

# **ENGINEERING REPORT**

## **FM Translator Minor Construction Permit Modification Application**

for

**W239AP – Mobile, AL**

License No. BLFT-20080307AAY

CP File No. BMPFT-20120820AAI

November, 2012

COPYRIGHT 2012

**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 13.1a - Copy of USGS Topographic Map

Exhibit 13.1a - Copy of USGS Aerial Photograph

Exhibit 13.2 - Vertical Plan of Antenna System and Support Tower

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 - §74.1204(d) Given Interference Waiver Request toward WRKH(FM)

Exhibit 13.7 - Manufacturer's Vertical Radiation Pattern Data

**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 modification application for FM translator W239AP – Mobile, AL, License No. BLFT-20080307AAY. W239AP presently operates on Channel 239D, 95.7 MHz, with 19 watts of non-directional power with an antenna COR of 122 meters AMSL. W239AP also holds granted construction permit BMPFT-20120820AAI authorizing operation on CH239D, 95.7 MHz, with 99 watts ERP at 131 meters AMSL while rebroadcasting new AM station WIJD(AM) – Prichard, AL.

The applicant has been informed that subsequent to the grant of the existing Construction Permit (BMPFT-20120820AAI), ASR, #1059666 owner Clear Channel Broadcasting Inc. has deemed the tower to be structurally unsound. Therefore the tower is slated to be dismantled and rebuilt. For the interim period, Clear Channel Broadcasting, Inc. has arranged for a temporary tower to be constructed at the same licensed location. The temporary tower will be a Model SR-106 telescoping COW (Cell Tower on Wheels) tower. The tower itself is 106 feet high atop a trailer height of 4 feet. A 10-foot pole will be mounted on top of the tower for use by W239AP. This temporary tower will also house an AM 3-wire skirt mounted 110 feet above ground for the diplexed operations of WASG(AM) and WIJD(AM). Notification of the AM operations has already been made under STA filings BSTA-20121102AAO and BSTA-20121102AAJ.

Therefore continued operation at the present site location is requested. Operation on CH239D, 95.7 MHz, with 99 watts ERP at 46 meters AMSL is requested utilizing the previously specified Shively 6812B-1 non-directional antenna. The translator will also rebroadcast previously specified AM station WIJD(AM) – Prichard, AL, 1270 kHz, Facility ID No. 53144. The Translator will continue to serve the community of Mobile, AL.

The translator will be mounted on the temporary 36.6 meter AGL tower located at the site of dismantled Antenna Structure Registration number 1059666. USGS Topographic Mapping and Aerial Photography of the site has been included in **Exhibit(s) 13.1a-b**. A copy of the vertical antenna system has been included in **Exhibit 13.2**. TOWAIR has been consulted and the temporary tower does not require FAA notification.

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 WRKH(FM) – Mobile, AL (CH241C). General allocation details are found in **Exhibit 13.5**. A §74.1204(d) Second Adjacent Channel Given Interference Waiver is requested toward WRKH(FM) as included in **Exhibit 13.6**. Full protection will be afforded WRKH(FM) as the calculated interference area will not reach the ground nor a 7 meter artificial plane representing a standard two story building 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 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 NED 03 second terrain database for all allocation, contour and HAAT showings contained here-in.

The proposed 60 dBu contour of the Fill-In translator lies wholly inside of the WIJD(AM) primary daytime 2.0 mV/m contour and a 25 mile radius around the AM site. A map of the proposed service area in relation to the primary station service contour has been included in **Exhibit 13.4**.

## Discussion (continued)

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 additional international showings are believed required.

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 13.3**.

**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).

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 or will be properly marked with signs, and entry is restricted by means of fencing with locked doors and/or gates if required. 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. = 304444.0 W. Lng. = 880540.0						
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	10.5	35.5	0.0990	-10.04	1.000	6.07
030	3.1	42.9	0.0990	-10.04	1.000	6.67
060	1.0	45.0	0.0990	-10.04	1.000	6.84
090	1.5	44.5	0.0990	-10.04	1.000	6.80
120	1.5	44.5	0.0990	-10.04	1.000	6.79
150	2.9	43.1	0.0990	-10.04	1.000	6.68
180	5.8	40.2	0.0990	-10.04	1.000	6.45
210	26.8	19.2	0.0990	-10.04	1.000	5.62
240	48.2	-2.2	0.0990	-10.04	1.000	5.62
270	41.5	4.5	0.0990	-10.04	1.000	5.62
300	38.2	7.8	0.0990	-10.04	1.000	5.62
330	17.2	28.8	0.0990	-10.04	1.000	5.62
Ave El= 16.51 M HAAT= 29.49 M AMSL= 46						