

## **ENGINEERING REPORT**

FM Translator Minor Amendment to  
a Pending Application

File No. BNPFT-20030828AOI

APP238D– Kissimmee, FL

Frequency Change to CH241D

**April, 2006**

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(Exhibit numbering is in response to FCC Online Form 349, Section III-A)

## Discussion (As Amended)

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This firm has been retained to prepare the required engineering report in support of a minor amendment to pending application BNPFT-20030828AOI for a new FM translator for Kissimmee, FL. The previously filed frequency of CH238D is no longer valid due to changes within the allocation, therefore this amendment proposes operation on CH241D with 80 watts of circular polarization with a max HAAT of 46 meters. A non-directional antenna will be employed. The translator will rebroadcast parent station WYFO(FM), Lakeland, FL, 91.9 MHz.

It has been determined the translator may be used in the area without interference to any existing FM broadcast station or translator with the exception of 2<sup>nd</sup> adjacent channel station WHTQ(FM), Orlando, FL. Allocation details are found in **Exhibit 12.5**. A second adjacent interference study towards WHTQ(FM) showing a lack of population or housing within the interference area has been included in **Exhibit 12.6**. The translator site is outside of the primary contour, and the 1 mV/m (60 dBu) contour extends beyond the primary station 1 mV/m contour. A map of the proposed service area in relation to the primary station service contour has been included in **Exhibit 12.4**.

For purposes of HAAT calculations and contours employed in coverage and allocation studies, the more accurate NED 03 second terrain database has been employed.

The proposed operating parameters have been changed from the original values, however the proposed service contour serves a portion of the present service area as seen in **Exhibit 12.3**.

The proposed translator is not located within 320 kilometers of the border between the United States of America and Canada or Mexico.

The translator will employ a two bay circularly polarized FMEC-2 non-directional antenna. Both antenna bays will be placed  $1.4\lambda$  (wavelength) apart to achieve the required vertical null required for protection of WHTQ(FM). The antenna will be mounted on an existing tower bearing ASR No. 1013623. The antenna will not increase the overall height, therefore the FAA need not be notified. A copy of the existing Antenna Structure Registration has been included in **Exhibit 12.1**

The proposed facility meets the requirements of the Rules for operation without a licensed operator in attendance. The transmitter site may be reached promptly at all hours and in all seasons. The transmitter will be equipped with proper control and interface circuits which will place the translator in a non-radiating condition in the event the proper incoming signal is absent. The transmitter and controls will be placed in a locked area to prevent unauthorized tampering with the equipment. A person or persons will be assigned to observe the signals of the station each day, and to take corrective action if required. The equipment proposed for operation is listed in the type-approved list of the Commission.

## Discussion (As Amended)

Prompt suspension of the translator operation will be made, in the event of equipment failure that could cause operation outside the specifications of the Rules. The data contained in this report is responsive to the Rules of the Commission, and provides information for FCC Form 349.

**RADIATION PROTECTION:** The FM broadcast facility proposed in this application is within the limits as set forth in the FCC Form 349 Worksheet #2 (RF Exposure Compliance), issued March, 2001. As this facility complies with Worksheet #2, no RF study need be supplied. The facility will be properly marked with signs, and entry will be 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. = 28 18 40 W. Lng. = 81 27 36<br>HAAT and Distance to Contour - FCC Method - NED-03 Arc Sec. |             |             |               |               |              |             |
|--|-------------|-------------|---------------|---------------|--------------|-------------|
| Azi.   | AV EL       | HAAT        | ERP kW        | dBk           | Field        | 60-F5       |
| 000  | 25.9        | 37.1        | 0.0800        | -10.97        | 1.000        | 5.88        |
| 030  | 26.8        | 36.2        | 0.0800        | -10.97        | 1.000        | 5.81        |
| 060  | 24.4        | 38.6        | 0.0800        | -10.97        | 1.000        | 5.99        |
| 090  | 20.6        | 42.4        | 0.0800        | -10.97        | 1.000        | 6.29        |
| 120  | 18.7        | 44.3        | 0.0800        | -10.97        | 1.000        | 6.43        |
| <b>150</b>   | <b>17.3</b> | <b>45.7</b> | <b>0.0800</b> | <b>-10.97</b> | <b>1.000</b> | <b>6.53</b> |
| 180  | 20.7        | 42.3        | 0.0800        | -10.97        | 1.000        | 6.28        |
| 210  | 19.5        | 43.5        | 0.0800        | -10.97        | 1.000        | 6.37        |
| 240  | 24.5        | 38.5        | 0.0800        | -10.97        | 1.000        | 5.99        |
| 270  | 24.9        | 38.1        | 0.0800        | -10.97        | 1.000        | 5.96        |
| 300  | 26.6        | 36.4        | 0.0800        | -10.97        | 1.000        | 5.83        |
| 330  | 29.4        | 33.6        | 0.0800        | -10.97        | 1.000        | 5.61        |
| Ave El= 23.27 M HAAT= 39.73 M AMSL= 63 M   |             |             |               |               |              |             |