

Attachment 46
Environmental Considerations
Telefutura DC, LLC
WFDC-DT Arlington, VA
Ch 15 1000 kW 227m

This application proposes continued use of the present WFDC/WFDC-DT transmitter site, which is a multiple-user facility owned by NBC Subsidiary (WRC-TV), Inc.. The multi-channel UHF antenna proposed will replace the existing WRC-TV analog antenna, on the taller tower immediately adjacent to the existing WFDC-TV facility. Use of shared sites located in areas near other towers is environmentally preferred. Implementation of this proposal will result in a 40% reduction in radiated energy with respect to the current analog and transitional digital facilities of this station at this site.

Operation is proposed on channel 15, with its center frequency of 479 MHz yielding a radiofrequency radiation exposure guideline value of $319 \mu\text{W}/\text{cm}^2$ for the general population. The proposed Dielectric TUC-O5-12/60H antenna, with its radiation center 179 meters above ground level, has a maximum downward radiation value of 0.03 at a depression angle of 58° (elevation pattern attached hereto). Consequently, the worst-case predicted exposure level at 2 meters above ground level is $0.96 \mu\text{W}/\text{cm}^2$. This exposure level is 0.03% of the guideline value, far below the "responsibility threshold" of 5%. Access to the tower base is restricted by fencing, with appropriate warning signage. The site is gated and guarded full-time.

16 June 2008



Karl D. Lahm, P.E.
California Registration #E010307
Engineering Manager
Univision Management Company
P.O. Box 647
Lake Villa, IL 60046
847.245.8699



Date
Call Letters
Location
Customer
Antenna Type

16 Jun 2008
WFDC-DT Channel 15
Washington, DC
Telefutura DC, LLC
TUC-O5-12/60H-T

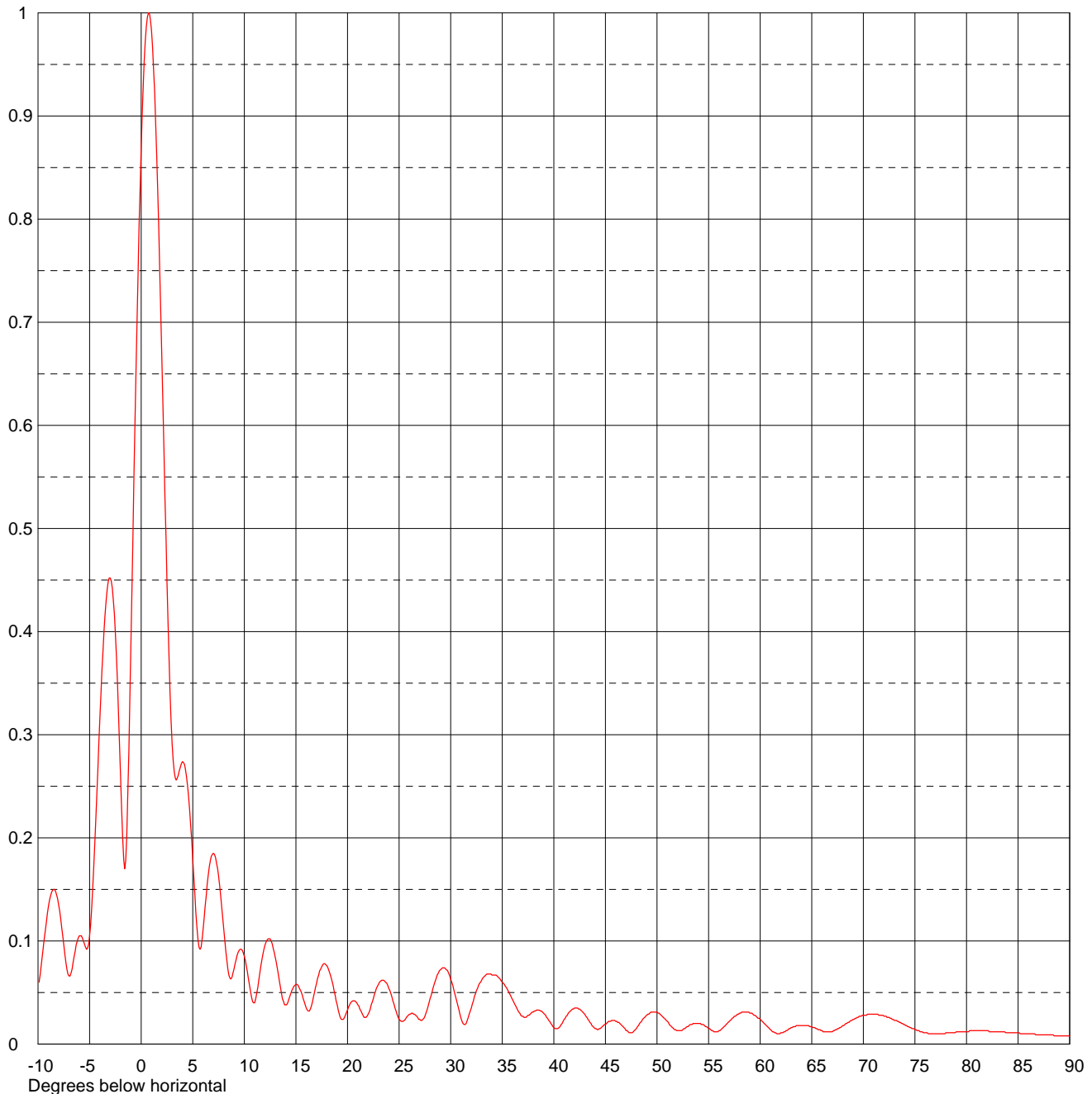
ELEVATION PATTERN

RMS Gain at Main Lobe
RMS Gain at Horizontal
Calculated / Measured

20.2 (13.05 dB)
15.3 (11.85 dB)
Calculated

Beam Tilt
Frequency
Drawing #

0.75 Degrees
479.00 MHz
12U202075-90



Remarks:



Date **16 Jun 2008**
 Call Letters **WFDC-DT** Channel **15**
 Location **Washington, DC**
 Customer **Telefutura DC, LLC**
 Antenna Type **TUC-O5-12/60H-T**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing # **12U202075-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.054	2.4	0.490	10.6	0.051	30.5	0.045	51.0	0.022	71.5	0.028
-9.5	0.093	2.6	0.409	10.8	0.041	31.0	0.025	51.5	0.016	72.0	0.027
-9.0	0.133	2.8	0.341	11.0	0.040	31.5	0.020	52.0	0.013	72.5	0.026
-8.5	0.150	3.0	0.291	11.5	0.069	32.0	0.035	52.5	0.014	73.0	0.023
-8.0	0.135	3.2	0.264	12.0	0.096	32.5	0.052	53.0	0.017	73.5	0.021
-7.5	0.096	3.4	0.256	12.5	0.102	33.0	0.062	53.5	0.020	74.0	0.019
-7.0	0.066	3.6	0.261	13.0	0.084	33.5	0.068	54.0	0.020	74.5	0.016
-6.5	0.085	3.8	0.269	13.5	0.055	34.0	0.067	54.5	0.019	75.0	0.014
-6.0	0.105	4.0	0.274	14.0	0.038	34.5	0.066	55.0	0.015	75.5	0.012
-5.5	0.097	4.2	0.271	14.5	0.049	35.0	0.060	55.5	0.012	76.0	0.011
-5.0	0.105	4.4	0.259	15.0	0.058	35.5	0.053	56.0	0.013	76.5	0.010
-4.5	0.194	4.6	0.239	15.5	0.051	36.0	0.043	56.5	0.017	77.0	0.010
-4.0	0.317	4.8	0.212	16.0	0.035	36.5	0.033	57.0	0.022	77.5	0.010
-3.5	0.417	5.0	0.179	16.5	0.037	37.0	0.027	57.5	0.027	78.0	0.011
-3.0	0.452	5.2	0.145	17.0	0.059	37.5	0.028	58.0	0.030	78.5	0.011
-2.8	0.442	5.4	0.114	17.5	0.075	38.0	0.031	58.5	0.031	79.0	0.012
-2.6	0.416	5.6	0.094	18.0	0.076	38.5	0.033	59.0	0.030	79.5	0.012
-2.4	0.376	5.8	0.094	18.5	0.061	39.0	0.030	59.5	0.028	80.0	0.012
-2.2	0.322	6.0	0.111	19.0	0.038	39.5	0.023	60.0	0.024	80.5	0.013
-2.0	0.260	6.2	0.133	19.5	0.024	40.0	0.016	60.5	0.019	81.0	0.013
-1.8	0.200	6.4	0.155	20.0	0.033	40.5	0.016	61.0	0.014	81.5	0.013
-1.6	0.170	6.6	0.172	20.5	0.042	41.0	0.024	61.5	0.011	82.0	0.013
-1.4	0.202	6.8	0.182	21.0	0.038	41.5	0.031	62.0	0.011	82.5	0.012
-1.2	0.284	7.0	0.185	21.5	0.028	42.0	0.035	62.5	0.013	83.0	0.012
-1.0	0.386	7.2	0.181	22.0	0.029	42.5	0.034	63.0	0.016	83.5	0.012
-0.8	0.495	7.4	0.170	22.5	0.044	43.0	0.029	63.5	0.018	84.0	0.011
-0.6	0.602	7.6	0.154	23.0	0.058	43.5	0.021	64.0	0.018	84.5	0.011
-0.4	0.703	7.8	0.134	23.5	0.062	44.0	0.015	64.5	0.018	85.0	0.011
-0.2	0.794	8.0	0.112	24.0	0.054	44.5	0.015	65.0	0.017	85.5	0.010
0.0	0.870	8.2	0.090	24.5	0.039	45.0	0.019	65.5	0.015	86.0	0.010
0.2	0.931	8.4	0.073	25.0	0.024	45.5	0.022	66.0	0.013	86.5	0.010
0.4	0.973	8.6	0.064	25.5	0.023	46.0	0.022	66.5	0.012	87.0	0.009
0.6	0.996	8.8	0.065	26.0	0.029	46.5	0.019	67.0	0.012	87.5	0.009
0.8	0.999	9.0	0.073	26.5	0.029	47.0	0.013	67.5	0.015	88.0	0.009
1.0	0.983	9.2	0.082	27.0	0.024	47.5	0.011	68.0	0.018	88.5	0.008
1.2	0.947	9.4	0.089	27.5	0.027	48.0	0.015	68.5	0.021	89.0	0.008
1.4	0.895	9.6	0.092	28.0	0.044	48.5	0.022	69.0	0.024	89.5	0.008
1.6	0.828	9.8	0.091	28.5	0.061	49.0	0.028	69.5	0.026	90.0	0.008
1.8	0.751	10.0	0.085	29.0	0.072	49.5	0.031	70.0	0.028		
2.0	0.666	10.2	0.075	29.5	0.073	50.0	0.031	70.5	0.029		
2.2	0.577	10.4	0.063	30.0	0.063	50.5	0.027	71.0	0.029		

Remarks: