

**ENGINEERING REPORT
NEW Station and One-Step
Upgrade Application**

For

NEW CH244C2 – McMillan, MI
Channel 244 – 96.7 MHz

Auction 37 Application No.
BSFH-20040805AEW

December, 2004

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(Exhibit Numbering is in response to FCC Online Form 301, Section III-B)

DISCUSSION OF REPORT

This firm was retained to prepare the required engineering report in support of a new station and one-step upgrade application for Channel 244, McMillan, MI. This Form 301-FM is being filed in response to Auction 37 Application BSFH-20040805AEW. The Channel 244C3 allotment may be upgraded to Channel 244C2 from the proposed site coordinates. Operating parameters of 50.0 kW at 107 meters HAAT are requested.

The proposed site for the Class C2 operation meets all the spacing requirements of 47 C.F.R. §73.207 toward other stations in the allocation. A tabulation of the existing and required spacing toward each of the other relevant stations is found in **Exhibit 25.1**. Additional tabulations will be supplied to the Commission upon request.

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 23.1** of this report. This exhibit shows the 3.16 mV/m contour that serves the community of license, and the overall service 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 23.1** are based on the use of a full 360 terrain radials. The 03 second NED terrain database has been used in calculation of both HAAT and contour distance computations.

The antenna will be mounted on an existing structure bearing Antenna Structure Registration No. 1057310. A copy of the existing ASR has been included in **Exhibit 22.1**. A copy of the vertical antenna plan has been included as **Exhibit 22.2**. The proposed operation will not increase the overall tower height, therefore the FAA need not be notified.

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 Online Form 301, Section III-B.

DISCUSSION OF REPORT (continued)

The FM Broadcast facility proposed in this application is within the controlled and uncontrolled limits as set forth in §1.1310 of the Commission's rules. A copy of the RF compliance study has been included in **Exhibit 30.1**. 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 3.16 mV/m and 1.0 mV/m contours from the proposed facility using an ERP of 50.0 kW at an HAAT of 107 meters. These distances have been calculated based on the FCC F(50-50) curves.

N. Lat. = 46 31 35 W. Lng. = 85 35 30							
HAAT and Distance to Contour - FCC Method - 03 Arc Sec.							
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5	70-F5
000	219.5	133.5	50.0000	16.99	1.000	49.91	30.82
045	233.3	119.7	50.0000	16.99	1.000	47.94	29.43
090	253.5	99.5	50.0000	16.99	1.000	44.67	27.10
135	239.0	114.0	50.0000	16.99	1.000	47.08	28.83
180	259.4	93.6	50.0000	16.99	1.000	43.60	26.32
225	271.3	81.7	50.0000	16.99	1.000	41.30	24.69
270	253.8	99.2	50.0000	16.99	1.000	44.62	27.06
315	235.9	117.1	50.0000	16.99	1.000	47.56	29.17
Ave El= 245.70 M HAAT= 107.30 M AMSL= 353 M							