

**ENGINEERING REPORT**  
**Requesting Minor Change to Licensed Facility for**  
**KWFL(FM) – Roswell, NM**  
**Channel 257C3 (99.3 MHz.)**  
**File No. BPED-20081205AAG**

January 2009

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- Exhibit 13.1 – Copy of Existing Antenna Structure Registration
- Exhibit 13.2 – Proposed FM Operating Specifications
- Exhibit 13.3 – Present, Existing CP and Proposed Contour Study

## **Interference Requirements**

- Contour Overlap Requirements** (none)
- Spacing Requirements**
  - Exhibit 15.1 – Tabulation of Commercial Spacings
- Grandfathered Short-Spaced Requirements** (none)
- Contour Protection Requirements** (none)
- TV Channel 6 Protection Requirements** (none)

## **International Requirements**

- Exhibit 21.1 – Copy of Tabulation of Commercial Spacings

## **RF Radiation Study Requirement**

- Exhibit 22.1 – RF Radiation Study

(Exhibit numbering is in response to FCC Online Form 340, Section VII)

## **DISCUSSION OF REPORT**

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Family Life Broadcasting System, licensee of KWFL(FM), Roswell, NM, file number BLED-20081205AAG is licensed to operate on starred Channel 257C3 with 9.5 kW at 1299 meters COR AMSL and 133 meters HAAT utilizing a non-directional antenna. With this application, Family Life Broadcasting System proposes to modify its licensed Class C3 facility to increase its ERP to 16.4 kW at 1299 meters COR AMSL and 133 meters HAAT, utilizing USGS 03 Sec terrain data. KWFL(FM) will continue to serve Roswell, NM and remain a Class C3 facility.

KWFL has been granted a waiver of 47. C.F.R. Section 73.1125 to operate the facility as “satellite” of co-owned noncommercial educational FM station KFLT-FM, Tucson, Arizona.

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 existing tower bears Antenna Structure Registration No. 1213408. A copy of the existing ASR has been included as **Exhibit 13.1**. No actual physical changes in the existing transmission antenna will be employed. Therefore the FAA need not be notified.

The present and 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 13.3** 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 report is based on the use of the standard eight cardinal bearings. The computation of the area and population shown in the exhibit are based on the use of a full 360 terrain radials.

The existing site for this Class C3 operation meets all the spacing requirements of 47 C.F.R. §73.207 toward other stations for operations on Channel 257C3. A tabulation of the existing and required spacings toward each of the other relevant stations is found in **Exhibit 15.1**. Additional tabulations will be supplied to the Commission upon request. The facility is outside 320 miles of the Canadian border but within 320 miles of the Mexican border. However, full spacings toward all Mexican allocations have been observed and can be seen in **Exhibit 21.1**.

Since this application is for a revised facility on Channel 257, 47 C.F.R. §73.525 television Channel 6 protection is not applicable.

This FM Broadcast facility proposed in this application will not have a significant environmental impact in that: a) it proposes no change to the antenna support structure or the transmitting antenna; b) it proposes RF radiation on the ground below the 200.00  $\mu\text{Wcm}^2$  limit for Un-Controlled areas as shown in **Exhibit 22.1**; and c) it complies with the Commission’s rules under §1.1306(b).

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** is an RF Study showing 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 operating during the critical period.***

The table below shows the distances to the 60 dBu and 70 dBu contours from the proposed facility using an ERP of 16.4 kW at an HAAT of 133 meters. These distances have been calculated based on the FCC F(50-50) curves.

Latitude: 33-21-47 N    Longitude: 104-38-11 W						
COR = 1299.0 Meters AMSL						
HAAT and Distance to Contour – FCC Method						
KWFL – Family Life Broadcasting System						
Azi.	HAAT (m)	ERP Kw	dBk	Field	Distance (km)	
					60-FS	70-FS
000	130.6	16.4	12.148	1.000	39.9	23.8
045	188.2	16.4	12.148	1.000	46.4	27.9
090	197.7	16.4	12.148	1.000	47.1	28.6
135	171.9	16.4	12.148	1.000	44.9	26.8
180	136.9	16.4	12.148	1.000	40.7	24.3
225	89.6	16.4	12.148	1.000	33.9	19.9
270	74.4	16.4	12.148	1.000	30.9	18.0
315	75.9	16.4	12.148	1.000	31.2	18.2
Average HAAT for radials shown: 133.1 m						