

ENGINEERING REPORT

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

NEW296D – Greenfield, IN
File No. BNPFT-20030317KXI
Facility ID No. 148567

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

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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 an original Construction Permit “Long Form” Filing for FM Translator Application BNPFT-20030317KXI (Facility ID No. 148567). The pending “Short-Form” Application specified operation on CH296D (107.1 MHz) with 0.170 kW ERP of non-directional power at an antenna COR of 296 meters AMSL. Revised Operating Parameters will be requested in this “Long-Form” Filing. Continued operation on Channel CH296D (107.1 MHz) with a power of 0.170 kW ERP is requested from a corrected site location. A circularly polarized non-directional antenna will be utilized at the corrected antenna COR height of 292 meters AMSL. The translator will rebroadcast primary station WHHC-LP – New Castle, IN, CH298L1 (Facility ID No. 123622) as a regular (non-fill-in) non-commercial FM Translator.

The facility will be located on the roof of an existing church steeple which does not require Antenna Structure Registration Number. A USGS Topographical Photo-Map of the proposed 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. 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 NED 03 SEC Terrain Database for all allocation, contour and HAAT calculations contained here-in.

The proposed 60 dBμ contour of the Translator lies outside of the WHHC-LP 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 WHHC-LP directly off-air as a non-fill-in FM Translator. The applicant further certifies that the Translator and primary LPFM station are not co-owned and that written permission for retransmission has been sought and obtained from the WHHC-LP licensee.

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 §1.1310 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. = 394621.0 W. Lng. = 854511.0 | | | | | | |
|--|--------------|-------------|---------------|--------------|--------------|-------------|
| 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 | 271.8 | 20.2 | 0.1700 | -7.70 | 1.000 | 6.44 |
| 030 | 282.3 | 9.7 | 0.1700 | -7.70 | 1.000 | 6.44 |
| 060 | 289.9 | 2.1 | 0.1700 | -7.70 | 1.000 | 6.44 |
| 090 | 285.6 | 6.4 | 0.1700 | -7.70 | 1.000 | 6.44 |
| 120 | 272.9 | 19.1 | 0.1700 | -7.70 | 1.000 | 6.44 |
| 150 | 266.4 | 25.6 | 0.1700 | -7.70 | 1.000 | 6.44 |
| 180 | 257.2 | 34.8 | 0.1700 | -7.70 | 1.000 | 6.88 |
| 210 | 256.5 | 35.5 | 0.1700 | -7.70 | 1.000 | 6.94 |
| 240 | 256.0 | 36.0 | 0.1700 | -7.70 | 1.000 | 6.99 |
| 270 | 260.0 | 32.0 | 0.1700 | -7.70 | 1.000 | 6.62 |
| 300 | 263.8 | 28.2 | 0.1700 | -7.70 | 1.000 | 6.44 |
| 330 | 269.2 | 22.8 | 0.1700 | -7.70 | 1.000 | 6.44 |
| Ave El= 269.31 M HAAT= 22.69 M AMSL= 292 M | | | | | | |