TECHNICAL SUMMARY
APPLICATION FOR CONSTRUCTION PERMIT
TV STATION WFGC
PALM BEACH, FLORIDA
CHANNEL 7 12.1 KW (DA) 123 m

1. The instant application is the initial 90 day 'Checklist' application for the reassigned facilities of WFGC, Palm Beach, Florida. Station WFGC is a "band changing" station moving from UHF channel 49 to VHF channel 7. It is proposed to replace the existing side-mount antenna with a new side-mount antenna. There will be no change in the antenna radiation center height (128 m AMSL). There will also be no change in the overall structure height of the existing tower (ASRN 1018586).

2. The proposed facilities (Ch. 7, ERP 12.1 kW-DA, HAAT 123 m) will result in more than 1% coverage extension in some directions relative to baseline reassignment facility specified in the *Closing and Channel Reassignment Public Notice*. However, this is permitted for band changing stations by Section 73.3700(b)(1)(iii) of the FCC's rules provided that the proposed operation will not cause new interference beyond a rounding tolerance of 0.5 percent to any other station. The coverage extension results from directional antenna pattern variation between the UHF and VHF bands and to provide population coverage replication.[1] Furthermore, as indicated by the attached FCC *TVStudy* analysis, the proposed WFGC operation complies with the 0.5 percent interference criteria. As also indicated in the *TVStudy* analysis, the proposed facility is compliant with the 95% population service requirement. Therefore, it is believed that the proposed facilities comply with the technical requirements applicable to a band changing station.

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 122 meters above ground level. The total DTV ERP is 12.1 kW (horizontal polarization). A greater than expected vertical plane relative field value of 0.2 is presumed for the antenna's downward radiation (for angles below 60 degrees downward, see vertical plane relative field pattern attached). The calculated power density at a point 2 meters above ground level is 1.1 uW/cm^2 which is

[1] The interference free population within the noise-limited service contour for WFGC's baseline reassignment facility is 2,855,773 persons and for the proposed facilities 2,864,896 persons (see attached FCC *TVStudy* analysis).

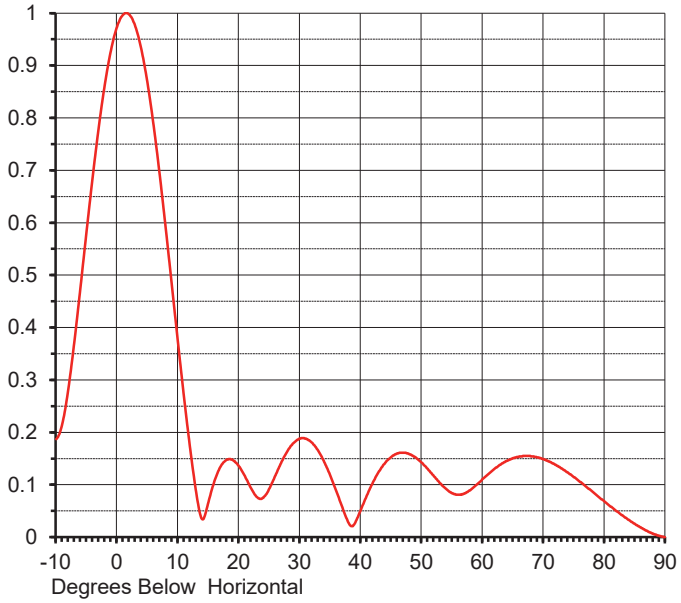
0.6% of the FCC's recommended limit of 200 uW/cm^2 for channel 7 for an uncontrolled environment and 0.1% of the FCC's recommended limit of 1000 uW/cm^2 for a controlled environment. Therefore, based on the responsibility threshold of 5%, the proposal will comply with the RF emission rules.

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.

ELEVATION PATTERN

Proposal No.	**C-70583-2**
Date	**18-May-17**
Call Letters	**WFGC**
Channel	**7**
Frequency	**177 MHz**
Antenna Type	**THV-5A7-R P220**

RMS Directivity at Main Lobe	**5.0 (6.99 dB)**	Beam Tilt	**1.50 deg**
RMS Directivity at Horizontal	**4.7 (6.72 dB)**	Pattern Number	**05V050150**
	Calculated		



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.187	10.0	0.370	30.0	0.188	50.0	0.142	70.0	0.149
-9.0	0.216	11.0	0.265	31.0	0.188	51.0	0.130	71.0	0.144
-8.0	0.283	12.0	0.168	32.0	0.180	52.0	0.116	72.0	0.138
-7.0	0.374	13.0	0.084	33.0	0.165	53.0	0.103	73.0	0.131
-6.0	0.478	14.0	0.034	34.0	0.143	54.0	0.092	74.0	0.123
-5.0	0.585	15.0	0.067	35.0	0.117	55.0	0.084	75.0	0.114
-4.0	0.688	16.0	0.108	36.0	0.087	56.0	0.081	76.0	0.105
-3.0	0.783	17.0	0.135	37.0	0.056	57.0	0.083	77.0	0.096
-2.0	0.865	18.0	0.148	38.0	0.027	58.0	0.090	78.0	0.087
-1.0	0.929	19.0	0.147	39.0	0.026	59.0	0.100	79.0	0.077
0.0	0.974	20.0	0.135	40.0	0.052	60.0	0.111	80.0	0.068
1.0	0.997	21.0	0.116	41.0	0.080	61.0	0.121	81.0	0.058
2.0	0.997	22.0	0.093	42.0	0.105	62.0	0.131	82.0	0.049
3.0	0.974	23.0	0.076	43.0	0.126	63.0	0.139	83.0	0.041
4.0	0.930	24.0	0.075	44.0	0.142	64.0	0.146	84.0	0.033
5.0	0.866	25.0	0.093	45.0	0.153	65.0	0.151	85.0	0.025
6.0	0.785	26.0	0.118	46.0	0.160	66.0	0.154	86.0	0.018
7.0	0.691	27.0	0.144	47.0	0.161	67.0	0.155	87.0	0.012
8.0	0.587	28.0	0.165	48.0	0.158	68.0	0.154	88.0	0.006
9.0	0.479	29.0	0.180	49.0	0.152	69.0	0.152	89.0	0.002
								90.0	0.000