

ENGINEERING REPORT

FM Translator Minor Construction Permit Application

for

W220BN – Natchez, MS
Lic No. BLFT-19970326TF

December, 2012

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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 W220BN – Natchez, MS, License No. BLFT-19970326TF. W220BN presently operates on 91.9 MHz with 0.013 kW of circularly polarized non-directional power with an antenna COR of 152 meters AMSL. A site change is requested to an existing unregistered 60 foot AGL tower. Operation on channel CH220D with 80 watts ERP at a COR of 71 meters AMSL is requested. The facility will continue to operate with a non-directional antenna employing circular polarization. The translator will rebroadcast FM station WYFQ-FM, Wadesboro, NC, CH228C3, Facility ID No. 73965, as a non-fill-in, satellite fed translator.

The proposed facility will be mounted on an existing 60 foot AGL tower which does not require Antenna Structure Registration. USGS Topographic Mapping and Aerial Photography of the tower site has been included in **Exhibit(s) 13.1** and **13.2**. A copy of the vertical antenna system has been included in **Exhibit 13.3**. TOWAIR has been consulted and the existing 60 foot AGL tower does not require Antenna Structure Registration. In addition, 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 13.6**. 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 protection studies as well as all contour and HAAT calculations employed in this Form 349 filing. Pursuant to §74.1235(b)(1), the maximum permissible power for this non-fill-in (regular) translator will be 80 watts based off a maximum value of 52.9 meters HAAT for radial 300°T.

The translator site and proposed 60 dBu contour lie outside of the WYFQ-FM 60 dBu contour. The translator is and will continue to operate as a non-commercial, non-fill-in translator fed via a satellite downlink. A map of the proposed service area in relation to the primary station service contour has been included in **Exhibit 13.5**.

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. Therefore no further international showings are believed required.

The proposed translator is and will remain within the affected radius of one (1) DTV-6 facility, DTV-6 Pending Application BDISTVL-20090824AAQ for W30CC.A - Natchez, MS. Pursuant to current FCC policy, as the W30CC.A DTV-6 application remains pending and this W220BN.P proposal will not inhibit or delay processing of the W30CC.A DTV-6 application; processing and grant of this W220BN.P Form 349 application may continue. In addition, the applicant would like to note the current W220BN.L - Natchez, MS licensed operation (BLFT-19970326TF) actually predates the W30CC.A - Natchez, MS proposed DTV-6 application (BDISTVL-20090824AAQ); with the W30CC.A proposal being filed over top of the W220BN.L licensed facility.

Discussion (continued)

The proposed operating parameters have been changed from the licensed values, however the proposed service contour serves a portion of the present service area as seen in **Exhibit 13.4**.

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 §1.1310 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. = 313247 W. Lng. = 912231 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	48.2	22.8	0.0800	-10.97	1.000	5.33
030	55.1	15.9	0.0800	-10.97	1.000	5.33
060	75.2	-4.2	0.0800	-10.97	1.000	5.33
090	100.4	-29.4	0.0800	-10.97	1.000	5.33
120	92.8	-21.8	0.0800	-10.97	1.000	5.33
150	83.1	-12.1	0.0800	-10.97	1.000	5.33
180	66.3	4.7	0.0800	-10.97	1.000	5.33
210	33.6	37.4	0.0800	-10.97	1.000	5.91
240	20.4	50.6	0.0800	-10.97	1.000	6.89
270	21.2	49.8	0.0800	-10.97	1.000	6.84
300	18.1	52.9	0.0800	-10.97	1.000	7.05
330	23.2	47.8	0.0800	-10.97	1.000	6.69

Ave El= 53.13 M HAAT= 17.87 M AMSL= 71 M