application. A vertical antenna plan depicting the placement of the antenna on the tower has been included in **Exhibit 13.2**. A copy of USGS topographical mapping showing the site has been included in **Exhibit 13.1**.

DISCUSSION OF REPORT (continued)

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

The proposal complies with the FCC Worksheet #3 for human exposure to RF radiation. A copy of the Worksheet will be supplied if requested.

DISTANCES TO CONTOURS: The table below shows the distances to the 1.0 mV/m contour from the proposed facility using an ERP of 25 kW at an HAAT of 85 meters. These distances have been calculated based on the FCC F(50-50) curves.

N. Lat. = 421047.0 W. Lng. = 850910.0						
HAAT and Distance to Contour - FCC Method - NGDC 30 SEC						
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	270.5	94.5	18.9225	12.77	0.870	35.94
045	281.0	84.0	20.2500	13.06	0.900	34.53
090	285.1	79.9	25.0000	13.98	1.000	35.38
135	288.0	77.0	25.0000	13.98	1.000	34.78
180	278.1	86.9	25.0000	13.98	1.000	36.75
225	268.6	96.4	10.1442	10.06	0.637	31.37
270	285.7	79.3	1.6900	2.28	0.260	18.79
315	287.0	78.0	5.4173	7.34	0.465	24.60
Ave El= 280.50 M HAAT= 84.50 M AMSL= 365						