

ENGINEERING REPORT
FM Translator
Minor Change in Licensed Facility
Permit Application
for
W243BD – Zeeland, MI
File No: BLFT-20120608AAS

as an AM Fill-In Translator for
WPNW(AM) – Zeeland, MI

March, 2019

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(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 Modification to License Permit Application for FM Translator W243BD – Zeeland, MI (Facility ID No. 146885). Operation on CH243D (96.5 MHz) with 250 kW ERP (H&V) at 302 meters AMSL is granted under license BLFT-20120608AAS. This Translator proposal requests the same channel, power, and AMSL on a different tower. The Fill-In Translator will rebroadcast Class D Primary Station WPNW(AM) – Zeeland, MI (1260kHz); Facility ID No. 36352.

The Translator as proposed will be mounted on a tower bearing Antenna Structure Registration Number 1060574. A copy of the ASR is included in **Exhibit 13.1**.

The proposed 60 dB μ contour of the Fill-In Translator lies wholly inside the greater of the AM primary daytime 2.0 mV/m contour and a 25 mile radius around the AM site. A map of the proposed service area in relation to the primary station service contour has been included in **Exhibit 13.2**. The proposed operating parameters have been changed from the present values.

It has been determined the Translator may be used in the area without interference to any existing FM broadcast station or facility. General allocation details are found in **Exhibit 13.3**. It is believed sufficient clearance exists precluding the need for additional contour protection showings.

The applicant would like to note the existence of a §74.1204(d) Second/Third Adjacent Channel Given Interference Waiver Request toward WMAX-FM – Holland, MI (CH241B) and WLAV-FM – Grand Rapids, MI (CH245B) as noted in **Exhibit 13.4**. Protection has been based on the worst case calculated 105.25 dB μ F(50:10) Interference Contour, corresponding to the worst case 65.25 dB μ F(50:50) Protected Contour. Protection has been demonstrated through a downward vertical radiation study. Full protection will be afforded the facility as the interference will not reach the ground nor a five meter artificial plane above the ground when taking into account the downward radiation characteristics of the antenna as supplied by the antenna manufacturer. The antenna manufacturer's specifications are included in **Exhibit 13.5**.

The applicant certifies the proposed translator 34 dBu F(50:10) Interference contour does not enter Canadian territory. Documentation of the proposed 34 dBu F(50:10) Interference contour will be supplied upon request.

This translator is not within the affected distance of any TV Channel 6 stations.

The applicant would like to note use of the NED 03 second terrain database for terrain based showings contained here-in.

Discussion (continued)

RADIATION PROTECTION: The Commission requires an engineering study regarding compliance with the guidelines for human protection from radiofrequency radiation. This report section is in response to that provision of the Rules. 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 of the Commission's rules concerning RF contributors. ***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.