

ENGINEERING REPORT

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

NEW253D – Jonesboro, AR
File No. BNPFT-20030317CAF
Facility ID No. 146807

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

August, 2013

COPYRIGHT 2013

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 13.1 - Copy of Existing Antenna Structure Registration

Exhibit 13.2 - Vertical Plan of Existing Tower Structure

Exhibit 13.3 - Licensed 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

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 an original Construction Permit "Long Form" Filing for FM Translator Application BNPFT-20030317CAF (Facility ID No. 146807). The pending "Short-Form" Application specified operation on CH253D (98.5 MHz) with 0.140 kW ERP of non-directional power at an antenna COR of 212 meters AMSL. Revised Operating Parameters will be requested in this "Long-Form" Filing. Continued operation on Channel CH253D (98.5 MHz) with a power of 0.250 kW ERP is requested from a new site location. A circularly polarized non-directional antenna will be utilized at the revised antenna COR height of 216 meters AMSL. The translator will rebroadcast primary station KJBX(FM) – Cash, AR CH292C3 (Facility ID No. 18085) as a Fill-in Commercial FM Translator.

The facility will be located at the existing tower bearing Antenna Structure Registration Number 1225967. A copy of the existing ASR 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. General allocation details are found in **Exhibit 13.5**. It is believed sufficient clearance exists precluding the need for additional contour protection showings.

The applicant would like to note the use of the NGDC 30 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 KJBX(FM) primary 60 dBμ contour. 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 KJBX(FM) with a direct feed as a commercial FM 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**.

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 NGDC 30 second terrain database.

N. Lat. = 354927.0 W. Lng. = 904448.0						
HAAT and Distance to Contour,						
FCC, FM 2-10 Mi, 51 pts Method - NGDC 30 SEC						
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	107.9	108.1	0.2500	-6.02	1.000	13.37
030	111.3	104.7	0.2500	-6.02	1.000	13.15
060	92.2	123.8	0.2500	-6.02	1.000	14.29
090	77.4	138.6	0.2500	-6.02	1.000	15.17
120	75.9	140.1	0.2500	-6.02	1.000	15.26
150	93.1	122.9	0.2500	-6.02	1.000	14.23
180	78.0	138.0	0.2500	-6.02	1.000	15.13
210	77.1	138.9	0.2500	-6.02	1.000	15.19
240	79.0	137.0	0.2500	-6.02	1.000	15.07
270	79.4	136.6	0.2500	-6.02	1.000	15.04
300	78.3	137.7	0.2500	-6.02	1.000	15.11
330	80.4	135.6	0.2500	-6.02	1.000	14.98
Ave El= 85.83 M HAAT= 130.17 M AMSL= 216						