ENGINEERING REPORT

Requesting a Minor Construction Permit for FM Station

WVAC-FM – Adrian, MI
License No. BLED–20071203ABY
Channel 300D (107.9 MHz)

April 2008

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TABLE OF CONTENTS

(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 to Non-Commercial FM station WVAC-FM, Adrian, MI, License No. BLED-20071203ABY, which operates on Channel 300D, 107.9 MHz. Recently WVAC-FM was licensed to operate with 0.087 kW at 25 meters HAAT utilizing a non-directional antenna on the campus of Adrian College. However, after a brief period of operation it was determined the existing support structure was inadequate to hold the new antenna. This application requests authority to move the antenna to a new tower to be constructed near an alternate building on the campus where new studios are being built. WVAC-FM is one of the original Class D educational stations. The FCC staff has indicated the station could increase power above the originally authorized level of 10 watts as long as the class contour does not exceed 5.4 km. Therefore, the present application requests an effective radiated power (ERP) of 0.087 kW at an HAAT of 25.5 meters using circular polarization.

The proposed operation will not produce 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***. There is one other facility, WJUC, Swanton, OH, close enough to the transmitter site to require further study. An FMCommander™ map of the relevant protected and interference contours between the proposed WVAC-FM facility and WJUC has been supplied as ***Exhibit 16.2.*** 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 new 30.5 meter tower, which will be located adjacent to Rush Hall on the Adrian College campus. The proposed configuration passes the FCC TOWAIR program. Therefore, the structure does not require registration, and notification of the FAA is not required. No construction will commence until Form 620 has been filed.

DISCUSSION OF REPORT (continued)

A vertical antenna plan depicting the placement of the antenna on the tower has been included in ***Exhibit 13.2***.

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 proposed facility complies with the January 2008 edition of Worksheet 3 from Form 301. Therefore, no additional studies showing compliance with the FCC guidelines for exposure to radiofrequency radiation are believed to be required.

DISTANCES TO CONTOURS: The table below shows the distances to the 1.0 mV/m contour from the proposed facility using an ERP of 0.087 kW at an HAAT of 25.5 meters. These distances have been calculated based on the FCC F(50-50) curves.

N. Lat. = 415349 W. Lng. = 840340
HAAT and Distance to Contour - FCC Method - NGDC 30 SEC

Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	261.0	10.3	0.0870	-10.60	1.000	5.44
045	239.0	32.3	0.0870	-10.60	1.000	5.63
090	220.3	51.0	0.0870	-10.60	1.000	7.06
135	224.4	46.9	0.0870	-10.60	1.000	6.76
180	233.6	37.7	0.0870	-10.60	1.000	6.05
225	244.4	26.9	0.0870	-10.60	1.000	5.44
270	267.1	4.2	0.0870	-10.60	1.000	5.44
315	276.7	-5.4	0.0870	-10.60	1.000	5.44

Ave El= 245.81 M HAAT= 25.49 M AMSL= 271.3 M