

## **ENGINEERING EXHIBIT**

### **Incentive Auction Channel Reassignment**

#### **Application for Modification of Digital Television Station Construction Permit**

prepared for

##### **New Orleans Hearst Television Inc.**

WDSU(DT) New Orleans, LA

Facility ID 71357

Ch. 19 925 kW 288 m

*New Orleans Hearst Television Inc. (“Hearst”)* is the licensee of digital television station WDSU(DT), Channel 43, Facility ID 71357, New Orleans, LA. Reassignment of WDSU from Channel 43 to Channel 19 was specified in the *Incentive Auction Closing and Channel Reassignment Public Notice (“CCRPN”*, DA 17-317, released April 13, 2017). A Construction Permit (“CP” file# 0000034524) authorizes WDSU to operate on Channel 19 at 1000 kW effective radiated power (“ERP”) with a directional antenna at 288 meters height above average terrain (“HAAT”). *Hearst* proposes herein to reduce the ERP to 925 kW. No other changes are sought.

As with the current authorization, the proposed Channel 19 operation will employ the existing broadband shared antenna system utilized by the licensed WDSU facility. The antenna is top-mounted on a tower structure which corresponds to FCC Antenna Structure Registration number 1020862. No change to the overall structure height will result.

The antenna is a horizontally polarized directional Dielectric model TUF-C4SP-10/32U-1-T. The directional antenna’s azimuthal pattern is provided in Figure 1. The proposed antenna system has panel radiators oriented in four different azimuths. The directional pattern has a “cardioid” shape intended to emphasize signal levels towards New Orleans and the surrounding heavily populated areas while minimizing power towards the sparsely populated areas of the Louisiana coastal region and beyond to the Gulf of Mexico.

In order to achieve the desired horizontal plane radiation pattern, the number of stacked panel layers at each azimuth is varied. At 290°T towards the principal community of New Orleans, where the pattern is centered, a stack of 10 panels is used. The pattern's cardioid shape is developed by stacks of 9 panels each at 20°T and 200°T. To the southeast at 110°T (where power is reduced), a stack of four panels is specified. Electrical beamtilt of 0.5 degree is employed for the dominant stacks at 290°T, 20°T, and 200°T. The electrical beamtilt for the southeast panel stack at 110°T is 1.1 degree. The amount of beamtilt specified in the accompanying FCC Form 2100 Antenna Technical Data section is given as 0.5 degree as that represents the beamtilt along the azimuths of maximum radiation. Elevation pattern plots and data are provided in Figure 2 for the 290°T face, Figure 3 for the 20°T and 200°T faces, and Figure 4 for the 110°T face.<sup>1</sup>

Figure 5 supplies a map that demonstrates compliance with §73.625(a)(1) regarding coverage of the entire principal community. The proposed facility's predicted population exceeds 95 percent of the *CCRPN* baseline facility's population.

At 1000 kW ERP, the presently authorized WDSU noise limited service contour ("NLSC") extends beyond that of the *CCRPN* facility and resulted from a minor modification application filed during the second filing window.<sup>2</sup> The modification sought herein provides an NLSC which also exceeds that of the *CCRPN* facility but is within that of the present authorization. A comparison map of the WDSU authorized, proposed, and reassignment NLSC is provided as Figure 6. The FCC's NLSC expansion "freeze" Public Notice<sup>3</sup> of April 5, 2013

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<sup>1</sup>As discussed informally with FCC Staff, a response of "No" is provided in the accompanying Form 2100 Antenna Technical Data section question regarding whether the elevation pattern varies for reasons other than the use of mechanical beamtilt. A "yes" response would prompt the upload of pattern data in XML format, a feature which is primarily intended to be associated with DTS facilities. This application does not rely on specific elevation pattern data to comply with coverage or interference requirements; therefore use of the default elevation pattern can be utilized.

<sup>2</sup>Public Notice "*Incentive Auction Task Force and Media Bureau Announce the Opening of the Second Filing Window for Eligible Full Power and Class A Television Station—October 3 Through November 2, 2017*" DA 17-911, released September 20, 2017.

<sup>3</sup>"*Media Bureau Announces Limitations on the Filing and Processing of Full Power and Class A Television Station Modification Applications, Effective Immediately, and Reminds Stations of Spectrum Act Preservation Mandate,*" DA 13-618, Public Notice, released April 5, 2013.

(DA 13-618) is not applicable to the proposal since there is no extension beyond the currently authorized NLSC, and further, the freeze was lifted<sup>4</sup> on July 22, 2019 for reassigned stations such as WDSU that have not completed the transition to their post-auction channels.

Interference study per FCC OET Bulletin 69<sup>5</sup> shows that the proposal complies with the 0.5 percent limit of new interference caused to pertinent nearby post-auction full service and Class A television stations and reassignments as required by §73.616. The interference study output report is provided as Table 1.

There are no authorized non-directional AM stations within 0.8 kilometers of the site. One authorized directional AM station is located within 3.0 km of the site (WQNO 690 kHz, New Orleans LA). Since the facility proposed herein does not involve any changes to the existing tower, antenna system, or transmission line, the proposal does not represent a significant modification of a tower as defined in 47 CFR 1.30002(d).<sup>6</sup> Therefore, consideration of AM pattern disturbance is not required.

### **Human Exposure to Radiofrequency Electromagnetic Field (Environmental)**

The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the FCC's OET Bulletin Number 65. Based on OET-65 equation (10), and considering 15 percent antenna relative field in downward elevations (pattern data shows less than 15 percent relative field at angles 25 to 90 degrees below the antenna), the calculated signal density near the tower at two meters above ground level attributable to the proposed facility is  $8.6 \mu\text{W}/\text{cm}^2$ , which is 2.6 percent of the general population/uncontrolled maximum

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<sup>4</sup>“Media Bureau Lifts the Freeze on the Filing of Minor Modification Applications that Expand the Contour of Full Power and Class A Television Stations for Certain Repacked Stations, Effective Immediately,” DA 19-684, Public Notice, released July 22, 2019.

<sup>5</sup>FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 (“OET-69”). This analysis employed the FCC's current “TVStudy” software with the default application processing template settings, 2 km cell size, and 1 km terrain increment. Comparisons of various results of this computer program (run on a Mac processor) to the FCC's implementation of TVStudy show excellent correlation.

<sup>6</sup>§1.30002(d): “A significant modification of a tower in the immediate vicinity of an AM station is defined as follows: (1) Any change that would alter the tower's physical height by 5 electrical degrees or more at the AM frequency; or (2) The addition or replacement of one or more antennas or transmission lines on a tower that has been detuned or base-insulated.”

permitted exposure limit. This is below the five percent threshold limit described in §1.1307(b) regarding sites with multiple emitters, categorically excluding the applicant from responsibility for taking any corrective action in the areas where the proposal's contribution is less than five percent.

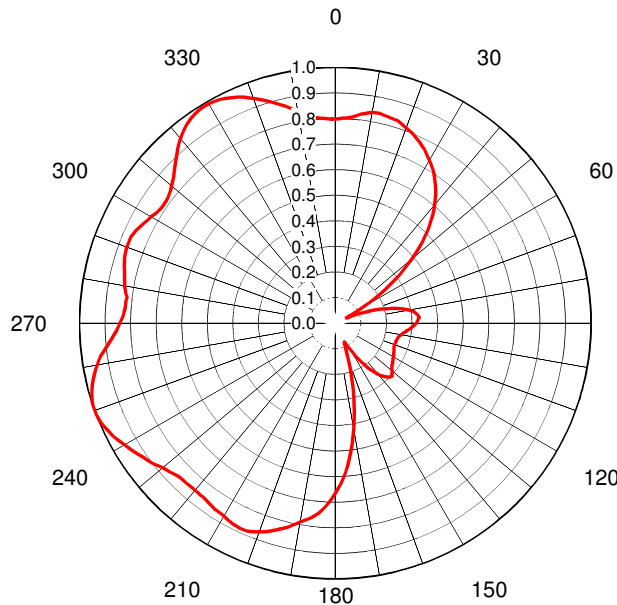
The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, the applicant will coordinate exposure procedures with all pertinent stations and will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from RF electromagnetic field exposure in excess of FCC guidelines. This exhibit is limited to the evaluation of exposure to RF electromagnetic field. No tower or antenna work is required to carry out this proposal.

*List of Attachments*

Figure 1	Antenna Azimuthal Pattern
Figure 2	Antenna Elevation Pattern – 290°T Face
Figure 3	Antenna Elevation Pattern – 20°T and 200°T Faces
Figure 4	Antenna Elevation Pattern – 110°T Face
Figure 5	Proposed Coverage Contours
Figure 6	Coverage Contour Comparison
Table 1	TVStudy Analysis of Proposal
Form 2100	Saved Version of Engineering Sections from FCC Form at Time of Upload

**Chesapeake RF Consultants, LLC**

Joseph M. Davis, P.E.	August 9, 2019	
207 Old Dominion Road	Yorktown, VA 23692	703-650-9600



## AZIMUTH PATTERN Horizontal Polarization

Proposal No. **C-70129**  
 Date **18-Mar-17**  
 Call Letters **WDSU**  
 Channel **19**  
 Frequency **503 MHz**  
 Antenna Type **TUF-C4SSP-10/32U-1-T**  
 Gain **2.03 (3.08dB)**  
 Calculated

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.798	36	0.667	72	0.170	108	0.248	144	0.212	180	0.666	216	0.857	252	0.999	288	0.864
1	0.799	37	0.653	73	0.187	109	0.248	145	0.198	181	0.684	217	0.855	253	0.995	289	0.865
2	0.802	38	0.637	74	0.205	110	0.248	146	0.183	182	0.701	218	0.855	254	0.990	290	0.868
3	0.803	39	0.621	75	0.222	111	0.248	147	0.168	183	0.718	219	0.853	255	0.984	291	0.867
4	0.806	40	0.605	76	0.238	112	0.248	148	0.153	184	0.732	220	0.853	256	0.978	292	0.868
5	0.810	41	0.587	77	0.254	113	0.249	149	0.137	185	0.746	221	0.852	257	0.971	293	0.867
6	0.816	42	0.569	78	0.268	114	0.251	150	0.122	186	0.756	222	0.853	258	0.962	294	0.863
7	0.823	43	0.551	79	0.281	115	0.254	151	0.108	187	0.766	223	0.855	259	0.954	295	0.859
8	0.827	44	0.531	80	0.294	116	0.255	152	0.096	188	0.774	224	0.855	260	0.945	296	0.852
9	0.832	45	0.510	81	0.304	117	0.257	153	0.087	189	0.782	225	0.855	261	0.935	297	0.847
10	0.837	46	0.488	82	0.312	118	0.259	154	0.081	190	0.789	226	0.859	262	0.926	298	0.841
11	0.838	47	0.465	83	0.318	119	0.261	155	0.082	191	0.799	227	0.864	263	0.913	299	0.836
12	0.838	48	0.441	84	0.323	120	0.263	156	0.088	192	0.808	228	0.870	264	0.900	300	0.832
13	0.835	49	0.417	85	0.326	121	0.264	157	0.098	193	0.818	229	0.874	265	0.888	301	0.825
14	0.833	50	0.393	86	0.330	122	0.266	158	0.112	194	0.826	230	0.880	266	0.876	302	0.820
15	0.831	51	0.367	87	0.326	123	0.269	159	0.130	195	0.833	231	0.888	267	0.866	303	0.817
16	0.830	52	0.341	88	0.323	124	0.271	160	0.149	196	0.841	232	0.896	268	0.856	304	0.815
17	0.828	53	0.315	89	0.320	125	0.274	161	0.171	197	0.849	233	0.903	269	0.849	305	0.815
18	0.823	54	0.289	90	0.317	126	0.275	162	0.194	198	0.857	234	0.909	270	0.843	306	0.815
19	0.818	55	0.263	91	0.312	127	0.277	163	0.218	199	0.863	235	0.915	271	0.835	307	0.818
20	0.812	56	0.236	92	0.307	128	0.280	164	0.244	200	0.868	236	0.922	272	0.830	308	0.823
21	0.807	57	0.209	93	0.300	129	0.285	165	0.271	201	0.873	237	0.930	273	0.826	309	0.828
22	0.802	58	0.183	94	0.295	130	0.290	166	0.299	202	0.878	238	0.938	274	0.824	310	0.836
23	0.795	59	0.157	95	0.290	131	0.294	167	0.328	203	0.883	239	0.944	275	0.823	311	0.843
24	0.787	60	0.132	96	0.280	132	0.299	168	0.357	204	0.884	240	0.951	276	0.823	312	0.851
25	0.780	61	0.107	97	0.278	133	0.304	169	0.387	205	0.885	241	0.959	277	0.820	313	0.862
26	0.772	62	0.084	98	0.271	134	0.302	170	0.417	206	0.883	242	0.967	278	0.827	314	0.873
27	0.765	63	0.065	99	0.266	135	0.298	171	0.446	207	0.881	243	0.974	279	0.831	315	0.884
28	0.755	64	0.051	100	0.261	136	0.293	172	0.475	208	0.879	244	0.980	280	0.836	316	0.895
29	0.745	65	0.047	101	0.258	137	0.287	173	0.504	209	0.875	245	0.985	281	0.839	317	0.907
30	0.735	66	0.055	102	0.254	138	0.280	174	0.532	210	0.871	246	0.991	282	0.842	318	0.919
31	0.726	67	0.072	103	0.252	139	0.272	175	0.559	211	0.869	247	0.995	283	0.845	319	0.931
32	0.716	68	0.090	104	0.251	140	0.262	176	0.583	212	0.867	248	0.998	284	0.849	320	0.942
33	0.705	69	0.109	105	0.250	141	0.250	177	0.606	213	0.866	249	1.000	285	0.854	321	0.951
34	0.693	70	0.129	106	0.248	142	0.238	178	0.627	214	0.862	250	1.000	286	0.857	322	0.960
35	0.680	71	0.149	107	0.247	143	0.225	179	0.647	215	0.860	251	1.000	287	0.861	323	0.968



**Figure 1**  
**Antenna Azimuthal Pattern**  
**WDSU(DT) New Orleans, LA**  
**Facility ID 71357**  
**Ch. 19 925 kW 288 m**

prepared for  
**New Orleans Hearst Television Inc.**

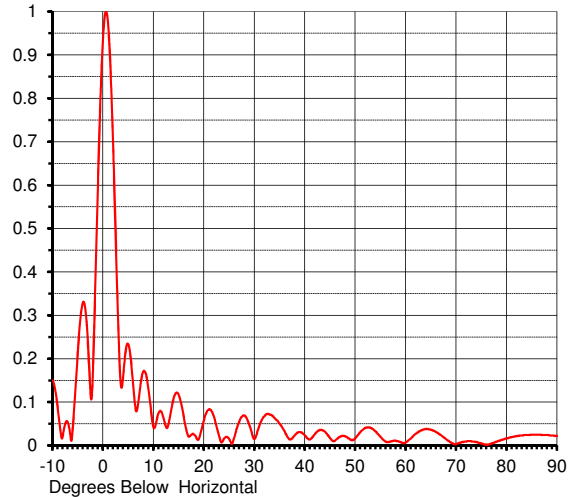
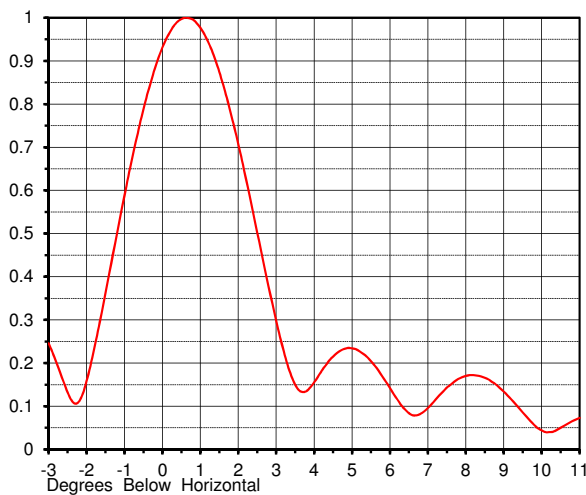
August, 2019

## ELEVATION PATTERN

Proposal No. **C-70129**  
 Date **18-Mar-17**  
 Call Letters **WDSU**  
 Channel **19**  
 Frequency **503 MHz**  
 Antenna Type **TUF-C4SSP-10/32U-1-T**

RMS Directivity at Main Lobe **19.0 ( 12.79 dB )**  
 RMS Directivity at Horizontal **16.5 ( 12.17 dB )**  
**Calculated**

Beam Tilt **0.50 deg**  
 Pattern Number **10U190050**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.150	10.0	0.040	30.0	0.015	50.0	0.017	70.0	0.004
-9.0	0.083	11.0	0.076	31.0	0.048	51.0	0.032	71.0	0.007
-8.0	0.025	12.0	0.061	32.0	0.068	52.0	0.041	72.0	0.009
-7.0	0.052	13.0	0.053	33.0	0.071	53.0	0.041	73.0	0.009
-6.0	0.048	14.0	0.111	34.0	0.062	54.0	0.032	74.0	0.008
-5.0	0.225	15.0	0.115	35.0	0.049	55.0	0.019	75.0	0.004
-4.0	0.331	16.0	0.063	36.0	0.031	56.0	0.009	76.0	0.001
-3.0	0.225	17.0	0.020	37.0	0.014	57.0	0.009	77.0	0.005
-2.0	0.193	18.0	0.025	38.0	0.024	58.0	0.011	78.0	0.009
-1.0	0.632	19.0	0.017	39.0	0.031	59.0	0.007	79.0	0.013
0.0	0.951	20.0	0.061	40.0	0.023	60.0	0.007	80.0	0.017
1.0	0.963	21.0	0.084	41.0	0.014	61.0	0.017	81.0	0.020
2.0	0.669	22.0	0.063	42.0	0.027	62.0	0.028	82.0	0.022
3.0	0.261	23.0	0.019	43.0	0.036	63.0	0.035	83.0	0.023
4.0	0.168	24.0	0.017	44.0	0.031	64.0	0.038	84.0	0.024
5.0	0.232	25.0	0.014	45.0	0.016	65.0	0.036	85.0	0.025
6.0	0.128	26.0	0.020	46.0	0.012	66.0	0.031	86.0	0.025
7.0	0.105	27.0	0.057	47.0	0.021	67.0	0.023	87.0	0.024
8.0	0.172	28.0	0.069	48.0	0.021	68.0	0.014	88.0	0.024
9.0	0.125	29.0	0.045	49.0	0.013	69.0	0.006	89.0	0.023
								90.0	0.022

**Figure 2**

**Antenna Elevation Pattern - 290°T Face**  
**WDSU(DT) New Orleans, LA**  
**Facility ID 71357**  
**Ch. 19 925 kW 288 m**

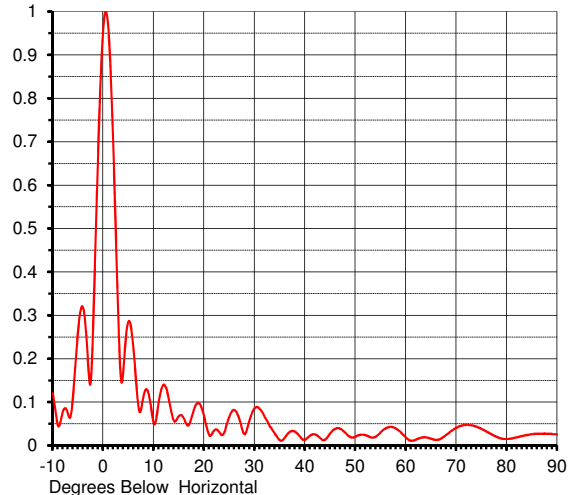
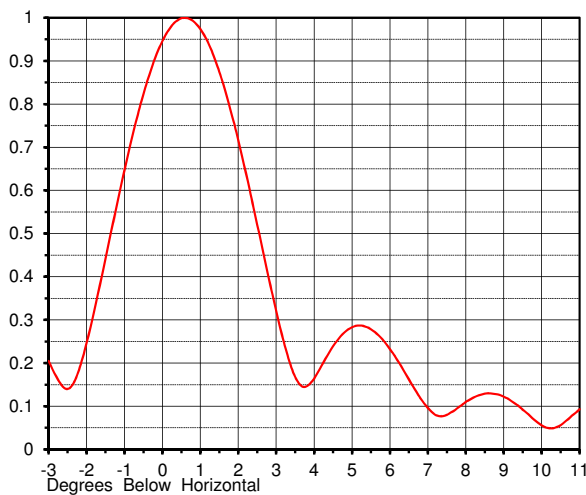
prepared for  
**New Orleans Hearst Television Inc.**

August, 2019

## ELEVATION PATTERN

Proposal No. **C-70129**  
 Date **18-Mar-17**  
 Call Letters **WDSU**  
 Channel **19**  
 Frequency **503 MHz**  
 Antenna Type **TUF-C4SSP-10/32U-1-T**

RMS Directivity at Main Lobe **17.6 ( 12.44 dB )**  
 RMS Directivity at Horizontal **15.7 ( 11.96 dB )**  
 Beam Tilt **0.50 deg**  
 Pattern Number  
**Calculated**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.120	10.0	0.051	30.0	0.086	50.0	0.020	70.0	0.041
-9.0	0.047	11.0	0.101	31.0	0.084	51.0	0.025	71.0	0.046
-8.0	0.078	12.0	0.140	32.0	0.065	52.0	0.024	72.0	0.048
-7.0	0.073	13.0	0.106	33.0	0.044	53.0	0.019	73.0	0.046
-6.0	0.114	14.0	0.057	34.0	0.027	54.0	0.020	74.0	0.043
-5.0	0.264	15.0	0.068	35.0	0.012	55.0	0.031	75.0	0.038
-4.0	0.317	16.0	0.061	36.0	0.019	56.0	0.040	76.0	0.032
-3.0	0.186	17.0	0.048	37.0	0.032	57.0	0.043	77.0	0.025
-2.0	0.282	18.0	0.084	38.0	0.032	58.0	0.039	78.0	0.020
-1.0	0.686	19.0	0.097	39.0	0.020	59.0	0.030	79.0	0.016
0.0	0.963	20.0	0.066	40.0	0.013	60.0	0.018	80.0	0.015
1.0	0.960	21.0	0.024	41.0	0.023	61.0	0.011	81.0	0.016
2.0	0.679	22.0	0.035	42.0	0.025	62.0	0.014	82.0	0.019
3.0	0.284	23.0	0.031	43.0	0.017	63.0	0.018	83.0	0.022
4.0	0.179	24.0	0.031	44.0	0.013	64.0	0.018	84.0	0.024
5.0	0.286	25.0	0.067	45.0	0.028	65.0	0.015	85.0	0.026
6.0	0.220	26.0	0.081	46.0	0.039	66.0	0.013	86.0	0.027
7.0	0.087	27.0	0.059	47.0	0.038	67.0	0.016	87.0	0.027
8.0	0.115	28.0	0.026	48.0	0.029	68.0	0.025	88.0	0.027
9.0	0.118	29.0	0.059	49.0	0.019	69.0	0.034	89.0	0.026
								90.0	0.025

**Figure 3**

**Antenna Elevation Pattern - 20°T and 200°T Faces**  
**WDSU(DT) New Orleans, LA**  
**Facility ID 71357**  
**Ch. 19 925 kW 288 m**

prepared for  
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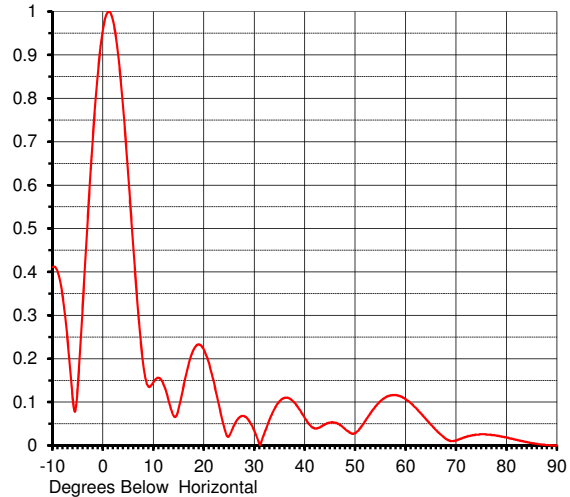
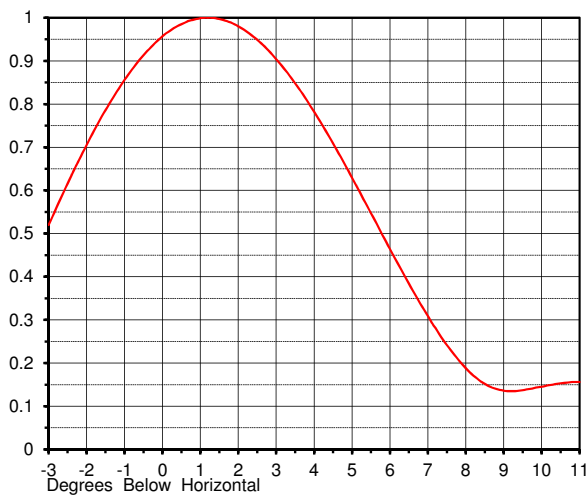
August, 2019

## ELEVATION PATTERN

Proposal No. **C-70129**  
 Date **18-Mar-17**  
 Call Letters **WDSU**  
 Channel **19**  
 Frequency **503 MHz**  
 Antenna Type **TUF-C4SSP-10/32U-1-T**

RMS Directivity at Main Lobe **7.8 ( 8.92 dB )**  
 RMS Directivity at Horizontal **7.1 ( 8.51 dB )**  
**Calculated**

Beam Tilt **1.10 deg**  
 Pattern Number **04U178110**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.411	10.0	0.147	30.0	0.032	50.0	0.029	70.0	0.012
-9.0	0.399	11.0	0.156	31.0	0.002	51.0	0.041	71.0	0.016
-8.0	0.339	12.0	0.139	32.0	0.031	52.0	0.058	72.0	0.020
-7.0	0.232	13.0	0.101	33.0	0.061	53.0	0.075	73.0	0.023
-6.0	0.101	14.0	0.067	34.0	0.086	54.0	0.091	74.0	0.025
-5.0	0.147	15.0	0.088	35.0	0.103	55.0	0.103	75.0	0.026
-4.0	0.339	16.0	0.142	36.0	0.110	56.0	0.111	76.0	0.025
-3.0	0.539	17.0	0.191	37.0	0.108	57.0	0.116	77.0	0.024
-2.0	0.722	18.0	0.223	38.0	0.097	58.0	0.116	78.0	0.023
-1.0	0.868	19.0	0.233	39.0	0.081	59.0	0.113	79.0	0.020
0.0	0.964	20.0	0.219	40.0	0.062	60.0	0.106	80.0	0.018
1.0	1.000	21.0	0.187	41.0	0.046	61.0	0.097	81.0	0.015
2.0	0.975	22.0	0.141	42.0	0.039	62.0	0.086	82.0	0.013
3.0	0.894	23.0	0.088	43.0	0.042	63.0	0.073	83.0	0.010
4.0	0.768	24.0	0.039	44.0	0.049	64.0	0.060	84.0	0.008
5.0	0.613	25.0	0.023	45.0	0.053	65.0	0.047	85.0	0.005
6.0	0.448	26.0	0.048	46.0	0.052	66.0	0.035	86.0	0.004
7.0	0.294	27.0	0.065	47.0	0.047	67.0	0.024	87.0	0.002
8.0	0.179	28.0	0.067	48.0	0.037	68.0	0.015	88.0	0.001
9.0	0.135	29.0	0.055	49.0	0.029	69.0	0.010	89.0	0.000
								90.0	0.000

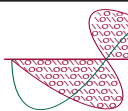
**Figure 4**

**Antenna Elevation Pattern - 110°T Face**  
**WDSU(DT) New Orleans, LA**  
**Facility ID 71357**  
**Ch. 19 925 kW 288 m**

prepared for  
**New Orleans Hearst Television Inc.**

August, 2019



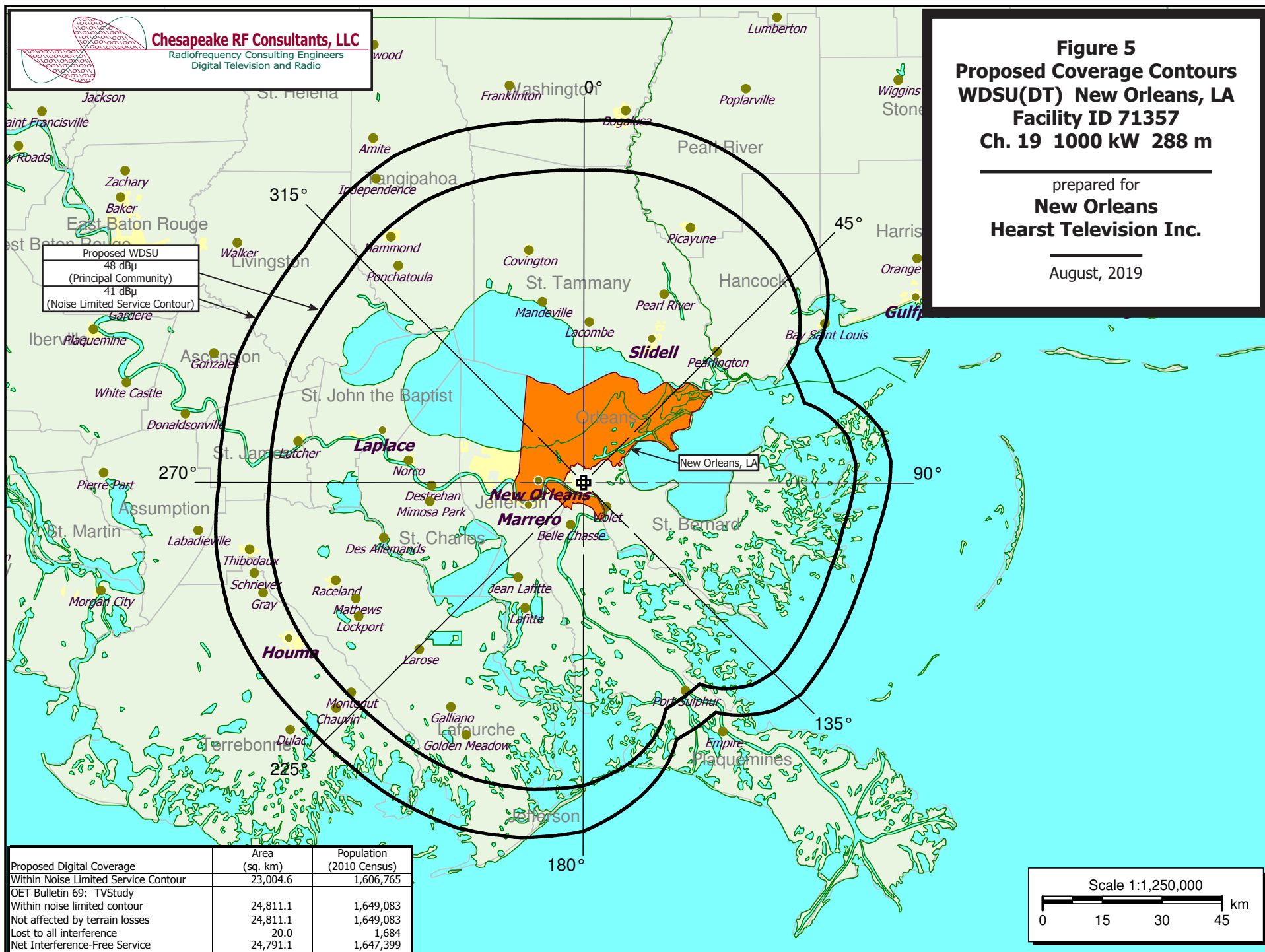


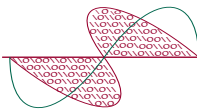
**Chesapeake RF Consultants, LLC**  
Radiofrequency Consulting Engineers  
Digital Television and Radio

**Figure 5**  
**Proposed Coverage Contours**  
**WDSU(DT) New Orleans, LA**  
**Facility ID 71357**  
**Ch. 19 1000 kW 288 m**

prepared for  
**New Orleans**  
**Hearst Television Inc.**

August, 2019





**Chesapeake RF Consultants, LLC**  
Radiofrequency Consulting Engineers  
Digital Television and Radio

**Figure 6**  
**Coverage Contour Comparison**  
**WDSU(DT) New Orleans, LA**  
**Facility ID 71357**  
**Ch. 19 1000 kW 288 m**

prepared for  
**New Orleans**  
**Hearst Television Inc.**

August, 2019



**Table 1 WDSU TVStudy Analysis of Proposal**  
(page 1 of 3)



tvstudy v2.2.5 (4uoc83)  
Database: localhost, Study: WDSU 925kW CP-MOD, Model: Longley-Rice  
Start: 2019.08.09 13:51:49

Study created: 2019.08.09 13:51:49

Study build station data: LMS TV 2019-08-09

Proposal: WDSU D19 DT APP NEW ORLEANS, LA  
File number: WDSU 925kW CP-MOD  
Facility ID: 71357  
Station data: User record  
Record ID: 2816  
Country: U.S.  
Zone: III

Search options:  
Baseline record excluded if station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WMPV-TV	D18	DT	CP	MOBILE, AL	BLANK0000064264	237.3 km
Yes	WMAU-TV	D18	DT	LIC	BUDE, MS	BLEDT20090327ABW	175.4
Yes	WIIQ	D19	DT	LIC	DEMOPOLIS, AL	BLEDT20090511AHE	333.4
No	WLYC	D19	DT	CP	TROY, AL	BLANK0000075838	448.0
No	KAJN-CD	D19	DC	LIC	LAFAYETTE, LA	BLANK0000063952	196.6
Yes	KARD	D19	DT	LIC	WEST MONROE, LA	BLANK0000063972	318.6
No	WKRQ-TV	D20	DT	CP	MOBILE, AL	BLANK0000027663	220.0
No	KZUP-CD	D20	DC	LIC	BATON ROUGE, LA	BLDTA20100308ABT	133.5
No	WMPN-TV	D20	DT	LIC	JACKSON, MS	BLEDT20080807AAP	252.8

No non-directional AM stations found within 0.8 km

Directional AM stations within 3.2 km:  
WQNO 690 L DAN D NEW ORLEANS, LA BMML20170703AFC  
WQNO 690 L DAN N NEW ORLEANS, LA BMML20170703AFC

Record parameters as studied:

Channel: D19  
Latitude: 29 57 0.00 N (NAD83)  
Longitude: 89 57 28.00 W  
Height AMSL: 288.6 m  
HAAT: 288.4 m  
Peak ERP: 925 kW  
Antenna: DIE-TUF-C4SP-10/32U-1-T (ID 1001279) 0.0 deg  
Elev Pattn: Generic  
Elec Tilt: 0.50

39.3 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	589 kW	289.4 m	94.3 km
45.0	230	288.5	85.5
90.0	93.0	288.5	79.3
135.0	80.7	287.8	78.4
180.0	410	288.4	90.6
225.0	695	289.1	95.8
270.0	657	287.1	95.0
315.0	731	288.3	96.2

Distance to Canadian border: 1457.8 km

Distance to Mexican border: 813.9 km

Conditions at FCC monitoring station: Powder Springs GA  
Bearing: 47.3 degrees Distance: 657.8 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
Bearing: 313.3 degrees Distance: 1786.5 km

**Table 1 WDSU TVStudy Analysis of Proposal**  
(page 2 of 3)



No land mobile station failures found

Study cell size: 2.00 km  
Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%  
Maximum new IX to LPTV: 2.00%

-----  
Interference to BLEDT20090327ABW LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WMAU-TV	D18	DT	LIC	BUDE, MS	BLEDT20090327ABW	
Undesireds:	WDSU	D19	DT	BL	NEW ORLEANS, LA	DTVBL71357	175.4 km
	WDSU	D19	DT	APP	NEW ORLEANS, LA	WDSU 925kW CP-MOD	175.4
	KLWB	D17	DT	LIC	NEW IBERIA, LA	BLANK0000072363	162.8
	WUPL	D17	DT	CP	SLIDELL, LA	BLANK0000074625	176.7
	WMPV-TV	D18	DT	CP	MOBILE, AL	BLANK0000064264	311.3
	KMYA-DT	D18	DT	CP	CAMDEN, AR	BLANK0000028486	279.5
	KVHP	D18	DT	LIC	LAKE CHARLES, LA	BLANK0000064019	295.3
	KAJN-CD	D19	DC	LIC	LAFAYETTE, LA	BLANK0000063952	189.3
	KARD	D19	DT	LIC	WEST MONROE, LA	BLANK0000063972	156.8
-----							
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	32348.6	642,328	32216.7	636,504	31170.2	627,660	31166.2 627,650 0.01 0.00
-----							
Undesired			Total IX	Unique IX, before		Unique IX, after	
WDSU D19 DT BL			4.0	253	0.0	0	
WDSU D19 DT APP			8.0	263		4.0	10
KLWB D17 DT LIC			215.4	1,604	191.5	1,340	191.5 1,340
WUPL D17 DT CP			4.0	253	0.0	0	0.0 0
WMPV-TV D18 DT CP			350.3	3,993	342.3	3,732	342.3 3,732
KMYA-DT D18 DT CP			129.1	2,147	92.9	1,880	92.9 1,880
KVHP D18 DT LIC			23.9	264	0.0	0	0.0 0
KARD D19 DT LIC			387.8	1,367	363.5	1,362	363.5 1,362

-----  
Interference to BLEDT20090511AHE LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WIIQ	D19	DT	LIC	DEMOPOLIS, AL	BLEDT20090511AHE	
Undesireds:	WDSU	D19	DT	BL	NEW ORLEANS, LA	DTVBL71357	333.4 km
	WDSU	D19	DT	APP	NEW ORLEANS, LA	WDSU 925kW CP-MOD	333.4
	WHNT-TV	D19	DT	LIC	HUNTSVILLE, AL	BLCDDT20111118COZ	291.9
	WIYC	D19	DT	CP	TROY, AL	BLANK0000075838	184.1
	WGCL-TV	D19	DT	LIC	ATLANTA, GA	BLCDDT20060113ACO	366.3
	WABM	D20	DT	CP	BIRMINGHAM, AL	BLANK0000034382	159.6
	WKRQ-TV	D20	DT	CP	MOBILE, AL	BLANK0000027663	186.1
-----							
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	27205.0	353,241	26809.4	347,685	26277.8	336,436	26261.7 336,187 0.06 0.07
-----							
Undesired			Total IX	Unique IX, before		Unique IX, after	
WDSU D19 DT BL			56.0	220	24.0	68	
WDSU D19 DT APP			80.1	752		40.1	317
WHNT-TV D19 DT LIC			80.0	979	44.0	646	44.0 646
WIYC D19 DT CP			316.6	8,869	240.7	8,489	236.6 8,230
WGCL-TV D19 DT LIC			20.0	65	0.0	0	0.0 0
WABM D20 DT CP			52.1	370	28.0	132	28.0 132
WKRQ-TV D20 DT CP			126.8	1,504	111.0	1,359	107.0 1,335

-----  
Interference to BLANK0000063972 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KARD	D19	DT	LIC	WEST MONROE, LA	BLANK0000063972	
Undesireds:	WDSU	D19	DT	BL	NEW ORLEANS, LA	DTVBL71357	318.6 km
	WDSU	D19	DT	APP	NEW ORLEANS, LA	WDSU 925kW CP-MOD	318.6

**Table 1 WDSU TVStudy Analysis of Proposal**  
(page 3 of 3)



KMYA-DT	D18	DT	CP	CAMDEN, AR	BLANK0000028486	139.7
WMAU-TV	D18	DT	LIC	BUDE, MS	BLEDT20090327ABW	156.8
KAJN-CD	D19	DC	LIC	LAFAYETTE, LA	BLANK0000063952	228.1
KBXS-CD	D20	DC	LIC	SHREVEPORT, LA	BLANK0000071739	155.6
WMPN-TV	D20	DT	LIC	JACKSON, MS	BLEDT20080807AAP	166.9

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
42555.0 703,234	42450.6 700,887	41773.9 692,586	41770.0 692,586	0.01 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WDSU D19 DT BL 99.5	1,319	16.0	347
WDSU D19 DT APP 147.3	2,067		20.0 347
KMYA-DT D18 DT CP 284.1	3,033	284.1	3,033
WMAU-TV D18 DT LIC 170.8	1,234	83.3	326
KAJN-CD D19 DC LIC 15.9	366	7.9	301
KBXS-CD D20 DC LIC 112.8	1,480	112.8	1,480
WMPN-TV D20 DT LIC 101.2	1,941	81.0	1,831
			72.9 1,359

-----  
Interference to proposal scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WDSU	D19	DT	APP	NEW ORLEANS, LA	WDSU 925kW CP-MOD	
Undesireds:	KARD	D19	DT	LIC	WEST MONROE, LA	BLANK0000063972	318.6 km
	KZUP-CD	D20	DC	LIC	BATON ROUGE, LA	BLDTA20100308ABT	133.5

Service area	Terrain-limited	IX-free	Percent IX
24811.1 1,649,083	24811.1 1,649,083	24791.1 1,647,399	0.08 0.10

Undesired	Total IX	Unique IX	Prcnt Unique IX
KARD D19 DT LIC 8.0	19	8.0	19
KZUP-CD D20 DC LIC 12.0	1,665	12.0	1,665
			0.03 0.00
			0.05 0.10

**Channel and Facility Information**

Section	Question	Response
Proposed Community of License	Facility ID	71357
	State	Louisiana
	City	NEW ORLEANS
	DTV Channel	19
	Designated Market Area	New Orleans
Facility Type	Facility Type	Commercial
	Station Type	Auxiliary
Zone	Zone	3

**Antenna Location Data**

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	Yes
	ASR Number	1020862
Coordinates (NAD83)	Latitude	29° 57' 00.0" N+
	Longitude	089° 57' 28.0" W-
	Structure Type	TOWER-A free standing or guyed struct
	Overall Structure Height	294.4 meters
	Support Structure Height	242.8 meters
	Ground Elevation (AMSL)	1.6 meters
Antenna Data	Height of Radiation Center Above Ground Level	287 meters
	Height of Radiation Center Above Average Terrain	288.4 meters
	Height of Radiation Center Above Mean Sea Level	288.6 meters
	Effective Radiated Power	925 kW

## Antenna Technical Data

Section	Question	Response
Antenna Type	Antenna Type	Directional Custom
	Do you have an Antenna ID?	Yes
	Antenna ID	1001279
Antenna Manufacturer and Model	Manufacturer:	DIE
	Model	TUF-C4SP-10/32U-1-T
	Rotation	0 degrees
	Electrical Beam Tilt	0.5
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Horizontal
DTV and DTS: Elevation Pattern	Does the proposed antenna propose elevation radiation patterns that vary with azimuth for reasons other than the use of mechanical beam tilt?	No
	Uploaded file for elevation antenna (or radiation) pattern data	

### Directional Antenna Relative Field Values (Pre-rotated Pattern)

Degree	V <sub>A</sub> (Authorized Value)	Degree	V <sub>A</sub> (Authorized Value)	Degree	V <sub>A</sub> (Authorized Value)	Degree	V <sub>A</sub> (Authorized Value)
0	0.798	90	0.317	180	0.666	270	0.843
10	0.837	100	0.261	190	0.789	280	0.836
20	0.812	110	0.248	200	0.868	290	0.868
30	0.735	120	0.263	210	0.871	300	0.832
40	0.605	130	0.290	220	0.853	310	0.836
50	0.393	140	0.262	230	0.88	320	0.942
60	0.132	150	0.122	240	0.951	330	0.99
70	0.129	160	0.149	250	1.0	340	0.935
80	0.294	170	0.417	260	0.945	350	0.84

### Additional Azimuths

Degree	V <sub>A</sub>
86	0.33
134	0.302
12	0.838