



**STATEMENT OF JOHN E. HIDLE, P.E.  
IN SUPPORT OF AN APPLICATION FOR A  
MINOR MODIFICATION OF A  
LICENSED DIGITAL TELEVISION STATION  
BLCDDT-20090618ACD  
WSVN-DT - MIAMI, FLORIDA  
DTV - CH. 7 - 158 kW - 307.1 m HAAT**

Prepared for: Sunbeam Television Corporation

I am a Consulting Engineer, an employee in the firm of Carl T. Jones Corporation, with offices located in Springfield, Virginia. My education and experience are a matter of record with the Federal Communications Commission. I am a Professional Engineer in the Commonwealth of Virginia, License No. 7418, and in the State of New York, License No. 63418.

**GENERAL**

This office has been authorized by Sunbeam Television Corporation, licensee of WSVN(TV), Miami, Florida, and of post-transition digital Channel 7, both allotted to the Miami market, to prepare this statement, FCC Form 301, Section III-D, and the associated exhibits in support of an application for a minor modification of its post-transition licensed facility, BLCDDT-20090618ACD. The licensee proposes to alter its authorized post-transition DTV facility by relocating the facility to a new tower support structure located nearby (0.34 km), and install a new elliptically polarized directional antenna. The new tower will be shared with other stations, and the new antenna will be top-mounted. The relocation results in a different Height Above Average Terrain (HAAT) of 307.1 meters, and an increase in Effective Radiated Power (ERP) to 158 kW. No other changes are proposed.

### **PROPOSED DIRECTIONAL ANTENNA**

WSVN-DT proposes to install a new Dielectric antenna, Model No. THV-10AL/VP P210(7) elliptically polarized directional antenna. The manufacturer's horizontal azimuth relative field pattern in the horizontal plane is shown in Exhibit 1 and tabulated in Exhibit 2. The horizontal azimuth relative field pattern in the vertical plane is shown in Exhibit 3. The manufacturer's elevation pattern, showing the antenna's relative field characteristics above and below the horizontal plane, is shown in Exhibits 4 and 5, and is tabulated in Exhibit 6.

### **PREDICTED COVERAGE CONTOURS**

The predicted coverage contours were calculated in accordance with the method described in Section 73.684 of the Rules, utilizing the appropriate F(50,90) propagation curves (47 CFR Section 73.699, Figure 9), power, and antenna height above average terrain as determined for each profile radial. The average terrain on the eight cardinal radials from 3 kilometers to 16 kilometers from the site, was determined using the National Geophysical Data Center Thirty Second Point Database (TPG-0050) as prescribed in the FCC Rules. The antenna site elevation and coordinates were determined from FCC antenna registration data. Exhibit 7 displays the predicted DTV Noise Limited (36 dBu) contour and the predicted principal community (43 dBu) contour. The predicted 43 dBu contour, as shown, entirely encompasses the principal community of license, Miami, Florida.

## **ALLOCATION CONSIDERATIONS**

### **DTV Allocation Considerations**

A study was performed utilizing the Commission's application processing software to determine compliance with the post-transition limitations contained in §73.616 of the Commission's rules. Results indicate that the instant proposal to increase WSVN-DT's ERP from 31 kW to 158 kW is predicted to cause no unacceptable level (0.5%) of new interference to the populations served by any DTV station, expansion construction permit or post-transition allotment.

### **Class A Television Allocation Considerations**

As required in Section 73.616(f) of the FCC's Rules, a study was performed, using the FCC's application processing software. The study revealed only one predicted contour overlap, with co-channel Class A LPTV station WBSP-CA, Naples, Florida, BPTVA-20030418AAE. However, the Longley-Rice section of the study results determined that the "Proposal causes no interference". The instant application is, therefore, considered to be in compliance with Section 73.616(f). The study results indicate that no prohibited contour overlap exists with any other Class A LPTV stations. Therefore, no Class A station is impermissibly affected by the instant proposal.

## **BLANKETING AND INTERMODULATION INTERFERENCE**

A number of broadcast and non-broadcast facilities are located within 10 km of the proposed WSVN-DT transmitter/antenna site. The applicant recognizes its responsibility to remedy complaints of interference which might result from this proposal.

## **RADIO FREQUENCY IMPACT**

Effective October 15, 1997 the FCC adopted new guidelines and procedures for evaluating environmental effects of radio frequency (RF) emissions. The guidelines are generally based on recommendations by the National Council on Radiation Protection and Measurements (NCRP) in NCRP Report No. 86 (1986) and by the American National Standards Institute and the Institute of Electrical and Electronic Engineers, LLC (IEEE) in ANSI/IEEE C95.1-1992 (IEEE C95.1-1991). The guidelines establish a maximum permissible exposure (MPE) level for occupational or "controlled" situations that apply in cases that affect the general public. The FCC Office of Engineering and Technology's technical bulletin No. 65 entitled, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields" (DA 04-319, February 6, 2004), provides assistance in the determination of whether FCC-regulated transmitting facilities, operations or devices comply with guideline limits for human exposure to radio frequency electromagnetic fields as adopted by the Commission in 1996. Bulletin No. 65 provides the technical data required to evaluate compliance with the FCC's policies and guidelines.

The Maximum Permitted Exposure (MPE) level for broadcast facilities that operate on a frequency between 30 MHz and 300 MHz is 0.2 milliwatts per centimeter squared ( $\text{mW}/\text{cm}^2$ ) for an "uncontrolled" environment, and is 1.0 milliwatts per centimeter squared ( $\text{mW}/\text{cm}^2$ ) for a "controlled" environment. The MPE level for broadcast facilities that operate on a frequency between 300 MHz and 1500 MHz, primarily UHF TV stations, is determined for an "uncontrolled" environment by dividing the operating frequency in MHz

by 1500, and is similarly determined for a "controlled" environment by dividing the operating frequency in MHz by 300. The predicted emissions of WSVN-DT must be considered, along with the predicted emissions from other proposed stations at the site, and within 315 meters of the site. For WSVN-DT, which will operate on DTV Channel 7 (174-180 MHz), the MPE is 0.2 milliwatts per centimeter squared ( $\text{mW}/\text{cm}^2$ ) in an "uncontrolled" environment and  $1.0 \text{ mW}/\text{cm}^2$  in a "controlled" environment. The proposed WSVN-DT facility will operate with a maximum ERP of 158 kW using an elliptically polarized transmitting antenna at a centerline height of 307 meters above ground level (AGL). Considering a very conservative vertical plane relative field factor of 0.3, the WSVN-DT facility is predicted to produce a power density at two meters above ground level of  $0.01021 \text{ mW}/\text{cm}^2$ , which is 5.11% of the FCC guideline value for "uncontrolled" environments, and 0.022% of the FCC guideline value for "controlled" environments (see Appendix A). The total percentage of the ANSI value including all stations at the proposed site is 18.40% of the limit for "uncontrolled" environments, and 3.680% of the limit for "controlled" environments.

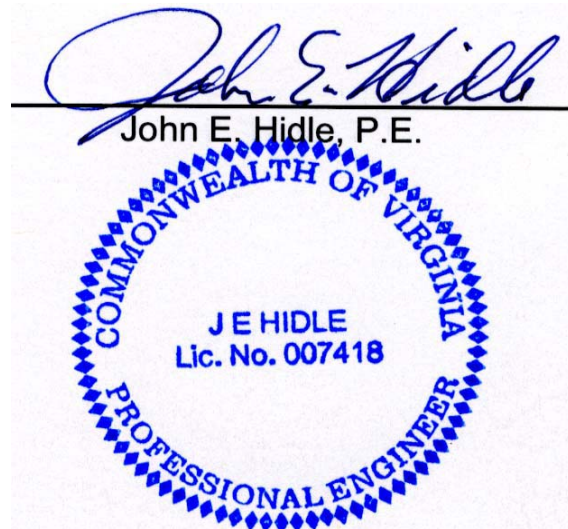
### **OCCUPATIONAL SAFETY**

The licensee of WSVN-DT is committed to the protection of station personnel and/or tower contractors working in the vicinity of the proposed WSVN-DT antenna. The applicant is committed to reducing power and/or ceasing operation during times of service or maintenance of the transmission systems, as necessary, to protect personnel.

**SUMMARY**

It is submitted that the instant application for a minor modification of license for WSVN-DT, seeking to relocate its transmission facility to a new tower structure nearby, install a new elliptically polarized directional antenna, and increase its ERP to 158 kW and its HAAT to 307.1 meters, as described herein, complies with the Rules, Regulations and Policies of the Federal Communications Commission. This statement, FCC Form 301, Section III-D, and attached exhibits were prepared by me, or under my direct supervision, and are believed to be true and correct to the best of my knowledge and belief.

DATED: June 19, 2009





Proposal Number

**C-01852**

**Exhibit 1**

Date

**24-Aug-07**

Call Letters

**WSVN-DT**

Channel

**7**

Location

**Miami, FL**

Customer

Antenna Type

**THV-10A7/VP P210**

## AZIMUTH PATTERN

Gain

**2.00**

**( 3.01 dB)**

Frequency

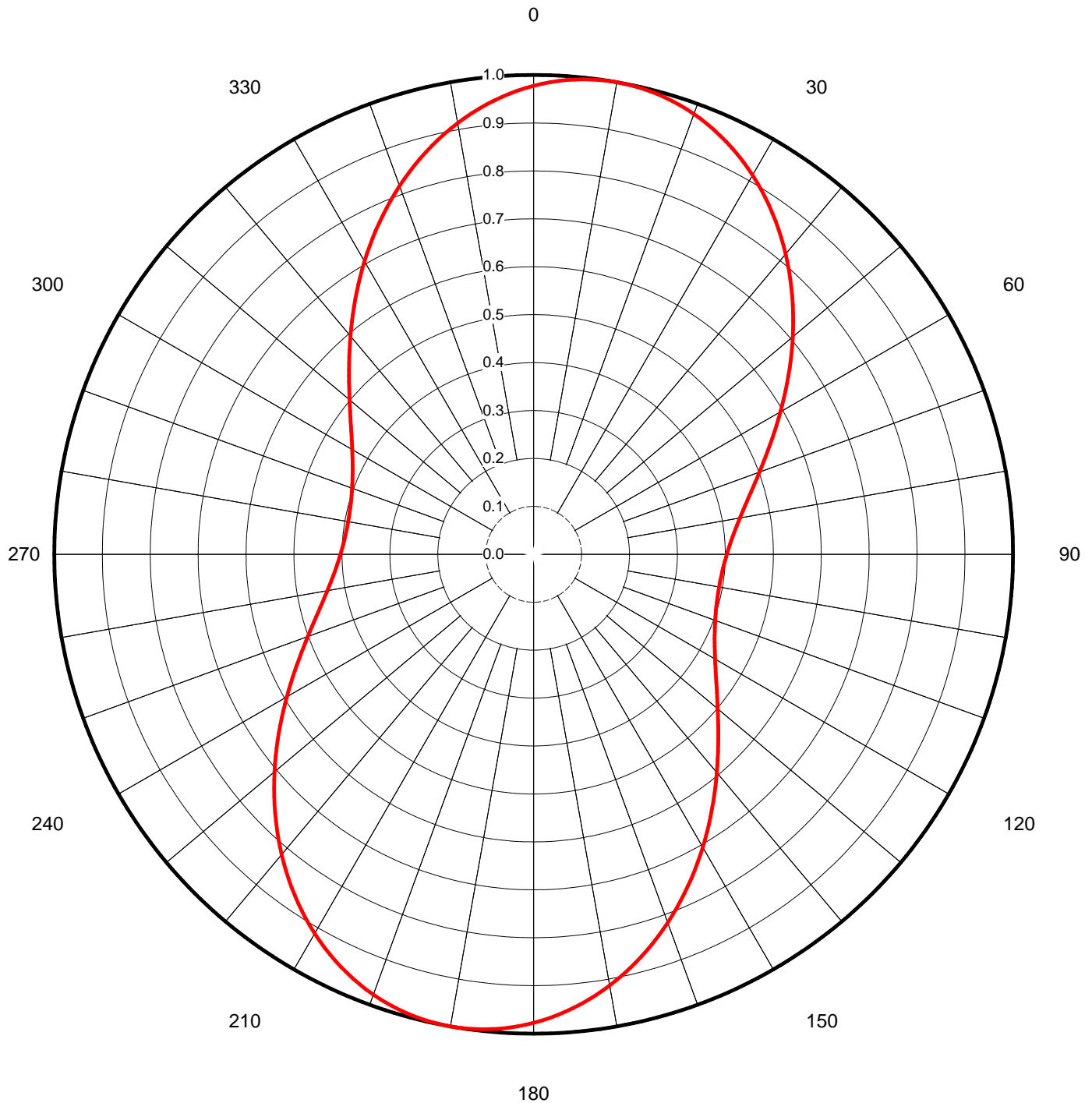
**177.00 MHz**

Calculated / Measured

**Calculated**

Drawing #

**THV-P200-HP**





Proposal Number

**C-01852**

Date

**24-Aug-07**

Call Letters

**WSVN-DT**

Channel

**7**

Location

**Miami, FL**

Customer

Antenna Type

**THV-10A7/VP P210****TABULATION OF AZIMUTH PATTERN**Azimuth Pattern Drawing #: **THV-P200-HP**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.977	45	0.763	90	0.403	135	0.545	180	0.977	225	0.763	270	0.403	315	0.545
1	0.982	46	0.751	91	0.401	136	0.554	181	0.982	226	0.751	271	0.401	316	0.554
2	0.986	47	0.740	92	0.399	137	0.564	182	0.986	227	0.740	272	0.399	317	0.564
3	0.989	48	0.728	93	0.398	138	0.574	183	0.989	228	0.728	273	0.398	318	0.574
4	0.992	49	0.717	94	0.396	139	0.584	184	0.992	229	0.717	274	0.396	319	0.584
5	0.994	50	0.706	95	0.395	140	0.594	185	0.994	230	0.706	275	0.395	320	0.594
6	0.996	51	0.694	96	0.395	141	0.605	186	0.996	231	0.694	276	0.395	321	0.605
7	0.998	52	0.683	97	0.394	142	0.616	187	0.998	232	0.683	277	0.394	322	0.616
8	0.999	53	0.671	98	0.393	143	0.627	188	0.999	233	0.671	278	0.393	323	0.627
9	1.000	54	0.660	99	0.393	144	0.638	189	1.000	234	0.660	279	0.393	324	0.638
10	1.000	55	0.649	100	0.393	145	0.649	190	1.000	235	0.649	280	0.393	325	0.649
11	1.000	56	0.638	101	0.393	146	0.660	191	1.000	236	0.638	281	0.393	326	0.660
12	0.999	57	0.627	102	0.393	147	0.671	192	0.999	237	0.627	282	0.393	327	0.671
13	0.998	58	0.616	103	0.394	148	0.683	193	0.998	238	0.616	283	0.394	328	0.683
14	0.996	59	0.605	104	0.395	149	0.694	194	0.996	239	0.605	284	0.395	329	0.694
15	0.994	60	0.594	105	0.395	150	0.706	195	0.994	240	0.594	285	0.395	330	0.706
16	0.992	61	0.584	106	0.396	151	0.717	196	0.992	241	0.584	286	0.396	331	0.717
17	0.989	62	0.574	107	0.398	152	0.728	197	0.989	242	0.574	287	0.398	332	0.728
18	0.986	63	0.564	108	0.399	153	0.740	198	0.986	243	0.564	288	0.399	333	0.740
19	0.982	64	0.554	109	0.401	154	0.751	199	0.982	244	0.554	289	0.401	334	0.751
20	0.977	65	0.545	110	0.403	155	0.763	200	0.977	245	0.545	290	0.403	335	0.763
21	0.973	66	0.535	111	0.405	156	0.774	201	0.973	246	0.535	291	0.405	336	0.774
22	0.968	67	0.527	112	0.408	157	0.785	202	0.968	247	0.527	292	0.408	337	0.785
23	0.962	68	0.518	113	0.410	158	0.796	203	0.962	248	0.518	293	0.410	338	0.796
24	0.956	69	0.509	114	0.413	159	0.807	204	0.956	249	0.509	294	0.413	339	0.807
25	0.950	70	0.501	115	0.417	160	0.818	205	0.950	250	0.501	295	0.417	340	0.818
26	0.943	71	0.493	116	0.420	161	0.828	206	0.943	251	0.493	296	0.420	341	0.828
27	0.936	72	0.486	117	0.424	162	0.839	207	0.936	252	0.486	297	0.424	342	0.839
28	0.929	73	0.479	118	0.428	163	0.849	208	0.929	253	0.479	298	0.428	343	0.849
29	0.921	74	0.472	119	0.432	164	0.859	209	0.921	254	0.472	299	0.432	344	0.859
30	0.913	75	0.465	120	0.437	165	0.869	210	0.913	255	0.465	300	0.437	345	0.869
31	0.905	76	0.459	121	0.442	166	0.878	211	0.905	256	0.459	301	0.442	346	0.878
32	0.896	77	0.453	122	0.447	167	0.887	212	0.896	257	0.453	302	0.447	347	0.887
33	0.887	78	0.447	123	0.453	168	0.896	213	0.887	258	0.447	303	0.453	348	0.896
34	0.878	79	0.442	124	0.459	169	0.905	214	0.878	259	0.442	304	0.459	349	0.905
35	0.869	80	0.437	125	0.465	170	0.913	215	0.869	260	0.437	305	0.465	350	0.913
36	0.859	81	0.432	126	0.472	171	0.921	216	0.859	261	0.432	306	0.472	351	0.921
37	0.849	82	0.428	127	0.479	172	0.929	217	0.849	262	0.428	307	0.479	352	0.929
38	0.839	83	0.424	128	0.486	173	0.936	218	0.839	263	0.424	308	0.486	353	0.936
39	0.828	84	0.420	129	0.493	174	0.943	219	0.828	264	0.420	309	0.493	354	0.943
40	0.818	85	0.417	130	0.501	175	0.950	220	0.818	265	0.417	310	0.501	355	0.950
41	0.807	86	0.413	131	0.509	176	0.956	221	0.807	266	0.413	311	0.509	356	0.956
42	0.796	87	0.410	132	0.518	177	0.962	222	0.796	267	0.410	312	0.518	357	0.962
43	0.785	88	0.408	133	0.527	178	0.968	223	0.785	268	0.408	313	0.527	358	0.968
44	0.774	89	0.405	134	0.535	179	0.973	224	0.774	269	0.405	314	0.535	359	0.973

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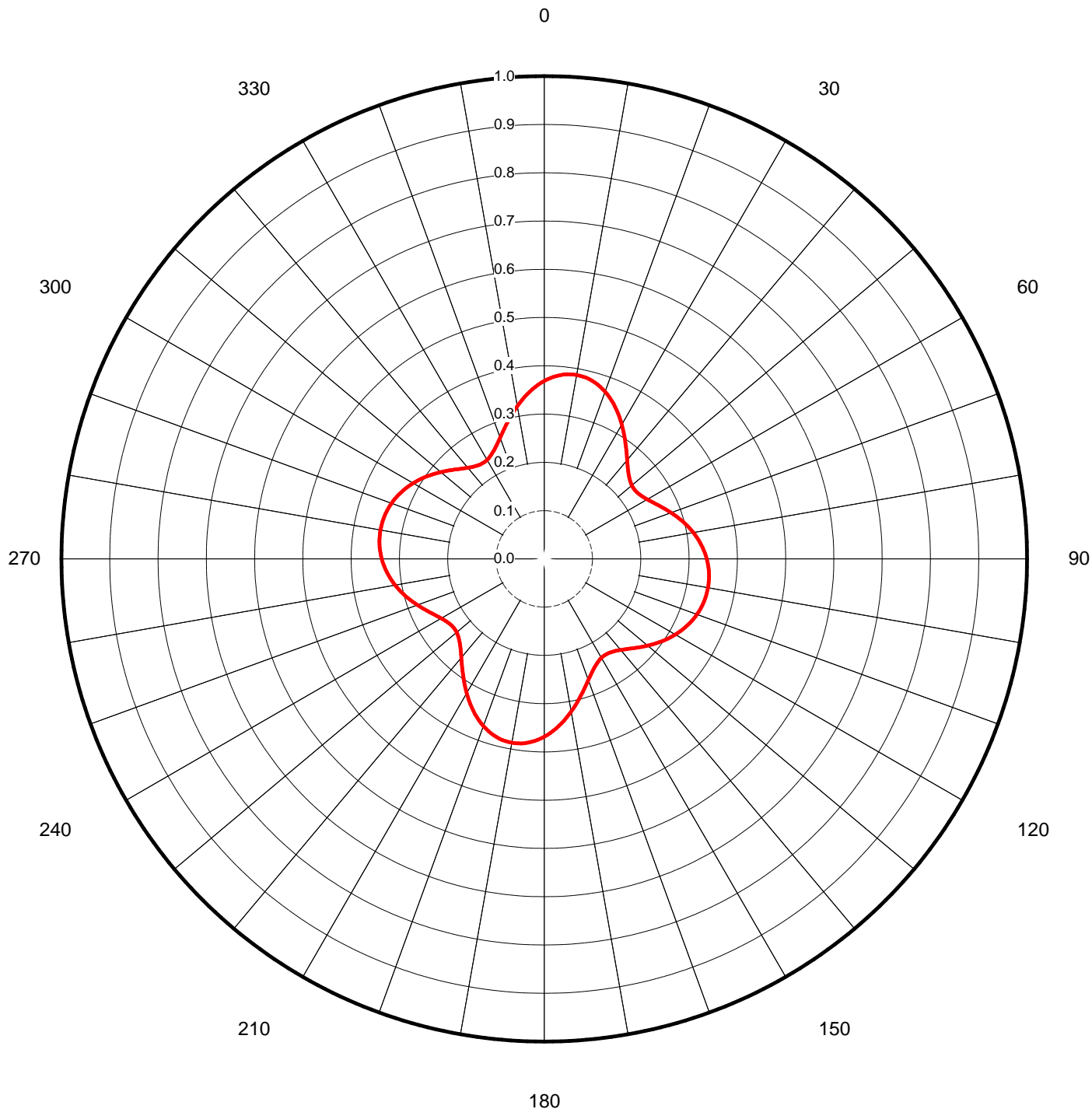


Proposal Number	<b>C-01852</b>	<b>Exhibit 3</b>
Date	<b>24-Aug-07</b>	
Call Letters	<b>WSVN-DT</b>	Channel <b>7</b>
Location	<b>Miami, FL</b>	
Customer		
Antenna Type	<b>THV-10A7/VP P210</b>	

## AZIMUTH PATTERN/VERTICAL POLARIZATION

Gain	<b>1.60</b>	<b>( 2.04 dB)</b>
Calculated / Measured		<b>Calculated</b>

Frequency	<b>177.00 MHz</b>
Drawing #	<b>THV-P160-VP</b>

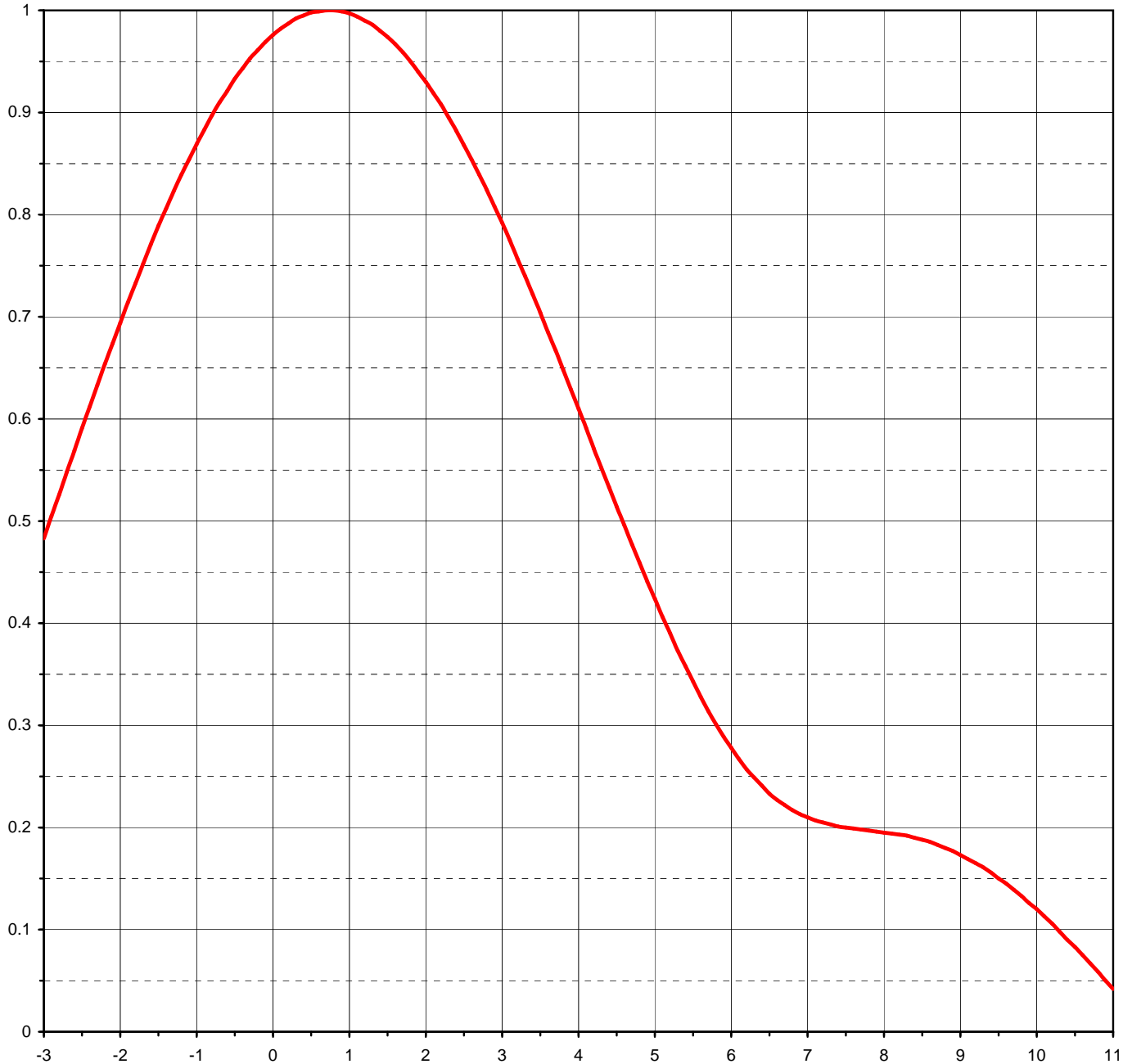




Proposal Number	<b>C-01852</b>	<b>Exhibit 4</b>
Date	<b>24-Aug-07</b>	
Call Letters	<b>WSVN-DT</b>	Channel <b>7</b>
Location	<b>Miami, FL</b>	
Customer		
Antenna Type	<b>THV-10A7/VP P210</b>	

## ELEVATION PATTERN

RMS Gain at Main Lobe	<b>10.00 ( 10.00 dB )</b>	Beam Tilt	<b>0.75 deg</b>
RMS Gain at Horizontal	<b>9.50 ( 9.78 dB )</b>	Frequency	<b>177.00 MHz</b>
Calculated / Measured	<b>Calculated</b>	Drawing #	<b>10V100075</b>



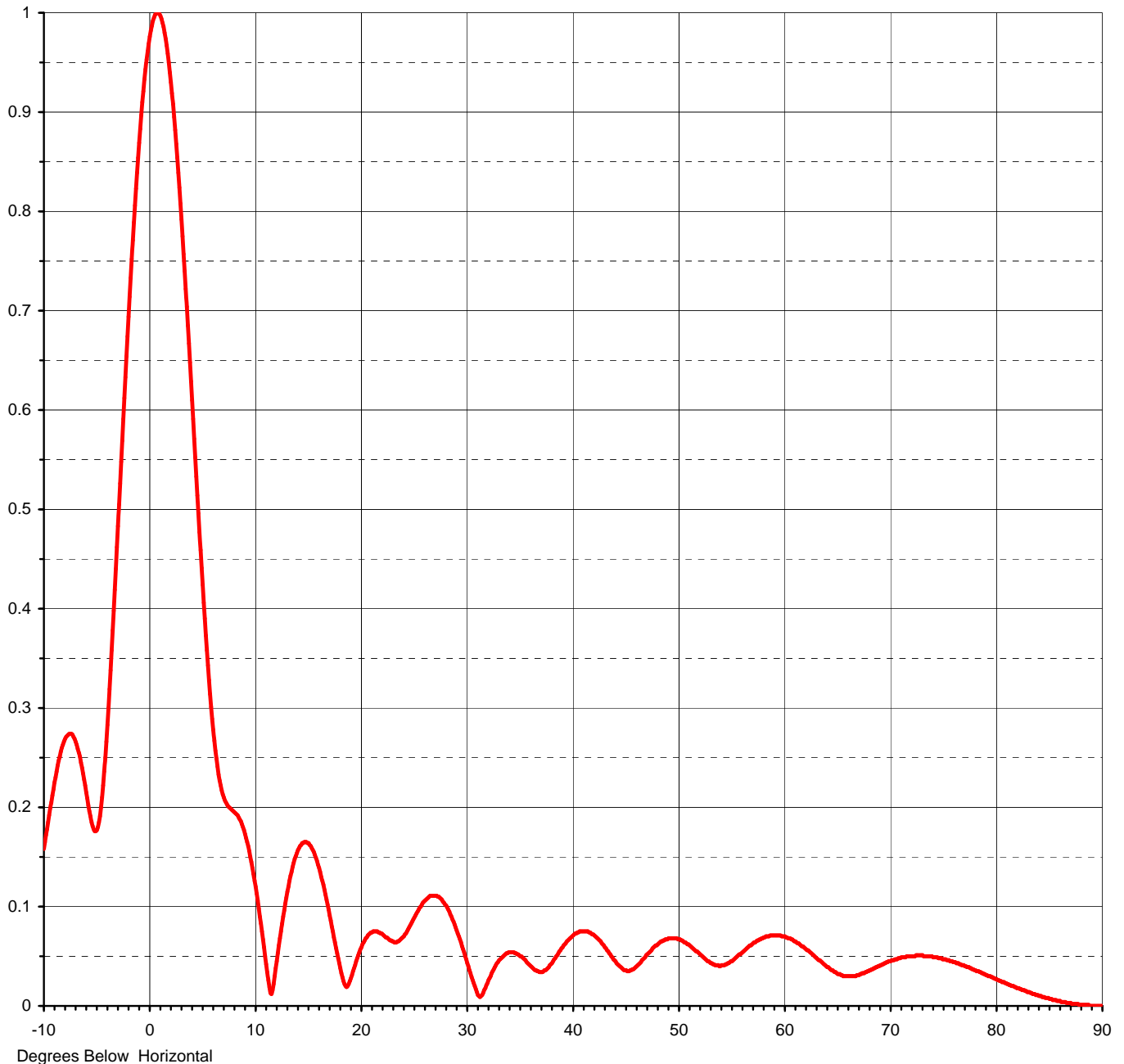
Degrees Below Horizontal



Proposal Number	<b>C-01852</b>	<b>Exhibit 5</b>
Date	<b>24-Aug-07</b>	
Call Letters	<b>WSVN-DT</b>	Channel <b>7</b>
Location	<b>Miami, FL</b>	
Customer		
Antenna Type	<b>THV-10A7/VP P210</b>	

## ELEVATION PATTERN

RMS Gain at Main Lobe	<b>10.00 ( 10.00 dB )</b>	Beam Tilt	<b>0.75 deg</b>
RMS Gain at Horizontal	<b>9.50 ( 9.78 dB )</b>	Frequency	<b>177.00 MHz</b>
Calculated / Measured	<b>Calculated</b>	Drawing #	<b>10V100075-90</b>





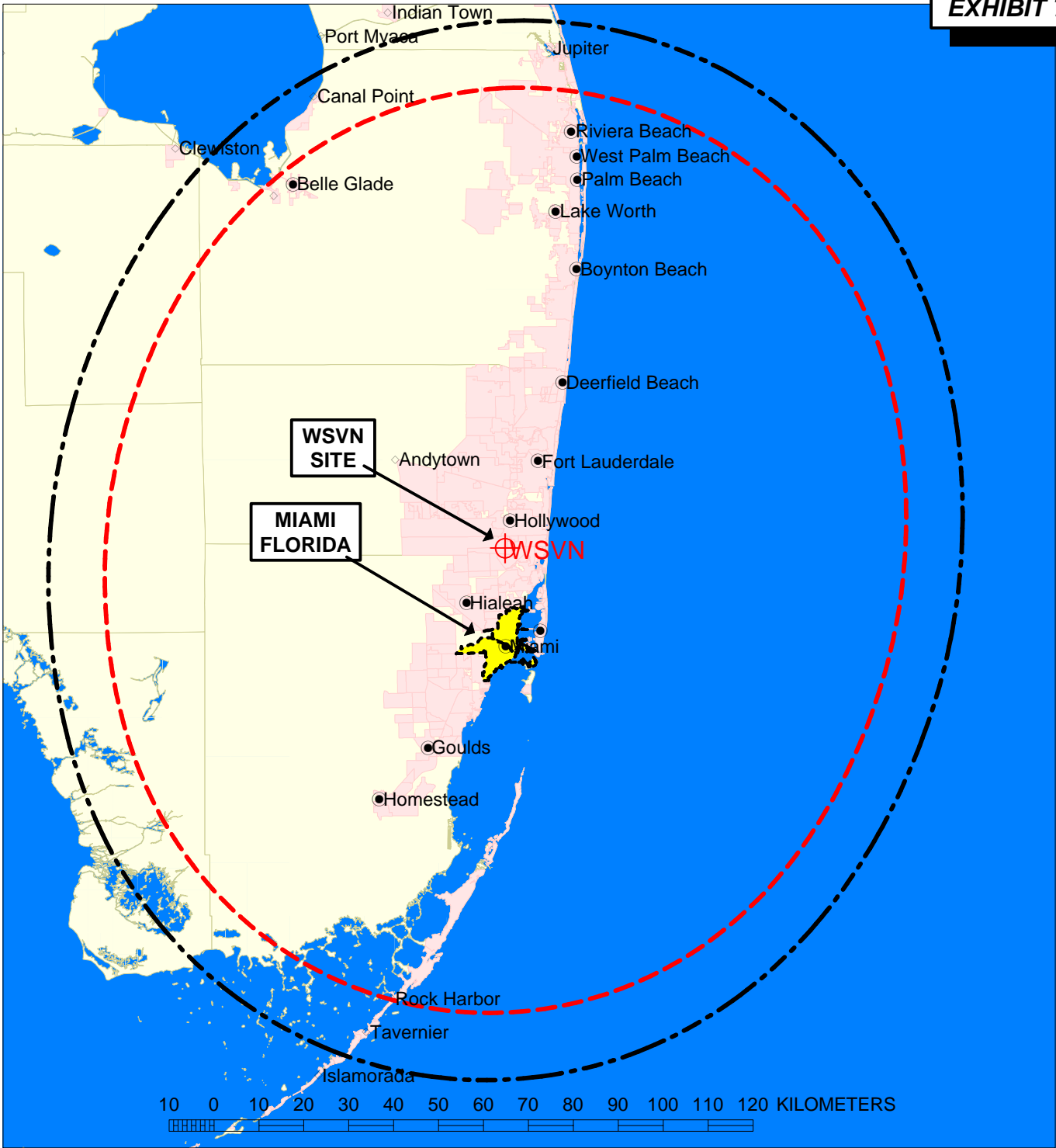
Proposal Number **C-01852** Exhibit **6**  
Date **24-Aug-07**  
Call Letters **WSVN-DT** Channel **7**  
Location **Miami, FL**  
Customer  
Antenna Type **THV-10A7/VP P210**

## TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **10V100075-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.158	2.4	0.882	10.6	0.083	30.5	0.029	51.0	0.062	71.5	0.050
-9.5	0.192	2.6	0.854	10.8	0.067	31.0	0.014	51.5	0.057	72.0	0.050
-9.0	0.225	2.8	0.824	11.0	0.050	31.5	0.011	52.0	0.053	72.5	0.051
-8.5	0.251	3.0	0.792	11.5	0.013	32.0	0.023	52.5	0.048	73.0	0.051
-8.0	0.269	3.2	0.757	12.0	0.038	32.5	0.035	53.0	0.044	73.5	0.050
-7.5	0.274	3.4	0.722	12.5	0.075	33.0	0.044	53.5	0.041	74.0	0.049
-7.0	0.266	3.6	0.685	13.0	0.109	33.5	0.050	54.0	0.040	74.5	0.048
-6.5	0.245	3.8	0.648	13.5	0.135	34.0	0.054	54.5	0.042	75.0	0.047
-6.0	0.215	4.0	0.610	14.0	0.154	34.5	0.054	55.0	0.045	75.5	0.046
-5.5	0.185	4.2	0.571	14.5	0.164	35.0	0.051	55.5	0.049	76.0	0.044
-5.0	0.177	4.4	0.533	15.0	0.164	35.5	0.047	56.0	0.053	76.5	0.042
-4.5	0.210	4.6	0.496	15.5	0.157	36.0	0.041	56.5	0.058	77.0	0.040
-4.0	0.283	4.8	0.459	16.0	0.142	36.5	0.036	57.0	0.062	77.5	0.038
-3.5	0.378	5.0	0.424	16.5	0.122	37.0	0.034	57.5	0.066	78.0	0.036
-3.0	0.483	5.2	0.390	17.0	0.097	37.5	0.036	58.0	0.068	78.5	0.034
-2.8	0.526	5.4	0.358	17.5	0.069	38.0	0.042	58.5	0.070	79.0	0.031
-2.6	0.569	5.6	0.328	18.0	0.043	38.5	0.050	59.0	0.071	79.5	0.029
-2.4	0.612	5.8	0.301	18.5	0.022	39.0	0.058	59.5	0.071	80.0	0.027
-2.2	0.654	6.0	0.278	19.0	0.025	39.5	0.065	60.0	0.070	80.5	0.024
-2.0	0.694	6.2	0.257	19.5	0.041	40.0	0.070	60.5	0.068	81.0	0.022
-1.8	0.733	6.4	0.241	20.0	0.057	40.5	0.074	61.0	0.065	81.5	0.020
-1.6	0.771	6.6	0.227	20.5	0.068	41.0	0.075	61.5	0.062	82.0	0.018
-1.4	0.806	6.8	0.217	21.0	0.074	41.5	0.075	62.0	0.058	82.5	0.016
-1.2	0.839	7.0	0.210	21.5	0.075	42.0	0.072	62.5	0.054	83.0	0.014
-1.0	0.869	7.2	0.205	22.0	0.073	42.5	0.067	63.0	0.049	83.5	0.012
-0.8	0.897	7.4	0.201	22.5	0.069	43.0	0.061	63.5	0.045	84.0	0.010
-0.6	0.921	7.6	0.199	23.0	0.065	43.5	0.053	64.0	0.040	84.5	0.009
-0.4	0.943	7.8	0.197	23.5	0.065	44.0	0.046	64.5	0.036	85.0	0.007
-0.2	0.961	8.0	0.195	24.0	0.069	44.5	0.040	65.0	0.032	85.5	0.006
0.0	0.976	8.2	0.193	24.5	0.077	45.0	0.036	65.5	0.030	86.0	0.005
0.2	0.987	8.4	0.190	25.0	0.087	45.5	0.036	66.0	0.030	86.5	0.004
0.4	0.995	8.6	0.186	25.5	0.097	46.0	0.039	66.5	0.030	87.0	0.003
0.6	0.999	8.8	0.180	26.0	0.105	46.5	0.044	67.0	0.031	87.5	0.002
0.8	1.000	9.0	0.173	26.5	0.110	47.0	0.051	67.5	0.033	88.0	0.001
1.0	0.997	9.2	0.165	27.0	0.111	47.5	0.056	68.0	0.036	88.5	0.001
1.2	0.990	9.4	0.156	27.5	0.109	48.0	0.061	68.5	0.038	89.0	0.000
1.4	0.980	9.6	0.145	28.0	0.102	48.5	0.065	69.0	0.041	89.5	0.000
1.6	0.967	9.8	0.139	28.5	0.092	49.0	0.067	69.5	0.043	90.0	0.000
1.8	0.950	10.0	0.126	29.0	0.079	49.5	0.068	70.0	0.045		
2.0	0.930	10.2	0.113	29.5	0.064	50.0	0.067	70.5	0.047		
2.2	0.908	10.4	0.098	30.0	0.047	50.5	0.065	71.0	0.049		

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**PREDICTED COVERAGE CONTOURS**  
**WSVN-DT, MIAMI, FLORIDA**  
**DTV - CH 7 - 158 kW ERP - 307.1meters HAAT**

**PREDICTED 43 dBu F(50,90)**  
**158 kW - 307.1 meters HAAT**  
**2000 Population = 4,936,533**

**PREDICTED 36 dBu F(50,90)**  
**158 kW - 307.1 meters HAAT**  
**2000 Population = 5,032,734**

**SUMMARY OF RADIOFREQUENCY  
RADIATION STUDY**  
WSVN-DT, MIAMI, FLORIDA  
CHANNEL 7, 158 kW ERP, 307.1 m HAAT  
JUNE, 2009

<u>CALL</u>	<u>SERVICE</u>	<u>CHANNEL</u>	<u>FREQUENCY</u>	<u>POLARIZATION</u>	<u>ANTENNA HEIGHT ** mAGL</u>	<u>ERP (kW)</u>	<u>VERT. RELATIVE FIELD FACTOR</u>	<u>PREDICTED POWER DENSITY (mW/cm<sup>2</sup>)</u>	<u>FCC UNCONTROLLED LIMIT (mW/cm<sup>2</sup>)</u>	<u>PERCENT OF UNCONTROLLED LIMIT</u>
WSVN-DT	DT	7	177	H & V	305	158.000	0.300	0.01021	0.200	5.11%
WPLG-DT	DT	10	195	H & V	306.9	156.000	0.300	0.00996	0.200	4.98%
WBFS-DT	DT	32	581	H	305.5	1000.000	0.300	0.03221	0.387	8.32%
<b>TOTAL PERCENTAGE OF ANSI VALUE=</b>										<b>18.40%</b>

*\*\* The antenna heights indicated above are 2 meters less than the actual antenna heights so that the predicted power densities consider the 2 meter human height allowance.  
This evaluation includes facilities collocated at the site.*

**CARL T. JONES**  
**CORPORATION**