

## **W290BO APPLICATION FOR MINOR CHANGE TO NON-ADJACENT CHANNEL 254**

This technical report has been developed in support of an application for a minor modification to W290BO at Brookville, PA, FCC file no. BLFT-20070621ABO. A waiver of Section 74.1233(a)(1) is requested to permit a move to the non-adjacent channel 254. This application proposes the non-adjacent move as a result of an interference complaint.

### **W290BO Modification Analysis:**

W290BO received an August 20, 2010 letter from James B. Bradshaw, Deputy Chief, Audio Division, Media Bureau, referencing a June 17, 2010 interference complaint of Jeff Spencer. W290BO does not believe that the interference complaint is from a bona fide listener to a regularly received signal. Nonetheless, in the event the Commission determines otherwise, this application is being filed in order to continue service from W290BO without interruption.

An overlap study is included in exhibit E-1 as a reference for the current channel 290 facility. A preclusion study was researched to find whether an adjacent +/-3, -53, 54 I.F. channel is available to eliminate the alleged interference. The results of this analysis are summarized below and shown in exhibit E-2:

**236    18.3 km interference overlap to co-ch. W236AH**

**237    10.0 km interference overlap to 1st adj. WFGI-FM 238B**

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- 287 62.6 km interference overlap to 1st adj. WMKX 288B1**
- 288 92.1 km interference overlap to co-ch. WMKX 288B1**
- 289 62.6 km interference overlap to 1st adj. WMKX 288B1**
- 290 Current licensed channel 290 and co-ch. to interference complainant WQCK(FM) 290A**
- 291 1st adj. to the complainant 290A and 5.8 km interference overlap to 2nd adjacent WDSN 293A**
- 292 30.1 km interference to 1st adj. WDSN 293A**
- 293 58.9 km interference to co-ch. WDSN 293A**

The preclusion study demonstrates that W290BO cannot move to any of the allowed channels without causing prohibited interference. Therefore, a modification to the non-adjacent channel 254 is requested. That channel is found to be clear of any interference to or from any existing facility (Exhibit E-3).

## **Antenna System:**

W290BO is located on the existing tower, ASR no. 1064439, at a COR AGL of 85 meters using a Scala CL-FM/CP, circularly polarized, directional antenna operating at 0.250 kW ERP. A correction in the tower ASR (Exhibit E-5) site elevation and the overall tower height change the COR AMSL to be 619 meters and 95 meters AGL, respectively, but there is no physical change in the W290BO antenna system. W290BO will continue to serve as a fill-in for primary station WDSN(FM) 293A at Reynoldsville, PA, and the 60 dBu contour remains within the primary WDSN(FM) 60 dBu contour (Exhibit E-4).

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## **RF Exposure Calculation:**

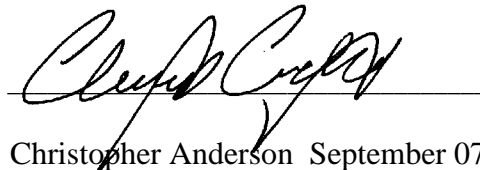
The RF contribution was calculated using the formula from the OET Bulletin 65:

$$S \text{ (RF in microwatts/cm}^2\text{)} = \frac{33.4 \times F^2 \times (H \text{ ERP} + V \text{ ERP in watts})}{R^2 \text{ (distance to radiation center in meters}^2\text{)}}$$

Using a worst-case vertical (F) factor of 1.0 results in an RF value of 2.42  $\mu\text{W/cm}^2$  to the ground, which is well below 5% of the 200  $\mu\text{W/cm}^2$  maximum permissible for general public exposure, allowing its exclusion from consideration.

## **Conclusion:**

It is concluded that the non-adjacent modification of W290BO to channel 254, based on a waiver of the rules set forth in CFR 74.1233(a)(1), complies with all Commission rules and policies.



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