

ENGINEERING REPORT

FM Translator “Long Form” Filing for Original Construction Permit Application

NEW247D – Canton, NC
File No. BNPFT-20030317AHL
Facility ID No. 141108

Long-Form “Singleton Filing pursuant
to Auction 83 (AUC-03-83-D)

July, 2013

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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 “Long Form” Filing for FM Translator Application BNPFT-20030317AHL (Facility ID No. 141108). The pending “Short-Form” Application specified operation on CH247D (97.3 MHz) with 0.105 kW of non-directional power at an antenna COR of 933 meters AMSL. Revised Operating Parameters will be requested in this “Long-Form” Filing. Continued operation on Channel CH247D (97.3 MHz) with a power of 0.015 kW ERP is requested from a new site location. A circularly polarized directional antenna will be utilized at the new antenna COR height of 1028 meters AMSL. The translator will rebroadcast primary station WISE(AM) – Asheville, NC, 1310 kHz (Facility ID No. 68835) as an AM Fill-In Translator.

The facility will be located at an existing tower which does not require Antenna Structure Registration. A copy of USGS Aerial Photography of the existing tower site 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 FM broadcast station or facility with the exception of W249AR – Asheville, NC (CH249D). General allocation details are found in **Exhibit 13.5**. A §74.1204(d) Second Adjacent Channel Given Interference Waiver is requested toward W249AR as included in **Exhibit 13.1**. Full protection will be afforded W249AR as the calculated interference area is void of all population, housing, buildings or major roads as noted in the **Exhibit 13.1** USGS Aerial Photograph. There is one (1) facility, existing or proposed, close enough to merit further study. Therefore supplemental contour protection studies have been provided toward co-channel protection WFHC-LP(FM) – Hendersonville, NC as included in **Exhibit 13.6**. 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 dB μ contour of the Translator lies wholly inside of the WISE(AM) primary daytime 2 mV/m contour and within a 25 mile radius around the AM 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 WISE(AM) directly off-air as an AM Fill-In Translator.

The proposed operating parameters have been changed from the original “Short-Form” values, however the proposed service contour serves a portion of the present service area as seen in **Exhibit 13.3**.

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(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 NED 03 second terrain database.

N. Lat. = 353604 W. Lng. = 823907 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	617.7	410.3	0.0150	-18.24	1.000	12.96
030	631.1	396.9	0.0150	-18.24	1.000	12.78
060	754.7	273.3	0.0150	-18.24	1.000	10.71
090	678.9	349.1	0.0150	-18.24	1.000	12.07
120	669.5	358.5	0.0150	-18.24	1.000	12.23
150	650.9	377.1	0.0004	-34.16	0.160	3.69
180	742.0	286.0	0.0150	-18.24	1.000	10.96
210	697.5	330.5	0.0150	-18.24	1.000	11.75
240	767.9	260.1	0.0150	-18.24	1.000	10.45
270	940.3	87.7	0.0150	-18.24	1.000	6.02
300	731.3	296.7	0.0150	-18.24	1.000	11.16
330	646.6	381.4	0.0150	-18.24	1.000	12.57

Ave El= 710.70 M HAAT= 317.30 M AMSL= 1028 M