

TECHNICAL SUMMARY
REQUEST FOR SPECIAL TEMPORARY AUTHORITY (STA)
TV STATION WTIC-TV
HARTFORD, CONNECTICUT
CHANNEL 31 120 KW (MAX-DA) 456 m

1. The instant request is for Special Temporary Authority (STA) for WTIC-TV, Hartford, Connecticut, which is licensed for operation on channel 31.¹ The WTIC-TV STA facility will operate on channel 31 utilizing a Dielectric model TFU-16W-R C160 directional antenna side-mounted at a height of 339 meters above ground level on WTIC-TV's current tower. There will be no change in the overall structure height of the existing tower (ASRN 1041624).

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 339 meters above ground level. The total DTV ERP is 120 kW (horizontal polarization). A conservative vertical plane relative field value of 0.15 is presumed for the antenna's downward radiation in both the horizontal and vertical planes of polarization (for angles below 60 degrees downward, see attached vertical plane relative field pattern). The calculated power density at a point 2 meters above ground level is 0.79 uW/cm^2 which is 0.21% of the FCC's recommended limit of 383.3 uW/cm^2 for channel 31 for an uncontrolled environment. Therefore, based on the responsibility threshold of 5%, the proposal will comply with the RF emission rules.

¹ See FCC File No. BLCDDT-20101222AAE.

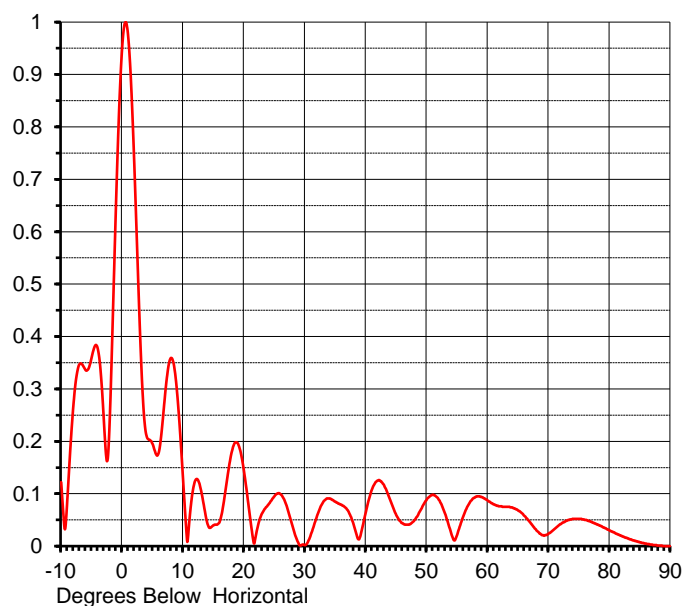
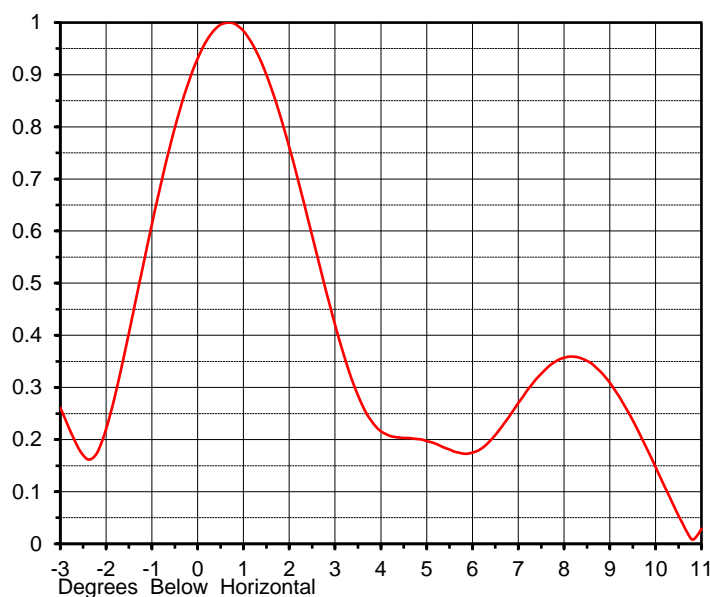
Access to the transmitting site is restricted and appropriately marked with RFR warning signs. Furthermore, as this is a multi-user site, a formal RFR protection protocol is in effect in the event that workers or other authorized personnel enter the restricted area or climb the tower to ensure that appropriate measures 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-70964-1**
 Date **6-Sep-17**
 Call Letters **WTIC**
 Channel **31**
 Frequency **575 MHz**
 Antenna Type **TFU-16WB-R C160**

RMS Directivity at Main Lobe **14.5 (11.60 dB)**
 RMS Directivity at Horizontal **13.1 (11.17 dB)**
Calculated

Beam Tilt **0.55 deg**
 Pattern Number **16W145055**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.122	10.0	0.128	30.0	0.002	50.0	0.089	70.0	0.024
-9.0	0.087	11.0	0.043	31.0	0.023	51.0	0.098	71.0	0.033
-8.0	0.268	12.0	0.125	32.0	0.058	52.0	0.088	72.0	0.042
-7.0	0.347	13.0	0.104	33.0	0.084	53.0	0.062	73.0	0.049
-6.0	0.336	14.0	0.043	34.0	0.091	54.0	0.025	74.0	0.052
-5.0	0.360	15.0	0.040	35.0	0.085	55.0	0.022	75.0	0.052
-4.0	0.377	16.0	0.046	36.0	0.079	56.0	0.057	76.0	0.050
-3.0	0.241	17.0	0.109	37.0	0.069	57.0	0.082	77.0	0.046
-2.0	0.251	18.0	0.180	38.0	0.041	58.0	0.094	78.0	0.041
-1.0	0.653	19.0	0.196	39.0	0.016	59.0	0.094	79.0	0.036
0.0	0.950	20.0	0.143	40.0	0.065	60.0	0.087	80.0	0.030
1.0	0.972	21.0	0.055	41.0	0.108	61.0	0.080	81.0	0.024
2.0	0.729	22.0	0.023	42.0	0.125	62.0	0.076	82.0	0.019
3.0	0.389	23.0	0.063	43.0	0.116	63.0	0.075	83.0	0.015
4.0	0.211	24.0	0.079	44.0	0.088	64.0	0.074	84.0	0.011
5.0	0.195	25.0	0.095	45.0	0.059	65.0	0.068	85.0	0.007
6.0	0.178	26.0	0.099	46.0	0.044	66.0	0.058	86.0	0.005
7.0	0.282	27.0	0.077	47.0	0.041	67.0	0.045	87.0	0.003
8.0	0.359	28.0	0.037	48.0	0.050	68.0	0.030	88.0	0.001
9.0	0.296	29.0	0.004	49.0	0.069	69.0	0.021	89.0	0.000
								90.0	0.000

This document contains proprietary and confidential information of Dielectric. It is to be used solely for the purpose for which it is provided. No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric.