

## **DISCUSSION OF REPORT**

This firm was retained to prepare the required engineering report in support of a “one-step” upgrade minor change application for KHST(FM) License No. BMLH-19981105KF. KHST(FM) is currently licensed to operate with 6.0 kW (H)&(V) ERP at 100 meters HAAT on Channel 269A. The station serves Lamar, MO. This application seeks to increase power to 22.0 kW (H)&(V) ERP at 100 meters HAAT. The facility will continue to serve Lamar, MO on Channel 269C3. In addition to the power increase applied for, a slight correction in site coordinates is being requested to match the KHST(FM) facilities with the existing Antenna Structure Registration.

The community reference point of Lamar, MO 37° 29' 41" NL; 94° 16' 35" WL; is fully spaced for Class C3 operation. These coordinates will be specified as the “one-step” reference point. The present KHST site that will be used for the Class C3 operation meets all the spacing requirements of 47 C.F.R. §73.207 toward other stations in the allocation with the exception of one facility. A tabulation of the existing and required spacing toward each of the other relevant stations is found in **Exhibit 24.0**. Protections as required by §73.215 are being requested towards KMXF, Lowell, AR. **Exhibit 28.0** is a contour protection study towards the KMXF, Lowell, AR licensed facility. Operating parameters for KMXF have been modified to the maximum allowable Class C2 facilities to afford maximum protection.

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 22.0** of this report. This exhibit shows the 3.16 mV/m contour that serves the community of license and 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 22.0** and the contour used as the basis of the area and population computations shown in **Exhibit 22.1**, are based on the use of a full 360 terrain radials.

The antenna will be mounted on an existing tower bearing Antenna Structure Registration No. 1007722. A copy of the existing ASR has been included as **Exhibit 21.0**. No changes in the overall height of the tower are being proposed by this instant application, therefore the FAA need not be notified. A copy of the vertical antenna plan has been included as **Exhibit 21.1**.

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.

The FM Broadcast facility proposed in this application is within the controlled and uncontrolled limits as set forth in the RF Exposure Compliance Worksheets, Worksheet #3, issue May 1999. A copy of Worksheet #3 has been included in **Exhibit 29.0**. The RF radiation will not result in human exposure to radiofrequency radiation in excess of the applicable safety standards specified in §1.1307(b) of the Commission's rules. 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 22.0 kW at an HAAT of 100 meters. These distances have been calculated based on the FCC F(50-50) curves.

Munn-Reese, Inc. - Coldwater, MI 49036							
N. Lat. = 37 25 27 W. Lng. = 94 16 11							
HAAT and Distance to Contour - FCC Method - 30 Arc Sec.							
Azi.	AV EL	HAAT	kW	dBk	Field	60 .5	70 .5
000	288.4	104.6	22.0000	13.42	1.000	38.80	23.05
045	300.2	92.8	22.0000	13.42	1.000	36.83	21.74
090	310.0	83.0	22.0000	13.42	1.000	34.99	20.55
135	301.4	91.6	22.0000	13.42	1.000	36.62	21.60
180	293.3	99.7	22.0000	13.42	1.000	38.02	22.53
225	279.4	113.6	22.0000	13.42	1.000	40.12	23.95
270	286.1	106.9	22.0000	13.42	1.000	39.16	23.30
315	288.2	104.8	22.0000	13.42	1.000	38.83	23.08
Ave El= 293.36 M HAAT= 99.64 M AMSL= 393M							