

ENGINEERING REPORT

FM Translator Minor Change CP Modification Application

For

W293CA – Flint, MI

File No. BNPFT-20130319AAY

Facility ID No. 139039

August, 2014

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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 Change Construction Permit Modification Application for FM Translator W293CA – Flint, MI, BNPFT-20130319AAY (Facility ID No. 139039). W293CA is authorized on Channel 293D, 106.5 MHz, with an ERP of 0.099 kW at a center of radiation (COR) of 292 meters AMSL. It is proposed to move W293CA to a new transmitter site, operating on the same channel, with an ERP of 0.25 kW at a COR of 316 meters AMSL. A circularly polarized non-directional antenna will be utilized. The translator will rebroadcast primary station WSNL(AM) – Flint, MI, 600 kHz, (Facility ID No. 42078) as an AM (fill-in) Translator. The translator will continue to serve the community of Flint, MI.

The facility will be located on a structure with Antenna Structure Registration Number 1203454. A copy of the Antenna Structure Registration has been included in **Exhibit 13.1**. The vertical antenna system has been plotted in **Exhibit 13.2**.

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 13.5**. Full protection is afforded all facilities as shown in this exhibit. Detailed protection showings are included as **Exhibit 13.6** for WDTW-FM – Detroit, MI; **Exhibit 13.7** for W292DA – Linden, MI; and **Exhibit 13.8** for WGER(FM) – Saginaw, MI.

The applicant would like to note the use of the USGS 03 SEC Terrain Database for all allocation, contour and HAAT calculations contained here-in.

The proposed 60 dBμ contour of the Translator lies wholly inside of the WSNL(AM) daytime 2 mV/m contour and a 25 mile radius from the WSNL(AM) transmitter site. A map of the proposed service contour in relation to the primary station service contour has been included in **Exhibit 13.4**. The Translator will rebroadcast WSNL(AM) as a “fill-in” FM Translator.

Regarding protection of international concerns, the facility is within 320 km of the common border between the United States and Canada. However, the proposed 34 dBμ f(50:10) interference contour does not enter Canadian territory.

The proposed service contour will serve a portion of the presently authorized service contour as shown in **Exhibit 13.3**, thus qualifying as a Minor Change Application.

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 §1.1307(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. = 430058.0 W. Lng. = 833900.0						
HAAT and Distance to Contour,						
FCC, FM 2-10 Mi, 51 pts Method - USGS 03 SEC						
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	233.2	83.2	0.2500	-6.02	1.000	11.79
030	230.5	85.9	0.2500	-6.02	1.000	11.96
060	237.4	79.0	0.2500	-6.02	1.000	11.50
090	242.1	74.3	0.2500	-6.02	1.000	11.19
120	251.9	64.5	0.2500	-6.02	1.000	10.50
150	257.3	59.1	0.2500	-6.02	1.000	10.10
180	254.9	61.5	0.2500	-6.02	1.000	10.28
210	244.5	71.9	0.2500	-6.02	1.000	11.02
240	231.2	85.2	0.2500	-6.02	1.000	11.91
270	225.4	91.0	0.2500	-6.02	1.000	12.29
300	230.5	85.9	0.2500	-6.02	1.000	11.96
330	232.4	84.0	0.2500	-6.02	1.000	11.84
Ave El= 239.28 M HAAT= 77.12 M AMSL= 316.4						