

TECHNICAL SUMMARY  
REQUEST FOR SPECIAL TEMPORARY AUTHORITY (STA)  
DTV STATION WVEN-TV  
MELBOURNE, FLORIDA  
CH 43 165 KW (MAX-DA) 428 m

1. The instant request is for Special Temporary Authority (STA) for WVEN-TV, Melbourne, Florida, which is licensed for pre-transition DTV operation on channel 43 (License, FCC File No. BLCDT-20090616ACO) and is also authorized for post-transition DTV operation on channel 22 (CP, LMS File No. 0000034008). The WVEN-TV STA facility will operate on pre-transition channel 43 at reduced ERP with a temporary directional antenna side-mounted at a height of 419.1 meters above ground level on the existing/authorized tower. The STA will permit WVEN-TV to continue operation on pre-transition channel 43 while the permanent, post-transition antenna is installed on the tower. There will be no change in the overall structure height of the existing tower (ASRN 1212124).

2. The proposed STA antenna system has been designed such that there will be no extension of the predicted noise-limited service contour of the STA facility beyond that of the main facility (see Figure 1 attached).

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 419.1 meters above ground level. The total DTV ERP is 172.59 kW (165 kW horizontal polarization, 7.59 kW vertical polarization). A conservative vertical plane relative field value of 0.25 is presumed (for angles below 60 degrees downward, see attached antenna data). The calculated power density at a point 2 meters above ground level is  $2.07 \text{ uW/cm}^2$  which is 0.48% of the FCC's recommended limit of  $431.3 \text{ uW/cm}^2$  for channel 43 for an uncontrolled environment. Therefore, based on the responsibility threshold of 5%, the proposal will comply with the RF emission rules.

Access to the transmitting site is restricted and appropriately marked with RFR warning signs. Furthermore, as this is a multi-user site, a formal RFR protection protocol is 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

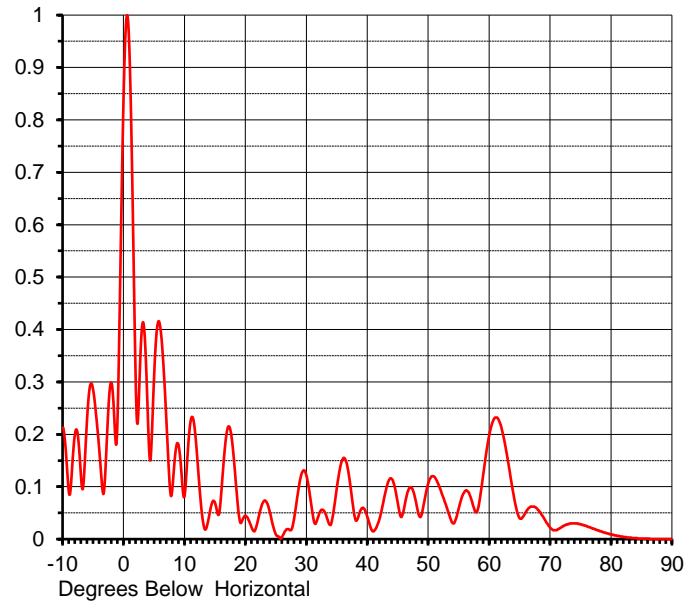
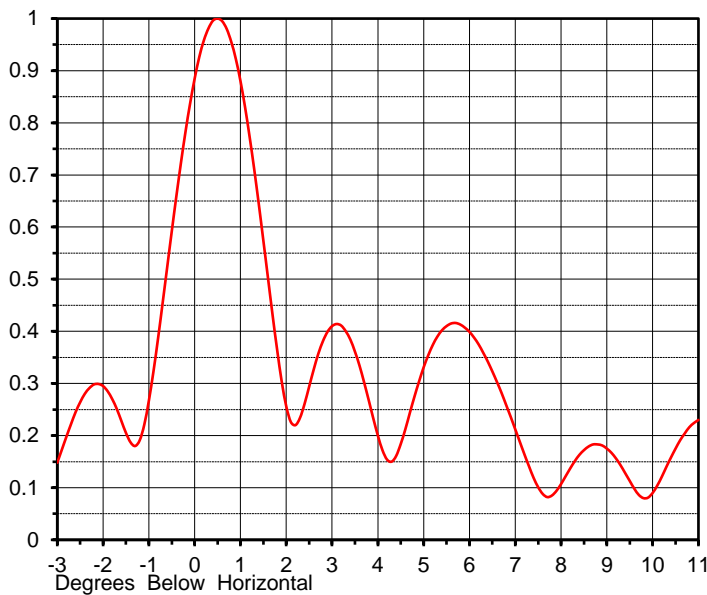
the exposure time, wearing protective clothing, reducing power to an acceptable level or termination of transmitter output power all together until workers leave the restricted area.

## ELEVATION PATTERN

Proposal No. **C-71020-8**  
 Date **5-Dec-19**  
 Call Letters **WVEN**  
 Channel **43**  
 Frequency **647 MHz**  
 Antenna Type **TFU-24WB/VP-R S230**

RMS Directivity at Main Lobe **18.8 ( 12.74 dB )**  
 RMS Directivity at Horizontal **14.7 ( 11.67 dB )**  
**Calculated**

Beam Tilt **0.50 deg**  
 Pattern Number **24W188050**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.213	10.0	0.090	30.0	0.118	50.0	0.109	70.0	0.021
-9.0	0.085	11.0	0.230	31.0	0.044	51.0	0.118	71.0	0.017
-8.0	0.205	12.0	0.156	32.0	0.048	52.0	0.092	72.0	0.024
-7.0	0.108	13.0	0.030	33.0	0.050	53.0	0.059	73.0	0.029
-6.0	0.244	14.0	0.047	34.0	0.030	54.0	0.030	74.0	0.030
-5.0	0.279	15.0	0.066	35.0	0.105	55.0	0.062	75.0	0.028
-4.0	0.159	16.0	0.096	36.0	0.155	56.0	0.092	76.0	0.024
-3.0	0.148	17.0	0.212	37.0	0.114	57.0	0.075	77.0	0.020
-2.0	0.295	18.0	0.155	38.0	0.036	58.0	0.055	78.0	0.016
-1.0	0.267	19.0	0.034	39.0	0.059	59.0	0.128	79.0	0.012
0.0	0.885	20.0	0.044	40.0	0.040	60.0	0.203	80.0	0.009
1.0	0.880	21.0	0.020	41.0	0.015	61.0	0.232	81.0	0.006
2.0	0.256	22.0	0.038	42.0	0.042	62.0	0.209	82.0	0.004
3.0	0.410	23.0	0.073	43.0	0.095	63.0	0.149	83.0	0.003
4.0	0.200	24.0	0.048	44.0	0.114	64.0	0.079	84.0	0.002
5.0	0.331	25.0	0.007	45.0	0.063	65.0	0.039	85.0	0.001
6.0	0.399	26.0	0.006	46.0	0.062	66.0	0.053	86.0	0.001
7.0	0.212	27.0	0.019	47.0	0.099	67.0	0.062	87.0	0.000
8.0	0.107	28.0	0.047	48.0	0.065	68.0	0.055	88.0	0.000
9.0	0.175	29.0	0.119	49.0	0.056	69.0	0.038	89.0	0.000
								90.0	0.000

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