

ENGINEERING REPORT

FM Translator Construction Permit Application

W210BG.L - Ashland, OH
License No. BLFT-20080812AAD
Facility ID No. 85385

June, 2016

COPYRIGHT 2015

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

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 - Present vs Proposed Service Contour Study

Exhibit 13.4 - Proposed vs Primary Station Service Contour Study

Contour Overlap Requirements

Exhibit 13.5 - Tabulation of Proposed Allocation

Exhibit 13.6(a-c) - Contour Protection Studies Toward Select Stations

Exhibit 13.7 - Manufacturer's Directional Antenna Pattern Documentation

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 W210BG.L - Ashland, OH (Facility ID: 85385). W210BG.L is presently licensed to operate on CH210D (89.9 MHz) with 0.055 kW of non-directional power at an antenna COR of 404 meters AMSL. Continued operation on CH210D (89.9 MHz) is requested with a directional power of 0.080 kW ERP (H&V) from the same site location. The same antenna COR height of 404 meters AMSL is requested. The translator will continue to rebroadcast primary station WYFQ-FM - Wadesboro, NC (Facility ID: 73965), CH228C3, as a non-commercial FM Translator.

The facility will be relocated to the existing tower bearing Antenna Structure Registration Number 1015348. A copy of ASR #1015348 has been included in **Exhibit 13.1**. The vertical antenna system has been plotted 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 or proposed FM broadcast station. General allocation details are found in **Exhibit 13.5**. There are three (3) facilities existing or proposed, close enough to merit further study. Therefore supplemental contour protection studies toward these three facilities have been included in **Exhibit(s) 13.6(a-c)**. It is believed sufficient clearance exists precluding the need for additional contour protection showings.

The applicant would like to note the use of the NED 03 second terrain database for all allocation, contour and HAAT calculations contained here-in.

The proposed 60 dBu contour of the Translator lies wholly outside of the WYFQ-FM primary service contour. A map of the proposed service area in relation to the primary station service contour has been included in **Exhibit 13.4**.

The proposed facility is located within the affected radius of multiple TV-6 facilities. Full protection will be afforded all TV-6 concerns as noted in the **Exhibit 13.5** Allocation Study.

Regarding protection of international concerns, the facility is and will remain within 320 km of the common border between the United States and Canada. The applicant certifies the proposed Translator 34 dBμ F(50:10) interference contour does not enter Canadian territory. Documentation of the proposed 34 dBμ F(50:10) interference contour will be supplied upon request.

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).

Discussion (continued)

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 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 NED 03 second terrain database.

N. Lat. = 405026.0 W. Lng. = 822126.0						
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	335.1	68.9	0.0380	-14.20	0.689	6.67
030	325.8	78.2	0.0380	-14.20	0.689	7.11
060	337.5	66.5	0.0550	-12.60	0.829	7.18
090	335.5	68.5	0.0380	-14.20	0.689	6.65
120	343.2	60.8	0.0550	-12.60	0.829	6.88
150	385.5	18.5	0.0800	-10.97	1.000	5.33
180	343.4	60.6	0.0550	-12.60	0.829	6.87
210	350.7	53.3	0.0800	-10.97	1.000	7.09
240	354.4	49.6	0.0800	-10.97	1.000	6.82
270	354.8	49.2	0.0800	-10.97	1.000	6.79
300	349.7	54.3	0.0800	-10.97	1.000	7.16
330	367.2	36.8	0.0800	-10.97	1.000	5.86
Ave El= 348.55 M HAAT= 55.45 M AMSL= 404						