**Consulting Engineers** 

## TECHNICAL SUMMARY SECOND FILING WINDOW APPLICATION FOR MODIFCATION OF CONSTRUCTION PERMIT TV STATION WFGC PALM BEACH, FLORIDA CHANNEL 7 17.9 KW (DA) 123 m

1. The instant application is a second filing window application for WFGC on channel 7 at Palm Beach, Florida. It is proposed to change the directional antenna system and increase the ERP from 12.1 kW to 17.9 kW. There will be no other changes. There will also be no change in the overall structure height of the existing tower (ASRN 1018586).

2. As demonstrated in the *TVStudy* analysis exhibit, the proposal complies with the FCC's interference protection requirements based on a cell size of 2.0 km and profile resolution of 1.0 points/km.

3. RFR Compliance: The proposed facilities were evaluated in terms of potential radiofrequency radiation (RFR) exposure at ground level to workers and the general public. The radiation center for the proposed DTV antenna will be located 123 meters above ground level. The total DTV ERP is 21.47 kW (17.9 kW-horizontal, 3.57 kW-vertical). A conservative vertical plane relative field value of 0.2 is presumed for the antenna's downward radiation (for angles below 60 degrees downward, see attached antenna data). The calculated power density at a point 2 meters above ground level is 2.0 uW/cm<sup>2</sup> which is 1.0% of the FCC's recommended limit of 200 uW/cm<sup>2</sup> for channel 7 for an uncontrolled environment. Therefore, based on the responsibility threshold of 5%, the proposal will comply with the RF emission rules.

Based on information from an agent of the applicant, the site is considered a controlled site as it is enclosed by a barbed wire fence. The nearest point of the fence is approximately 200 yards (600 feet, 183 meters) from the WFGC tower. Access to the transmitting site is restricted and appropriately markets with RFR warning signs. Also, as this is a mult-unser site, a protocol will be in effect in the event that workers or other authorized personnel enter the restricted area or climb the tower to ensure that appropriate measure will be taken to assure worker safety with respect to RFR exposure. Such measures include limiting the exposure time, wearing protective clothing, reducing power to an acceptable level or termination of transmitter output power all together until workers leave the restricted area.