

ENGINEERING REPORT

**Requesting a Minor Change
Application for**

**License No. BLED-20050902AAH
KFLT-FM – Tucson, AZ
Channel 203A (88.5 MHz)**

July, 2007

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MUNN-REESE, INC.
Broadcast Engineering Consultants
Coldwater, MI 49036

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- Exhibit 22.1 - RF Radiation 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 this minor change application for Non-Commercial station KFLT-FM, Tucson, AZ. KFLT-FM is currently licensed to operate on CH203A with 1.5 kW (vertical only) at 115 meters HAAT utilizing a directional antenna. This minor change seeks to relocate the transmitter to a new site. The change in location will result in Class C3 operating parameters of 0.300 kW at 581 meters HAAT utilizing a directional antenna pattern.

This application for KFLT(FM) Tucson, AZ is being filed concurrently with three other applications. KLKA(FM) – Globe/Casa Grande, AZ will modify cities of license from Globe, AZ to Casa Grande, AZ and change frequencies from CH203 to CH204 as well as site locations. KAIC(FM) – Tucson/Mammoth, AZ will change cities of license from Tucson, AZ to Mammoth, AZ and change frequencies from CH205 to CH207. And KZAI(FM) – Coolidge, AZ will reduce ERP to accommodate the contingent filings.

The proposed site for the Class C3 operation meets all the contour protection requirements towards other stations in the allocation with the exception of three (3) facilities. A tabulation of the proposed protections to each of the other relevant stations is found in **Exhibit 16.1**. A waiver concerning given and received contour overlap is requested towards KUAZ-FM, Tucson, AZ. A copy of the waiver request has been included in Exhibit **Exhibit 16.2**. Outgoing interference to KLTU(FM), Mammoth, AZ need not be considered pursuant to KLTU(FM) license BLED-20061221ACP “*Special Operating Condition No. 2*”. A copy of the KLTU(FM) license has been included in **Exhibit 16.3**. Interference with KLKA Globe/Casa Grande, AZ will be eliminated with the contingent application filings. 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 will be located within 320 km of the common border between the United States and Mexico. Full protection has been afforded all international considerations as seen in the tabulation in **Exhibit 16.1** and contour protection maps in **Exhibit 16.4**. Full protection will be afforded to all stations. Tabulations for each contour employed will be supplied to the FCC upon request.

The transmitter site proposed in this application is within the affected radius of one (1) Channel 6 television station, KUAT-TV, Tucson, AZ. The additional studies dictated by §73.525 under such conditions are included as **Exhibit 19.1** of this report. Full protection is provided to the Channel 6 facility under the current Rules.

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 13.4** 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 13.4** and the contour used as the basis of the area and population computations are based on the use of a full 360 terrain radials. The NGDC 30 second terrain database has been employed for all calculations contained here-in.

DISCUSSION OF REPORT (continued)

The antenna will be mounted on an existing structure. The structure stands 64.3 meters Above Ground Level and bears FCC Antenna Structure Registration 1218276. 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 is responsive to the Rules of the Commission, and provides the data for FCC Form 340.

The FM Broadcast facility proposed in this application will not produce human exposure to radiofrequency radiation in excess of the applicable safety standards specified in §1.1310 of the Commission's rules. **Exhibit 22.1** provides the details of the study that was made to demonstrate compliance. The facility is properly marked with signs, and entry is 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 0.300 kW at an HAAT of 581 meters. These distances have been calculated based on the FCC F(50-50) curves.

N. Lat. = 321457 W. Lng. = 1110659 HAAT and Distance to Contour - FCC Method - NGDC 30 SEC						
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	732.3	620.7	0.0501	-13.00	0.409	22.20
045	722.8	630.2	0.3000	-5.23	1.000	34.74
090	745.8	607.2	0.3000	-5.23	1.000	34.05
135	850.0	503.0	0.1142	-9.42	0.617	24.09
180	796.5	556.5	0.0145	-18.39	0.220	14.70
225	742.9	610.1	0.0095	-20.22	0.178	13.60
270	765.3	587.7	0.0095	-20.22	0.178	13.33
315	817.0	536.0	0.0095	-20.22	0.178	12.72
Ave El= 771.58 M HAAT= 581.42 M AMSL= 1353 M						