

ENGINEERING REPORT

FM Translator Minor Construction Permit Application

for

W224AF – Danville, VA

Lic No. BLFT-19850429TA

August, 2010

Notice of §73.3517 Contingent Filing. W224AF – Danville, VA (Facility ID No. 5117) and W224AL – Westover Hills, VA (Facility ID No. 5088) request simultaneous processing as §73.3517 contingent applications. Both applications have been simultaneously filed and reference each other with regards to the §73.3517 processing request. W224AF will remain on CH224D however a correction of coordinates is requested. W224AL will change frequencies to minor change channel CH222D and operate with 0.2 watts of non-directional power. Both facilities will be di-plexed into the same antenna. In addition, both facilities request §74.1204(d) waivers for given second adjacent channel contour overlap. As both stations will be second adjacent to each other (CH224D & CH222D) and co-located on the same tower, the interference area will be kept solely to the immediate tower area itself. In addition, filtering hardware will be installed to isolate potential interference between the two facilities.

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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 application for FM Translator W224AF, Danville, VA, License No. BLFT-19850429TA. W224AF presently operates on 92.7 MHz with 23 watts of grandfathered §74.1235(j) non-directional power with an antenna COR of 290 meters AMSL. A correction of site coordinates and COR AMSL height is requested from the present site location and antenna COR aperture. Continued non-directional operation is proposed, however a new make and model of non-directional antenna will be proposed. Continued operation on CH224D with 23 watts ERP at a corrected 285 meters AMSL is requested. Processing under §74.1235(j) for continued operation with a grandfathered power in excess current limits is requested. The Translator will rebroadcast primary station WHPE-FM, High Point, NC (Facility ID No. 5164) as a non fill-in translator.

The applicant would like to note that it presently holds authorizations for two FM translators grandfathered to serve substantially the same area while rebroadcasting the same signal. The translator to be modified by this Form 349 filing, W224AF (Facility ID No. 5117), serves the same area and is co-located with translator W224AL (Facility ID No. 5088). Both translators have rebroadcasted grandfathered primary station WHPE-FM, High Point, NC (Facility ID No. 5164) as non fill-in translators since the licensing of the facilities in 1984/1985. This proposal and a \$73.3517 contingent, Form 349 filing for the companion W224AL (Facility ID No. 5088) have been filed requesting continued co-located and di-plexed operation from a new common non-directional antenna. A map of the existing and proposed common service areas for both translators has been included in **Exhibit 16.1**. A continuation of the grandfathered common primary station of WHPE-FM, High Point, NC (Facility ID No. 5164) is requested.

The existing tower does not require Antenna Structure Registration. A copy of USGS topographic mapping of the existing tower site has been included in **Exhibit 13.1**. 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 WPAW(FM), Winston-Salem, NC. Allocation details are found in **Exhibit 13.5**. As W224AF is presently licensed with existing contour overlap with WPAW(FM), processing under §74.1204(c) is requested for a continuation of this contour overlap. As noted in **Exhibit 13.6**, the contour overlap area will not be increased as a result of this proposal. 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 second terrain database for all HAAT, allocation and contour showings.

The Translator site lies outside of the primary contour of WHPE-FM, and the 1 mV/m (60 dBu) contour of the proposed Translator lies outside of the WHPE-FM station primary contour as well. A map of the proposed service area in relation to the primary station service contour has been included in **Exhibit 13.4**.

Regarding protection of international concerns, the present facility is and will remain more than 320 km from the common border between the United States and Canada or Mexico. As a result, it is believed no further international showings are 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**.

Discussion (continued)

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 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. = 363856 W. Lng. = 792951 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	235.7	49.3	0.0230	-16.38	1.000	5.03
030	213.2	71.8	0.0230	-16.38	1.000	6.03
060	208.9	76.1	0.0230	-16.38	1.000	6.21
090	184.4	100.6	0.0230	-16.38	1.000	7.17
120	166.0	119.0	0.0230	-16.38	1.000	7.79
150	164.5	120.5	0.0230	-16.38	1.000	7.83
180	156.5	128.5	0.0230	-16.38	1.000	8.07
210	197.0	88.0	0.0230	-16.38	1.000	6.69
240	223.8	61.2	0.0230	-16.38	1.000	5.61
270	234.1	50.9	0.0230	-16.38	1.000	5.12
300	237.6	47.4	0.0230	-16.38	1.000	4.93
330	249.1	35.9	0.0230	-16.38	1.000	4.22
Ave El= 205.91 M HAAT= 79.09 M AMSL= 285 M						