

## **CHANNEL 6 INTERFERENCE ANALYSIS**

The proposed facility is within the affected area of WPVI-TV channel 6, Philadelphia, Pennsylvania. A detailed analysis has been performed to demonstrate compliance with 47 CFR §73.525 with respect to this channel 6 television station.

Following the procedures set forth in 47 CFR §73.525(e), the interference area with respect to WPVI was determined. The relevant F(50,50) contours of WPVI were plotted, which, as shown in the included plot, range from 50 to 58 dBu. This range falls within the “Grade B” service area of WPVI as defined in §73.683.

Associated with each of the WPVI contours is an interfering contour from the proposed facility, the field strength of which varies based on a U/D ratio added to the WPVI field strength contour per 47 CFR §73.525(e)(1)(ii) based on the curves contained in §73.599. Furthermore, along azimuths 110 degrees counter-clockwise through 250 degrees off-axis from the bearing to WPVI, an additional 6 dB adjustment is afforded by §73.525(e)(1)(iii) to account for television receiving antennae directivity. For WRTQ, operating on channel 217, the associated U/D ratios and resulting interfering contours are as follows:

<b>WPVI F(50,50) dBu</b>	<b>U/D Ratio dB</b>	<b>FM F(50,10) dBu</b>	<b>FM+6 F(50,10) dBu</b>
49.0	26.5	75.5	N/A
50.0	25.1	75.1	N/A
51.0	23.8	74.8	80.8
52.0	22.4	74.4	80.4
53.0	21.2	74.2	80.2
54.0	20.1	74.1	80.1
55.0	18.9	73.9	79.9
56.0	17.9	73.9	79.9
57.0	16.8	73.8	79.8
58.0	15.8	73.8	79.8

A contour plot showing the each of the WPVI contours along with all of the WRTQ interfering contours is included. The effective radiated power used to plot the FM interfering contours of the proposed facility were computed using the methods specified in 47 CFR §73.525(e)(4)(ii). As the predicted interference area does not include cities greater than 50,000 persons in population, the “A” divisor value used for computing the equivalent ERP of the vertical component is 40 per 47 CFR §73.525(4)(ii). The ERP used when plotting the interfering contours is calculated as follows:

**Proposed Facility:**

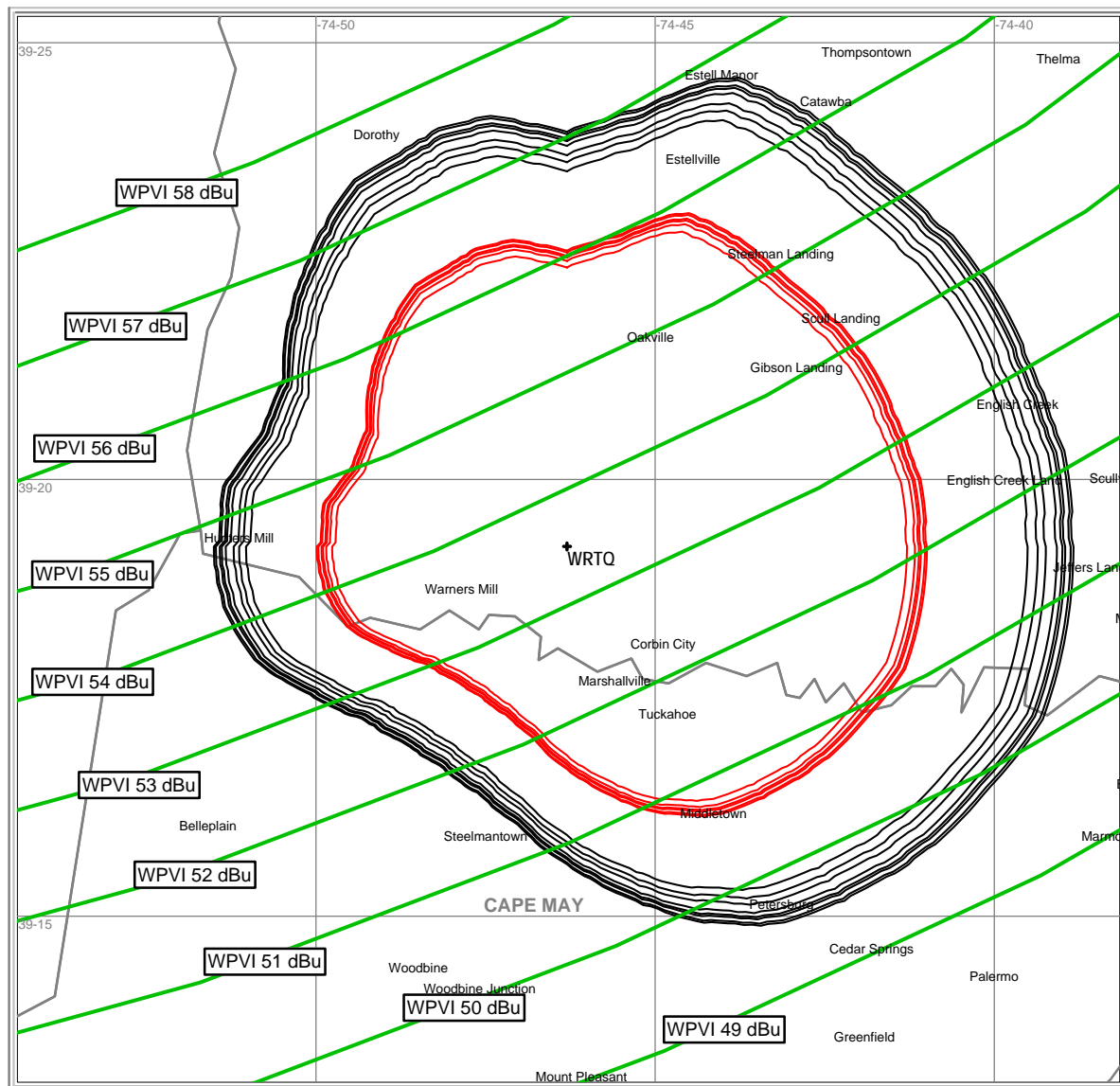
ERP horizontal polarization: 1.36 kW  
ERP vertical polarization: 13.5 kW  
Equivalent ERP for Channel 6 Protection:  $1.36 \text{ kW} + (13.5 \text{ kW} / 40) = \underline{1.70 \text{ kW}}$

The intersection of the relevant WPVI contour and the associated WRTQ interfering contour was then determined to define the overall interference area in accord with the procedures in §73.525(e)(1)(v). A plot of the interference area is included.

A population count of the persons within the interference area was conducted using the accepted centroid block method. A total of 2,601 persons are within the interference area. The instant application therefore complies with 47 CFR §73.525(c) which allows for up to 3,000 persons in the interference area. Although not required to do so, the licensee will make filters available to any person within the interference area who experiences interference to reception of WPVI that is attributable to the operation of WRTQ.

There also exist two low-power television stations on channel 6 that are located within the 174 km radius specified in 47 CFR §73.525(a)(1) with respect to an NCE-FM station operating on channel 217, WNYZ-LP New York City and an application for a new facility, file number BNPTVL-20000828BGT, Salisbury, Maryland. The proposed WRTQ interfering contours fall wholly outside those stations' 47 dBu "Grade B" contours, therefore no additional analysis is warranted with respect to those facilities.

## WPVI Channel 6 F(50,50) Contours and Corresponding WRTQ F(50,10) Contours



WRTQ Interfering F(50,10) Contours: Black = 73.8 through 75.5 dBu Red = 79.8 through 80.8 dB

## WPVI Channel 6 Interference Area

