

ENGINEERING REPORT

FM Translator Minor Construction Permit Modification Application

for

BPFT-20090406AFZ

Facility ID: 84372

April, 2009

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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 modification application for FM translator Facility ID 84372. The translator is presently operating under pending License No. BLFT-20090331AAR with 0.001 kW of directional power with an antenna COR of 262 meters AMSL on CH229D under call letters W229BI (formerly W282BC). The translator also holds granted Construction Permit File No. BPFT-20090406AFZ authorizing operation on CH232D, 94.3 MHz with 250 watts of circular polarization from ASR 1028013 utilizing a directional antenna under call letters W232BW. This minor construction permit modification proposes a sole rotation of the presently authorized DA pattern from 270°T to 240°T and a change in primary stations from WRSI(FM) Turners Falls, MA to WLZX(FM) Northampton, MA. The translator will continue to service the community of license of Amherst, MA.

The site is an existing communications tower bearing Antenna Structure Registration Number 1028013. As this proposal will not increase the overall tower height, therefore the FAA need not be notified. A copy of existing ASR has been included in **Exhibit 12.1**. A copy of the vertical antenna system has been included in **Exhibit 12.2**.

It has been determined the translator may be used in the area without interference to any existing FM broadcast station or translator operation with the exception of WMAS-FM, Springfield, MA and WRSI(FM), Turners Falls, MA. Allocation details are found in **Exhibit 12.5**. A §74.1204(d) waiver request for second adjacent channel given interference towards WMAS-FM and WRSI(FM) showing a lack of population or housing within the interference area has been included in **Exhibit 12.6**. It is believed sufficient clearance exists precluding the need for additional contour protection showings. The applicant would like to note the use of the NGDC 30 second terrain database for all HAAT, allocation and contour showings.

The translator will employ two Scala CL-FM directional antenna elements. One bay will be mounted in the horizontal plane and one bay will be mounted in the vertical plane. As stated before, the antenna will be mounted on an existing tower.

The Fill-In Translator site lies inside of the primary service contour of WLZX(FM), and the 1 mV/m (60 dBu) contour of the proposed Fill-In Translator lies wholly inside of the WLZX(FM) primary contour. A map of the proposed service area in relation to the primary station service contour has been included in **Exhibit 12.4**.

Regarding protection of international concerns, the proposed facility will remain within 320 km of the common border of the United States and Canada. Full protection will be afforded all Canadian concerns as noted in the **Exhibit 12.5** allocation study. In addition, the proposed 34 dBu f(50:10) interference contour does not reach the Canadian border. Documentation of the 34 dBu f(50:10) contour will be supplied upon request.

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 12.3**.

Discussion (continued)

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.

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 16.1*** 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.

N. Lat. = 422149.0 W. Lng. = 722524.0						
HAAT and Distance to Contour						
V-Soft 3-16 km, 131 pts Method - NGDC 30 SEC						
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	332.9	71.1	0.0002	-36.48	0.030	1.86
030	253.4	150.6	0.0002	-36.48	0.030	2.38
060	212.0	192.0	0.0002	-36.48	0.030	2.57
090	212.5	191.5	0.0002	-36.48	0.030	2.57
120	202.2	201.8	0.0002	-36.48	0.030	2.62
150	204.1	199.9	0.0002	-36.48	0.030	2.61
180	152.7	251.3	0.0380	-14.20	0.390	12.84
210	100.8	303.2	0.1669	-7.78	0.817	20.58
240	105.1	298.9	0.2500	-6.02	1.000	22.52
270	65.7	338.3	0.1669	-7.78	0.817	21.69
300	77.3	326.7	0.0380	-14.20	0.390	14.65
330	180.9	223.1	0.0002	-36.48	0.030	2.70
Ave El= 174.97 M HAAT= 229.03 M AMSL= 404 M						