

# **KESSLER AND GEHMAN ASSOCIATES, INC.**

507 NW 60<sup>th</sup> St. Ste C, Gainesville, FL 32607

WIRS-TV  
Yauco, PR

Environmental Impact / RFR Hazard Analysis

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A theoretical analysis has been conducted of the human exposure to radio frequency radiation (“RFR”) using the calculation methodology described in OET Bulletin 65, Edition 97-01. The RFR analysis is conducted pursuant to the following methodology:

Terrain<sup>1</sup> extraction is compiled from the proposed tower site to radial lengths of 0.25 miles in 0.001 mile increments for 360 radials. The power density is calculated for each terrain point at 6 feet above ground level using the elevation and azimuth pattern of the proposed broadcast antenna. The power density calculations are conducted using the lower edge of the proposed channel frequency. To account for ground reflections, a coefficient of 1.6 was included in the calculation.

The resulting cylindrical polar analysis is then summarized into a coordinate plane graph using the following methodology:

Starting from the origin the maximum calculated RFR value is determined among the 360 degree radials for each 0.001 mile increment, the value is then converted into a percentage of the maximum allowable general population or uncontrolled exposure and plotted as a function of perpendicular distance from the tower.

Exhibit 49.1 is the resulting RFR study demonstrating that the peak exposure is 14.3% of the general population or uncontrolled exposure threshold. Pursuant to OET Bulletin 65, facilities which exceed 5% must study contributions to exposure from other RF sources in the vicinity for a cumulative determination. The following facilities are considered

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<sup>1</sup> Terrain extraction is based upon a 3 arc second point spacing terrain database.

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significant contributors to the cumulative exposure threshold and were studied using the calculation methodology described above:

- WTIN (FCC File No.: BLCDT-20081029ABZ) – 32.8%
- W42DZ (FCC File No.: BNPDTL-20090825BKN) – 4.3%
- WSUR (FCC File No.: BNPDTL-20090825BKN) – 1.2%

It should be noted that other wireless facilities exist in the area but their contribution is likely to be considered insignificant. The cumulative general population or uncontrolled exposure for the facilities studied above is 52.6% and is thus considered to be well within compliance. In addition, the site is remote and cannot be reached except by an all-terrain vehicle. The property is marked with signs forbidding entry by unauthorized persons. As such the proposed facility is categorically excluded from further environmental processing.