

ENGINEERING REPORT

FM Translator Minor Construction Permit Application

for

K257DZ.L – Butler, MO

License No. BLFT-20110614ABS

July, 2011

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Table of Contents

Discussion of Report

FM Booster/Fill-in Translator Requirements (See Discussion)

Interference Requirements

Exhibit 13.1 - Copy of Existing Antenna Structure Registration

Exhibit 13.2 - Vertical Plan of Existing Tower Structure

Exhibit 13.3 - Licensed vs Proposed Service Contour Study

Exhibit 13.4 - Proposed vs Primary Station Service Contour Study

Contour Overlap Requirements

Exhibit 13.5 - Tabulation of Proposed Translator Allocation

Exhibit 13.6a - §74.1204(d) Waiver Request (USGS Topographic Map)

Exhibit 13.6b - §74.1204(d) Waiver Request (USGS Photograph)

Exhibit 13.7 - Proposed Directional Antenna Pattern Study

TV Channel 6 Protection Requirements (See Discussion)

Unattended Operation Requirements (See Discussion)

Multiple Translator Requirements (See Discussion)

RF Radiation Study Requirement

Exhibit 17.1 - RF Compliance Study

(Exhibit numbering is in response to FCC Online Form 349, Section III-A)

Discussion

This firm has been retained to prepare the required engineering report in support of a minor construction permit application for FM translator K257DZ.L, Butler, MO, License No. BLFT-20110614ABS. K257DZ.L presently operates on 99.3 MHz with 0.250 kW of directional power with an antenna COR of 261 meters AMSL. An increase in COR height to 542 meters AMSL with a new vertical only directional antenna is requested from a new site location. Continued operation on CH257D, 99.3 MHz with 250 watts ERP is requested. The translator will rebroadcast new primary station of KLRX(FM) – Lee’s Summit, MO, CH247C1, Facility ID No. 4933 as a Fill-In Translator.

The proposed facility will be relocated to a new tower location. A copy of the existing Antenna Structure Registration No. 1037282 has been included in **Exhibit 13.1**. A copy of the vertical antenna system has been included in **Exhibit 13.2**. As this proposal will not increase the overall tower height, it is believed the FAA need not be notified.

It has been determined the translator may be used in the area without interference to any existing FM broadcast station or facility with the exception of KQRC-FM – CH255C0, Leavenworth, KS and KGEX(FM) – Kansas City, MO. General allocation details are found in **Exhibit 13.5**. A §74.1204(d) Second Adjacent Channel Given Interference Waiver is requested toward KQRC-FM and KGEX(FM) as included in **Exhibit(s) 13.6a-b**. The exhibit demonstrates a lack of houses, building and major roads within the interference contour area. It is believed sufficient clearance exists precluding the need for additional contour protection showings.

The translator site and proposed 60 dBu contour lie inside of the KLRX(FM) 60 dBu service contour. A map of the proposed service area in relation to the primary station 60 dBu service contour has been included in **Exhibit 13.4**.

Regarding protection of international concerns, the facility is and will remain more than 320 km of the common border between the United States and Canada or Mexico. As a result, it is believed no further international showings are required.

The proposed operating parameters have been changed from the licensed values, however the proposed service contour serves a portion of the present service area as seen in **Exhibit 13.3**.

The applicant would like to note the use of the USGS 03 second terrain database for all HAAT, allocation and contour showings used for this Form 349 Translator filing.

Discussion (continued)

RADIATION PROTECTION: The Commission requires an engineering study regarding compliance with the guidelines for human protection from radiofrequency radiation. The current Federal Communications Commission guidelines for RF radiation protection are set forth in OET Bulletin No. 65 (Edition 97-01), and the accompanying Supplement A, (Edition 97-01).

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 §1.1307(b)(3) of the Commission's rules concerning RF contributors of less than 5%. ***Exhibit 17.1*** 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 following tabulation of the distances to the proposed service contours results from calculations performed in accordance with §73.313(d) and §73.333 Figure 1 utilizing the USGS 03 second terrain database.

N. Lat. = 384526.0 W. Lng. = 942602.0 HAAT and Distance to Contour, FCC, FM 2-10 Mi, 51 pts Method - NED 03 SEC						
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	311.9	230.1	0.2406	-6.19	0.981	19.66
030	299.4	242.6	0.1222	-9.13	0.699	16.96
060	286.7	255.3	0.0114	-19.41	0.214	9.67
090	281.7	260.3	0.0015	-28.18	0.078	5.44
120	293.5	248.5	0.0776	-11.10	0.557	15.19
150	284.0	258.0	0.2111	-6.75	0.919	20.14
180	281.1	260.9	0.2406	-6.19	0.981	20.91
210	287.9	254.1	0.1222	-9.13	0.699	17.37
240	288.5	253.5	0.0114	-19.41	0.214	9.64
270	307.1	234.9	0.0015	-28.18	0.078	5.22
300	313.3	228.7	0.0776	-11.10	0.557	14.57
330	312.2	229.8	0.2111	-6.75	0.919	19.02
Ave El= 295.61 M HAAT= 246.39 M AMSL= 542						