

ENGINEERING REPORT

FM Translator Minor Construction Permit Application

for

**W282AW.L - Ocean Pines, MD
(Facility ID: 152275)**

for

as an FM Fill-In Translator for
WOCQ(FM) - Berlin, MD

October 2016

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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 Construction Permit Application for FM Translator W282AW.L - Ocean Pines, MD (Facility ID: 152275). This Translator proposal requests a new site location and new operational antenna height. Continued operation on CH282D (104.3 MHz) with 0.250 kW ERP (H&V) at 93 meters AMSL is proposed. The Fill-In Translator will rebroadcast Class A FM Primary Station WOCQ(FM) - Berlin, MD (CH280A); Facility ID No. 47107. The Translator will continue to serve the community of Ocean Pines, MD.

The Translator will be mounted on the existing tower bearing Antenna Structure Registration Number 1036004. A copy of the existing ASR has been included in **Exhibit 13.1**. 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 WQHQ(FM) and WOCQ(FM). General allocation details are found in **Exhibit 13.5**. The applicant would like to note the existence of a §74.1204(d) Second/Third Adjacent Channel Given Interference Waiver Request toward WQHQ(FM) - Ocean City-Salisbury, MD (CH284B) and WOCQ(FM) - Berlin, MD (CH280A) as noted in **Exhibit 13.6**. Protection has been based on the worst case calculated 153.3 dBμ F(50:10) Interference Contour, corresponding to the worst case 113.3 dBμ F(50:50) Full Service Protected Contour. Protection has been demonstrated through a downward vertical radiation study. Full protection will be afforded the facility as the interference area will not reach the ground nor a seven meter artificial plane representing a standard two story home when taking into account the downward radiation characteristics of the antenna as supplied by the antenna manufacturer. A copy of the antenna manufacturer specifications has also been included in **Exhibit 13.7**. It is believed sufficient clearance exists precluding the need for additional contour protection showings.

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

The proposed 60 dBμ contour of the Fill-In Translator lies wholly inside of the FM primary 60 dBμ contour. A map of the proposed service area in relation to the primary station service area has been included in **Exhibit 13.4**.

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

The proposed operating parameters have been changed from the present values. A map of the proposed service contour has been included in **Exhibit 13.3**.

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.

N. Lat. = 382258 W. Lng. = 751858 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	11.0	82.0	0.2500	-6.02	1.000	11.71
030	11.4	81.6	0.2500	-6.02	1.000	11.68
060	7.6	85.4	0.2500	-6.02	1.000	11.92
090	6.7	86.3	0.2500	-6.02	1.000	11.99
120	7.7	85.3	0.2500	-6.02	1.000	11.92
150	7.4	85.6	0.2500	-6.02	1.000	11.94
180	6.5	86.5	0.2500	-6.02	1.000	12.00
210	7.9	85.1	0.2500	-6.02	1.000	11.91
240	12.3	80.7	0.2500	-6.02	1.000	11.62
270	18.3	74.7	0.2500	-6.02	1.000	11.22
300	15.6	77.4	0.2500	-6.02	1.000	11.40
330	12.5	80.5	0.2500	-6.02	1.000	11.60
Ave El= 10.39 M HAAT= 82.61 M AMSL= 93 M						