

**STATEMENT OF JOHN E. HIDLE, JR.  
IN SUPPORT OF AN APPLICATION FOR  
MINOR MODIFICATION OF CONSTRUCTION PERMIT  
FILE NUMBER BPCDT-19991028AAS  
KBSI-DT - CAPE GIRARDEAU, MISSOURI  
DT - CH. 22 – 435 kW ERP – 543.0 M HAAT**

**Prepared for: KBSI LICENSEE, L.P.**

**JUNE, 2004**

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**Prepared for: KBSI LICENSEE, L.P.**

I am an 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.

**GENERAL**

This office has been authorized by KBSI Licensee, L.P., permittee of KBSI-DT, channel 22, Cape Girardeau, Missouri, to prepare this statement, FCC Form 301, Sections III and III-D, and the associated exhibits in support of a Minor Modification of Construction Permit. The outstanding Construction Permit, file number BPCDT-19991028AAS,

proposed to construct the transmission facilities of KBSI-DT at its allotted site, located at 37° 24' 23" North Latitude, 89° 33' 44" West Longitude, Antenna Structure Registration Number 1005390, utilizing a Dielectric model TFU-26GTH-R 3S220 DC directional transmitting antenna. It is proposed herein to modify the digital facilities of KBSI-DT reflected in the outstanding Construction Permit to utilize a common, directional transmitting antenna with its associated analog facility, KBSI(TV) channel 23. The associated proposal for Minor Modification of the KBSI(TV) license is being filed simultaneously under separate cover. Due to the technical requirements of antenna sharing, it is additionally proposed herein to modify the existing directional azimuth pattern of KBSI-DT as reflected in the current Construction Permit, and to reduce the effective radiated power (ERP) from 1000 kW to 435 kW. The other major aspects of the permitted KBSI-DT facility, including radiation centerline above mean sea level (RCL-AMSL), and height above average terrain (HAAT) remain essentially unchanged.

#### **PROPOSED DIRECTIONAL ANTENNA**

The permittee of KBSI-DT proposes herein to utilize an antenna with a "skull" directional pattern, a Dielectric model TFU-26GTH-R 3S220 DC. It is intended for this antenna, which can be shared by multiple UHF television stations, to accommodate both the analog and digital facilities of KBSI(TV). The antenna will be top mounted on the tower located at 37° 24' 23" North Latitude, 89° 33' 44" West Longitude, Antenna Structure

Registration Number 1005390. A vertical plan antenna sketch, detailing the position of the antenna on the tower is attached as Exhibit 1. The antenna manufacturer's horizontal plane azimuth radiation pattern, illustrating the proposed antenna's directional pattern characteristics is shown in Exhibit 2, and tabulated in Exhibit 3, and the vertical plane radiation pattern, illustrating the proposed antenna's radiation characteristics above and below the horizontal plane, is shown in Exhibits 4A and 4B, and tabulated in Exhibit 5.

### **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), 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, the antenna site elevation and coordinates were determined from the National Geophysical Data Center Thirty Second Point Database (TPG-0050) as prescribed in the FCC Rules. The predicted principal community (48 dBu) contour completely encompasses the principal community of license, shown in Exhibit 6, as required by FCC Rules. The predicted 41 dBu protected coverage contour is also shown in Exhibit 6.

**MAXIMUM ALLOWABLE FACILITY**

The proposed facility of KBSI-DT is 435 kW ERP at 543 meters HAAT, and therefore exceeds the maximum DTV facility as calculated by the applicable method reflected in §73.622(f)(8)(ii) of the Rules. However, §73.622(f)(5) of the Rules indicates that licensees and permittees assigned a DTV channel in the initial DTV Table of Allotments may request an increase in either ERP or antenna HAAT up to that needed to provide the same geographic coverage area as the largest station within their market. As shown in Exhibit 7, the largest station in the Paducah, Kentucky - Cape Girardeau, Missouri, et. al. Designated Market Area (DMA) is WPSD-TV, channel 6, NTSC-analog, which operates at 100 kW ERP using a directional antenna with HAAT of 482 meters. The predicted geographic coverage area inside the WPSD-TV protected coverage area, as defined by the 47 dBu F(50,50) Grade B contour, is 44,930 km<sup>2</sup>. The predicted geographic coverage area inside the equivalent KBSI-DT protected coverage area proposed herein, as defined by the 41 dBu F(50,90) contour, is only 30,821 km<sup>2</sup>. Because the facility proposed herein is smaller than the largest station in its market, it is therefore in compliance with the Commission's Rules regarding the maximum allowable DTV facility.

## **ALLOCATION CONSIDERATIONS**

### **NTSC Allocation Considerations**

An allocation study was performed to ensure that the proposed DT facility is in compliance with the Commission's geographic separation rules contained in Section 73.610. The study shows that the facility proposed herein is in compliance with the Rules in regards to all authorized full service NTSC television facilities.

### **DTV Allocation Considerations**

An interference study was performed, using the Commission's application analysis program, TV\_Process, to ensure that the proposed facility is in compliance with the Commission's *de minimis* interference requirement contained in Section 73.623 of the Commission's rules. The study was evaluated to determine if the proposed modification of KBSI-DT is predicted to cause any level of new prohibited interference to other authorized DTV facilities. The study results indicate that the instant proposal is predicted to cause no unacceptable level of new interference to the populations served by any relevant DTV facility, and thereby is in compliance with the *de minimis* interference criteria contained in Section 73.623(c)(2) of the Commission's Rules.

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

As required in Section 73.613 of the FCC's Rules, as established in the Report and Order establishing Class A Television Service, released April 4, 2000, a study of interference contour overlap was performed, based on the KBSI-DT facility proposed herein, to establish compliance with the protection requirements contained therein. The results indicated that no prohibited contour overlap of any Class A television station is predicted to occur based on the instant proposed facility.

### **BLANKETING AND INTERMODULATION INTERFERENCE**

A number of broadcast and non-broadcast facilities are located within 10 km of the proposed KBSI-DT transmitter/antenna site. The applicant recognizes its responsibility to remedy complaints of interference created by this proposal in accordance with applicable Rules.

### **ENVIRONMENTAL CONSIDERATIONS**

#### **Radio Frequency Impact**

The Commission's guidelines and procedures for evaluating environmental effects of radio frequency (RF) emissions were adopted October 15, 1997. 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 provide 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" (Edition 97-01, August 1997), 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 contains the technical information necessary to evaluate compliance with the FCC's policies and guidelines.

The FCC's Maximum Permitted Exposure (MPE) level for "uncontrolled" environments is 0.2 milliwatts per centimeter squared ( $\text{mW}/\text{cm}^2$ ) when applied to broadcast facilities operating between 30 MHz and 300 MHz, and for broadcast facilities operating between 300 MHz and 1500 MHz, primarily UHF DT stations, is derived from the formula,  $(\text{frequency}/1500)$ . The MPE level for "controlled" environments is 1.0 milliwatts per centimeter squared ( $\text{mW}/\text{cm}^2$ ) for operations between 30 MHz and 300 MHz, and for broadcast stations operating between 300 MHz and 1500 MHz in a "controlled" environment is derived from the formula,  $(\text{frequency}/300)$ .

The predicted emissions of KBSI-DT channel 22 must be considered, along with the predicted emissions from other proposed and existing stations at the current site. For KBSI-DT, which will operate on channel 22 (521 MHz), the MPE level for "uncontrolled" environments is  $0.347 \text{ mW/cm}^2$ , and for "controlled" environments is  $1.735 \text{ mW/cm}^2$ .

The proposed KBSI-DT facility, channel 22, will operate with a maximum ERP of 435 kW from a horizontally polarized directional transmitting antenna with a centerline height of 468.6 meters above ground level (AGL). Considering a very conservative vertical plane relative field factor of 0.3, the KBSI-DT facility produces a predicted power density at two meters above ground level of  $0.00601 \text{ mW/cm}^2$ , which is 1.73% of the FCC guideline value for "uncontrolled" environments, and 0.346% of the FCC guideline value for "controlled" environments.

As shown in Appendix A, the total predicted percentage of the MPE value at KBSI's site, considering the cumulative predicted radiation of all of the stations which are located at the site, is only 35.64% of the limit for "uncontrolled" environments, and 7.128% of the limit for "controlled" environments. The site is therefore in compliance with the FCC's Maximum Permitted Exposure guidelines.

### **OCCUPATIONAL SAFETY**

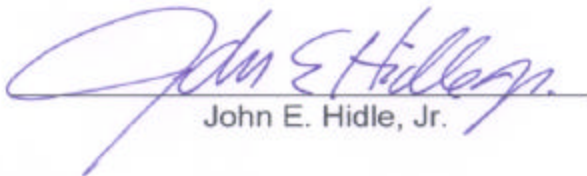
The permittee of KBSI-DT is committed to the protection of station personnel and/or tower contractors working in the vicinity of the KBSI-DT antenna, and is committed to

reducing power and/or ceasing operation during times of service or maintenance of the transmission systems, when necessary, to ensure protection to personnel. In light of the above, the proposed modification of the KBSI-DT facility should be categorically excluded from RF environmental processing under Section 1.1307(b) of the Commission's Rules.

**SUMMARY**

It is submitted that the proposal described herein complies with the Rules and Regulations of the Federal Communications Commission. This statement, FCC Form 301, Sections III and III-D, and the 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.

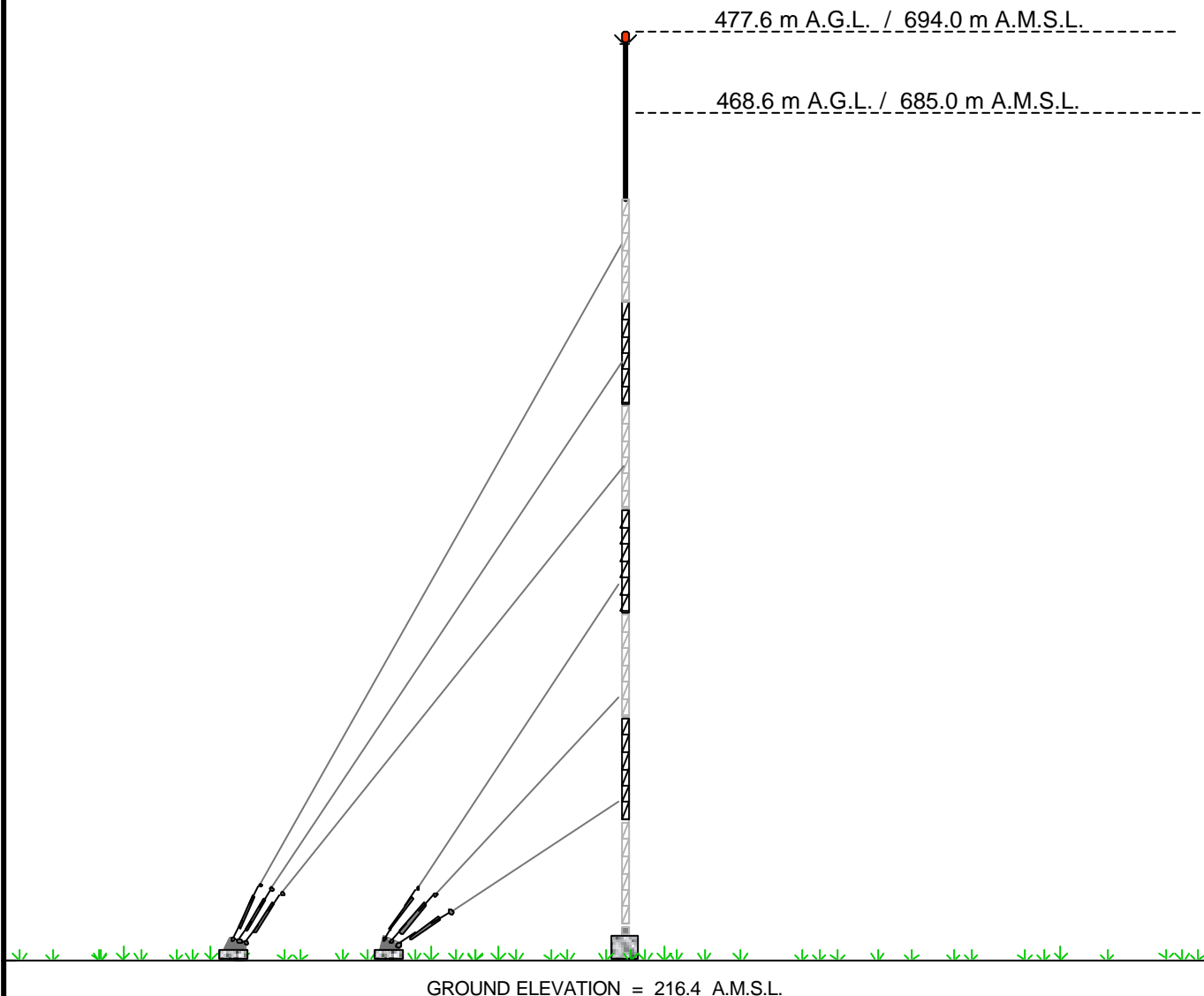
**Dated: June 15, 2004**



John E. Hidle, Jr.

COORDINATES NAD-27

NORTH LATITUDE: 47° 24' 23"  
WEST LONGITUDE: 89° 33' 44"

**VERTICAL PLAN ANTENNA SKETCH**

KBSI-DT - CAPE GIRARDEAU, MISSOURI

Ch. 22 - 435 kW ERP - 543 m HAAT

DIRECTIONAL ANTENNA

JUNE, 2004

**CARL T. JONES**  
CORPORATION

NOTE : NOT DRAWN TO SCALE



Proposal Number

**DCA-10196**

Exhibit 2

Date

**30-Apr-03**

Call Letters

**KBSI-DT**

Channel

**22**

Location

**Cape Girardeau, MO**

Customer

Antenna Type

**TFU-26GTH-R 3S220 DC**

## AZIMUTH PATTERN

Gain

**2.20**

**( 3.42 dB)**

Frequency

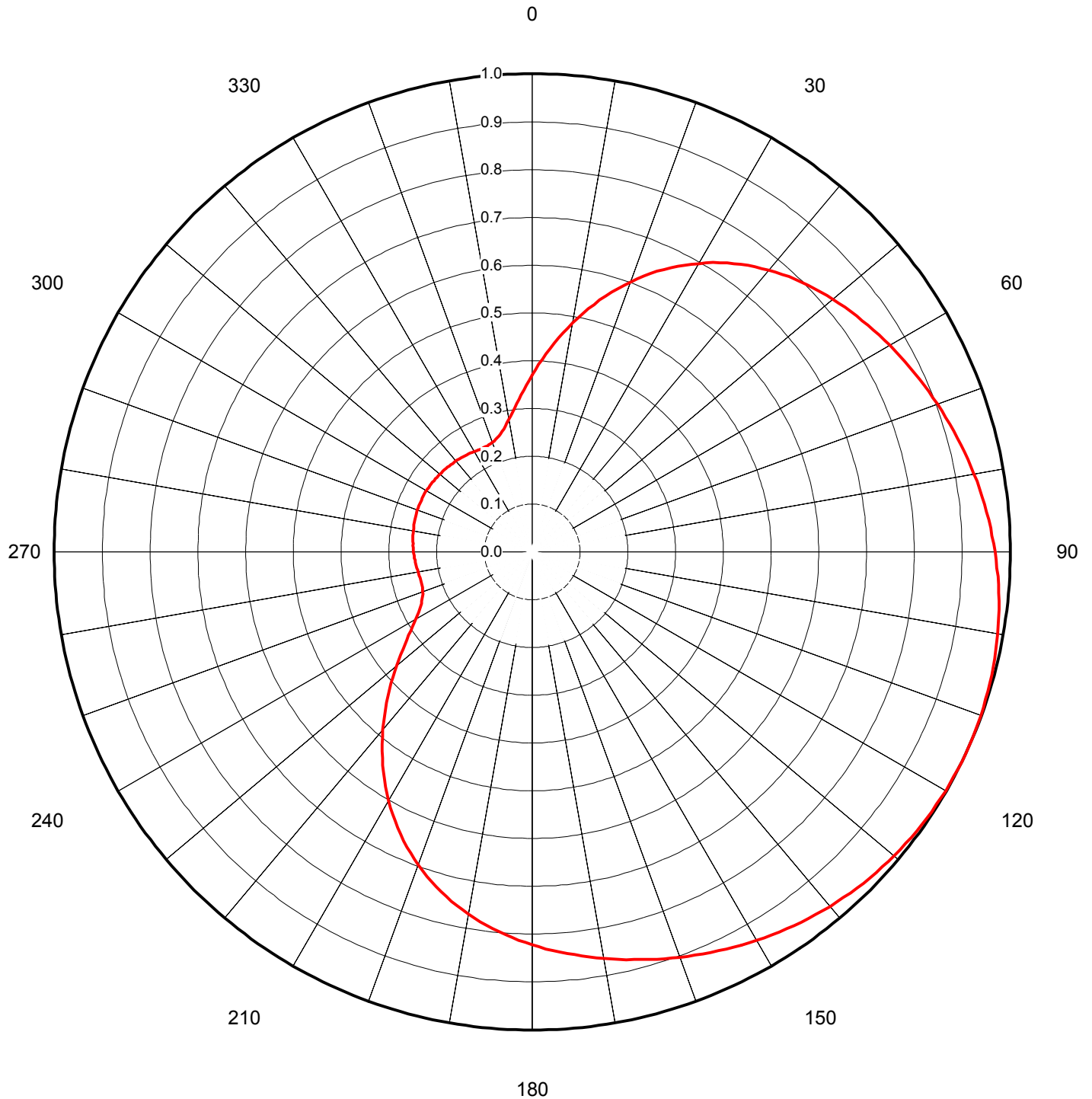
**521.00 MHz**

Calculated / Measured

**Calculated**

Drawing #

**TFU-3S220-23-22**





Proposal Number **DCA-10196** Exhibit 3  
 Date **30-Apr-03**  
 Call Letters **KBSI-DT** Channel **22**  
 Location **Cape Girardeau, MO**  
 Customer  
 Antenna Type **TFU-26GTH-R 3S220 DC**

## TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **TFU-3S220-23-22**

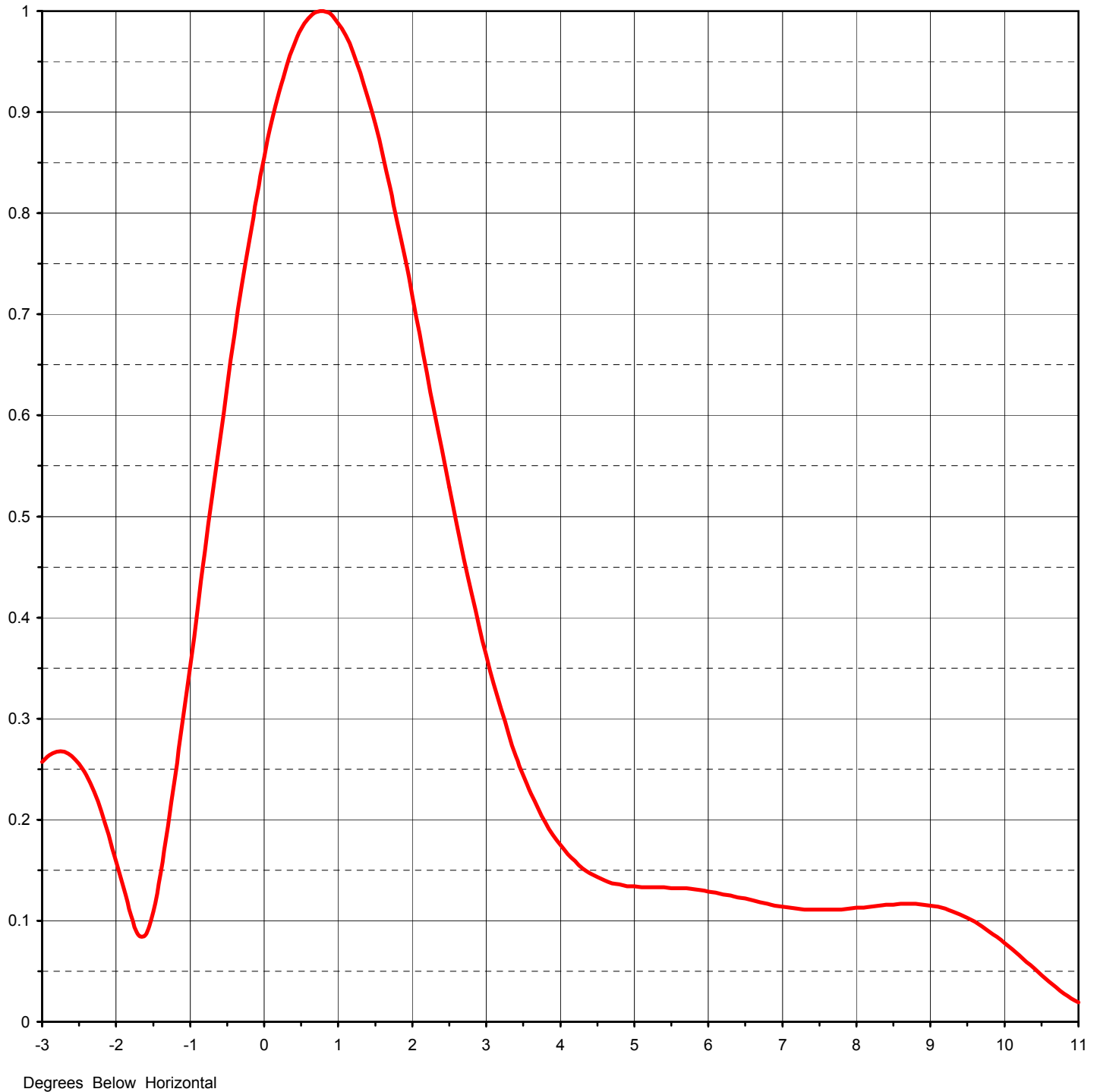
Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.370	45	0.797	90	0.968	135	0.979	180	0.821	225	0.427	270	0.248	315	0.250
1	0.381	46	0.802	91	0.970	136	0.977	181	0.817	226	0.415	271	0.249	316	0.250
2	0.392	47	0.807	92	0.973	137	0.975	182	0.812	227	0.403	272	0.249	317	0.250
3	0.403	48	0.812	93	0.975	138	0.973	183	0.807	228	0.392	273	0.250	318	0.249
4	0.415	49	0.817	94	0.977	139	0.970	184	0.802	229	0.381	274	0.250	319	0.249
5	0.427	50	0.821	95	0.979	140	0.968	185	0.797	230	0.370	275	0.250	320	0.248
6	0.438	51	0.826	96	0.981	141	0.965	186	0.792	231	0.359	276	0.251	321	0.248
7	0.450	52	0.830	97	0.983	142	0.963	187	0.787	232	0.349	277	0.251	322	0.247
8	0.462	53	0.835	98	0.985	143	0.960	188	0.781	233	0.339	278	0.252	323	0.247
9	0.474	54	0.839	99	0.987	144	0.957	189	0.775	234	0.329	279	0.252	324	0.246
10	0.486	55	0.843	100	0.988	145	0.954	190	0.769	235	0.320	280	0.252	325	0.245
11	0.498	56	0.847	101	0.990	146	0.951	191	0.763	236	0.311	281	0.253	326	0.245
12	0.510	57	0.851	102	0.991	147	0.948	192	0.756	237	0.303	282	0.253	327	0.244
13	0.522	58	0.855	103	0.993	148	0.945	193	0.750	238	0.295	283	0.254	328	0.244
14	0.533	59	0.859	104	0.994	149	0.942	194	0.743	239	0.288	284	0.254	329	0.243
15	0.545	60	0.863	105	0.995	150	0.938	195	0.736	240	0.281	285	0.254	330	0.242
16	0.556	61	0.867	106	0.996	151	0.935	196	0.728	241	0.275	286	0.255	331	0.242
17	0.568	62	0.871	107	0.997	152	0.931	197	0.721	242	0.270	287	0.255	332	0.241
18	0.579	63	0.875	108	0.997	153	0.928	198	0.713	243	0.264	288	0.255	333	0.241
19	0.590	64	0.879	109	0.998	154	0.924	199	0.705	244	0.260	289	0.256	334	0.241
20	0.601	65	0.883	110	0.999	155	0.921	200	0.697	245	0.256	290	0.256	335	0.241
21	0.611	66	0.887	111	0.999	156	0.917	201	0.688	246	0.253	291	0.256	336	0.241
22	0.622	67	0.891	112	0.999	157	0.913	202	0.679	247	0.249	292	0.256	337	0.241
23	0.632	68	0.895	113	1.000	158	0.910	203	0.670	248	0.247	293	0.256	338	0.242
24	0.642	69	0.898	114	1.000	159	0.906	204	0.661	249	0.245	294	0.256	339	0.242
25	0.652	70	0.902	115	1.000	160	0.902	205	0.652	250	0.244	295	0.256	340	0.244
26	0.661	71	0.906	116	1.000	161	0.898	206	0.642	251	0.242	296	0.256	341	0.245
27	0.670	72	0.910	117	1.000	162	0.895	207	0.632	252	0.242	297	0.256	342	0.247
28	0.679	73	0.913	118	0.999	163	0.891	208	0.622	253	0.241	298	0.256	343	0.249
29	0.688	74	0.917	119	0.999	164	0.887	209	0.611	254	0.241	299	0.256	344	0.253
30	0.697	75	0.921	120	0.999	165	0.883	210	0.601	255	0.241	300	0.256	345	0.256
31	0.705	76	0.924	121	0.998	166	0.879	211	0.590	256	0.241	301	0.256	346	0.260
32	0.713	77	0.928	122	0.997	167	0.875	212	0.579	257	0.241	302	0.255	347	0.264
33	0.721	78	0.931	123	0.997	168	0.871	213	0.568	258	0.241	303	0.255	348	0.270
34	0.728	79	0.935	124	0.996	169	0.867	214	0.556	259	0.242	304	0.255	349	0.275
35	0.736	80	0.938	125	0.995	170	0.863	215	0.545	260	0.242	305	0.254	350	0.281
36	0.743	81	0.942	126	0.994	171	0.859	216	0.533	261	0.243	306	0.254	351	0.288
37	0.750	82	0.945	127	0.993	172	0.855	217	0.522	262	0.244	307	0.254	352	0.295
38	0.756	83	0.948	128	0.991	173	0.851	218	0.510	263	0.244	308	0.253	353	0.303
39	0.763	84	0.951	129	0.990	174	0.847	219	0.498	264	0.245	309	0.253	354	0.311
40	0.769	85	0.954	130	0.988	175	0.843	220	0.486	265	0.245	310	0.252	355	0.320
41	0.775	86	0.957	131	0.987	176	0.839	221	0.474	266	0.246	311	0.252	356	0.329
42	0.781	87	0.960	132	0.985	177	0.835	222	0.462	267	0.247	312	0.252	357	0.339
43	0.787	88	0.963	133	0.983	178	0.830	223	0.450	268	0.247	313	0.251	358	0.349
44	0.792	89	0.965	134	0.981	179	0.826	224	0.438	269	0.248	314	0.251	359	0.359



Proposal Number	<b>DCA-10196</b>	Exhibit 4A
Date	<b>30-Apr-03</b>	
Call Letters	<b>KBSI-DT</b>	Channel <b>22</b>
Location	<b>Cape Girardeau, MO</b>	
Customer		
Antenna Type	<b>TFU-26GTH-R 3S220 DC</b>	

## ELEVATION PATTERN

RMS Gain at Main Lobe	<b>20.50 ( 13.12 dB )</b>	Beam Tilt	<b>0.75 deg</b>
RMS Gain at Horizontal	<b>15.00 ( 11.76 dB )</b>	Frequency	<b>521.00 MHz</b>
Calculated / Measured	<b>Calculated</b>	Drawing #	<b>26G205075D</b>



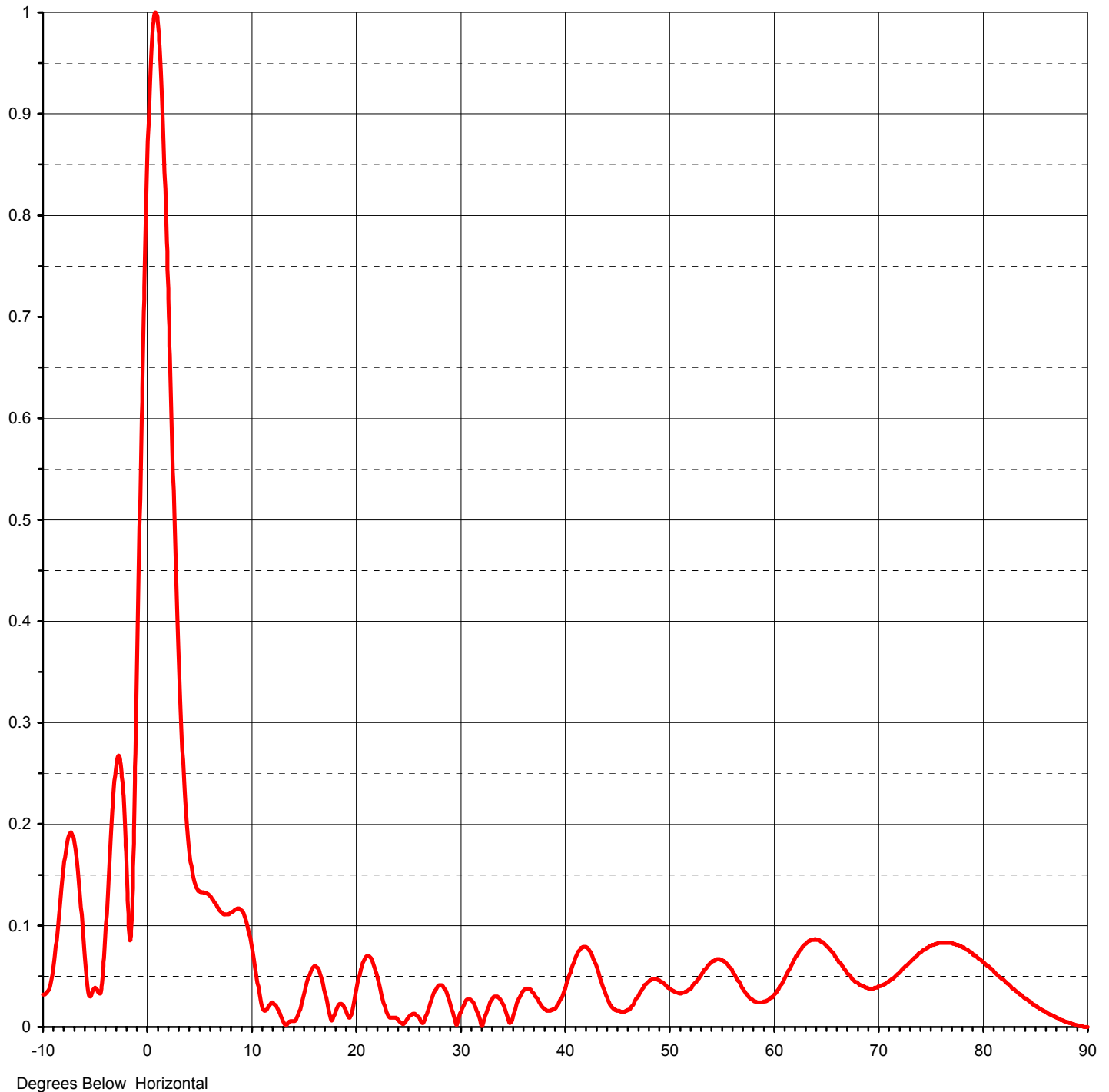


Proposal Number	<b>DCA-10196</b>	Exhibit 4B
Date	<b>30-Apr-03</b>	
Call Letters	<b>KBSI-DT</b>	Channel <b>22</b>
Location	<b>Cape Girardeau, MO</b>	
Customer		
Antenna Type	<b>TFU-26GTH-R 3S220 DC</b>	

## ELEVATION PATTERN

RMS Gain at Main Lobe	<b>20.50 ( 13.12 dB )</b>
RMS Gain at Horizontal	<b>15.00 ( 11.76 dB )</b>
Calculated / Measured	<b>Calculated</b>

Beam Tilt	<b>0.75 deg</b>
Frequency	<b>521.00 MHz</b>
Drawing #	<b>26G205075D-90</b>







Proposal Number **DCA-10196**

Exhibit 5

Date **30-Apr-03**

Call Letters **KBSI-DT** Channel **22**

Location **Cape Girardeau, MO**

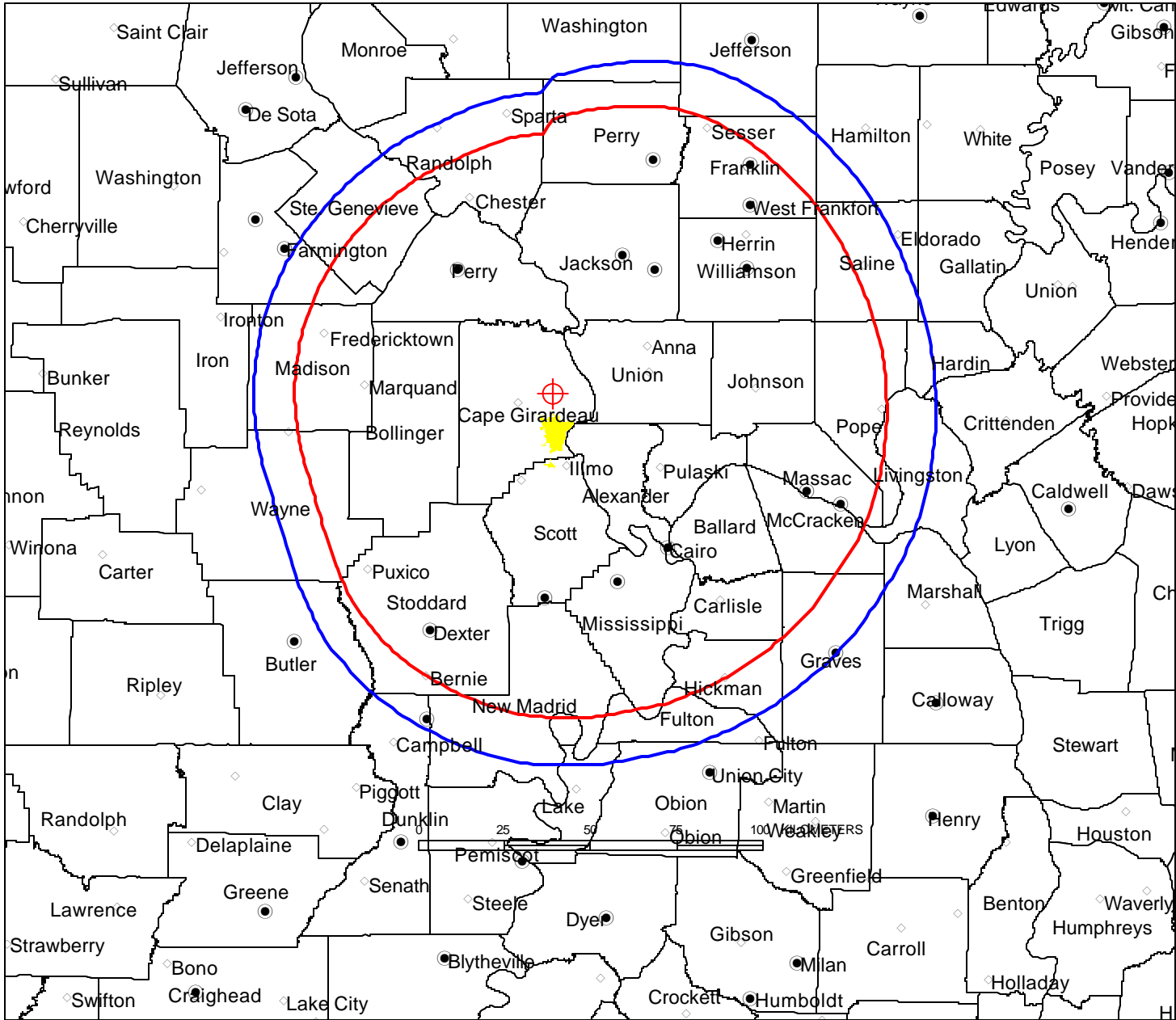
Customer

Antenna Type **TFU-26GTH-R 3S220 DC**

## TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **26G205075D-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.032	2.4	0.566	10.6	0.046	30.5	0.024	51.0	0.033	71.5	0.049
-9.5	0.036	2.6	0.493	10.8	0.034	31.0	0.027	51.5	0.034	72.0	0.054
-9.0	0.058	2.8	0.424	11.0	0.023	31.5	0.020	52.0	0.037	72.5	0.059
-8.5	0.106	3.0	0.363	11.5	0.017	32.0	0.004	52.5	0.043	73.0	0.064
-8.0	0.158	3.2	0.309	12.0	0.024	32.5	0.013	53.0	0.050	73.5	0.069
-7.5	0.189	3.4	0.263	12.5	0.019	33.0	0.026	53.5	0.057	74.0	0.073
-7.0	0.182	3.6	0.226	13.0	0.008	33.5	0.030	54.0	0.063	74.5	0.077
-6.5	0.136	3.8	0.197	13.5	0.003	34.0	0.025	54.5	0.066	75.0	0.080
-6.0	0.070	4.0	0.175	14.0	0.006	34.5	0.012	55.0	0.066	75.5	0.082
-5.5	0.030	4.2	0.159	14.5	0.011	35.0	0.007	55.5	0.063	76.0	0.083
-5.0	0.039	4.4	0.147	15.0	0.029	35.5	0.024	56.0	0.057	76.5	0.083
-4.5	0.033	4.6	0.140	15.5	0.048	36.0	0.035	56.5	0.048	77.0	0.083
-4.0	0.093	4.8	0.136	16.0	0.059	36.5	0.038	57.0	0.039	77.5	0.081
-3.5	0.188	5.0	0.134	16.5	0.056	37.0	0.034	57.5	0.032	78.0	0.079
-3.0	0.257	5.2	0.133	17.0	0.038	37.5	0.026	58.0	0.027	78.5	0.076
-2.8	0.267	5.4	0.133	17.5	0.014	38.0	0.019	58.5	0.024	79.0	0.072
-2.6	0.263	5.6	0.132	18.0	0.012	38.5	0.016	59.0	0.024	79.5	0.068
-2.4	0.244	5.8	0.131	18.5	0.023	39.0	0.018	59.5	0.026	80.0	0.064
-2.2	0.208	6.0	0.129	19.0	0.018	39.5	0.024	60.0	0.031	80.5	0.060
-2.0	0.159	6.2	0.126	19.5	0.009	40.0	0.036	60.5	0.037	81.0	0.055
-1.8	0.105	6.4	0.123	20.0	0.032	40.5	0.051	61.0	0.046	81.5	0.050
-1.6	0.086	6.6	0.120	20.5	0.056	41.0	0.066	61.5	0.056	82.0	0.046
-1.4	0.147	6.8	0.117	21.0	0.069	41.5	0.076	62.0	0.066	82.5	0.041
-1.2	0.243	7.0	0.114	21.5	0.068	42.0	0.079	62.5	0.075	83.0	0.037
-1.0	0.352	7.2	0.112	22.0	0.053	42.5	0.074	63.0	0.081	83.5	0.032
-0.8	0.465	7.4	0.111	22.5	0.032	43.0	0.062	63.5	0.085	84.0	0.028
-0.6	0.575	7.6	0.111	23.0	0.014	43.5	0.046	64.0	0.087	84.5	0.025
-0.4	0.680	7.8	0.111	23.5	0.009	44.0	0.031	64.5	0.084	85.0	0.021
-0.2	0.774	8.0	0.113	24.0	0.008	44.5	0.021	65.0	0.080	85.5	0.018
0.0	0.855	8.2	0.114	24.5	0.003	45.0	0.016	65.5	0.074	86.0	0.015
0.2	0.920	8.4	0.116	25.0	0.008	45.5	0.015	66.0	0.067	86.5	0.012
0.4	0.966	8.6	0.117	25.5	0.013	46.0	0.016	66.5	0.060	87.0	0.009
0.6	0.993	8.8	0.117	26.0	0.010	46.5	0.021	67.0	0.053	87.5	0.007
0.8	1.000	9.0	0.115	26.5	0.004	47.0	0.029	67.5	0.047	88.0	0.005
1.0	0.988	9.2	0.112	27.0	0.018	47.5	0.038	68.0	0.043	88.5	0.003
1.2	0.959	9.4	0.106	27.5	0.033	48.0	0.044	68.5	0.040	89.0	0.002
1.4	0.915	9.6	0.099	28.0	0.041	48.5	0.047	69.0	0.038	89.5	0.001
1.6	0.858	9.8	0.094	28.5	0.038	49.0	0.046	69.5	0.038	90.0	0.000
1.8	0.791	10.0	0.084	29.0	0.026	49.5	0.043	70.0	0.040		
2.0	0.718	10.2	0.072	29.5	0.008	50.0	0.039	70.5	0.042		
2.2	0.642	10.4	0.059	30.0	0.012	50.5	0.035	71.0	0.045		



## PREDICTED COVERAGE CONTOURS

**KBSI-DT, CAPE GIRARDEAU, MISSOURI**

## CH. 22, 435 kW ERP - 543.0 m HAAT

## DIRECTIONAL ANTENNA Dielectric TFU-26GTH R3S220

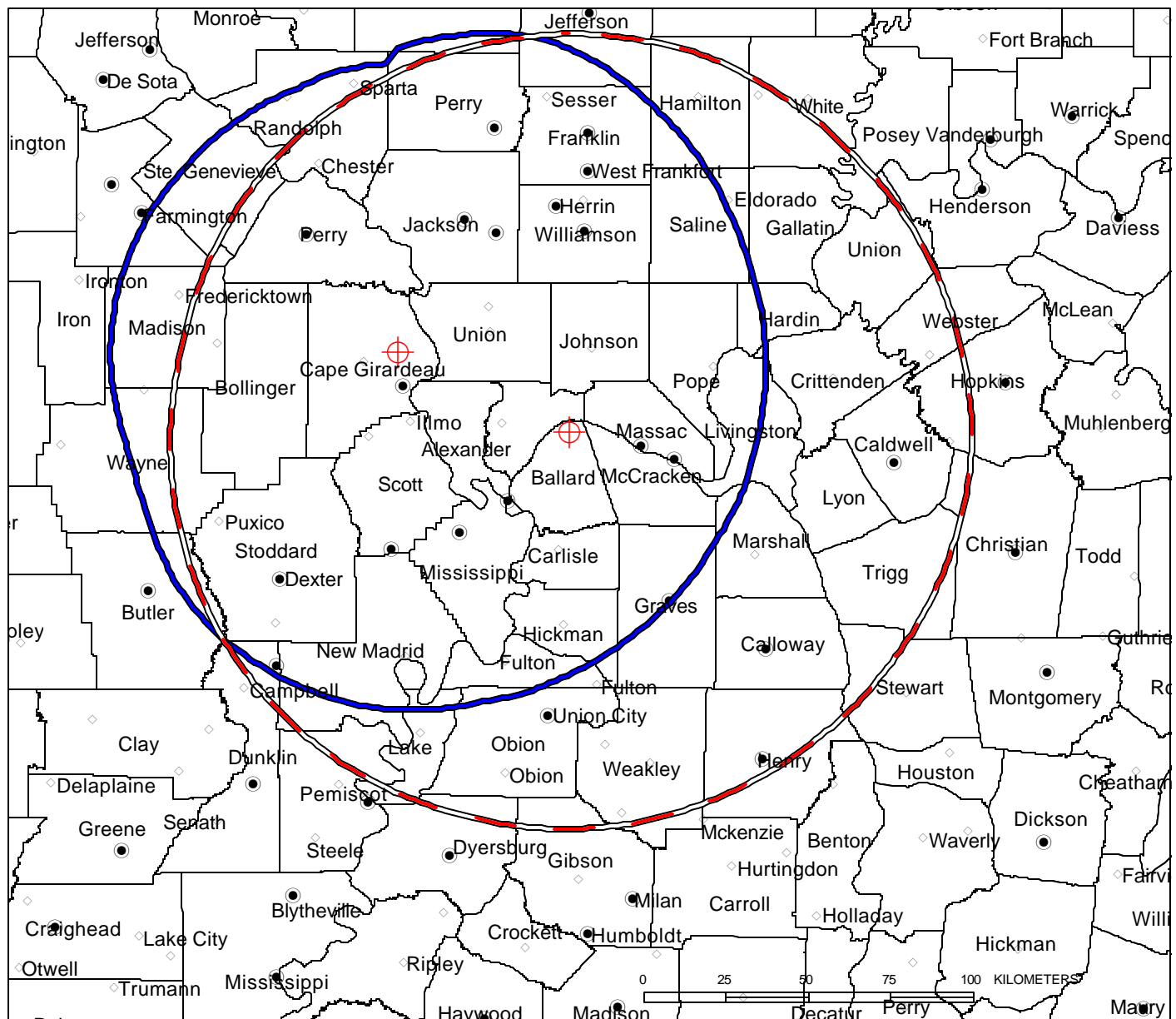
**JUNE, 2004**



**KBSI-DT CURRENT PROPOSAL  
PROTECTED COVERAGE CONTOUR  
41 dBu F(50,90)**



**KBSI-DT CURRENT PROPOSAL  
CITY GRADE COVERAGE CONTOUR  
48 dBu F(50,90)**



## COMPARISON OF TELEVISION SERVICE AREAS WITHIN THE PADUCAH, KY - CAPE GIRARDEAU, MO - HARRISBURG-MOUNT VERNON, IL DMA

KBSI-DT, CAPE GIRARDEAU, MISSOURI  
CH. 22, 435 kW ERP - 543.0 m HAAT  
DIRECTIONAL ANTENNA Dielectric TFU-26GTH R3S220

JUNE, 2004



**KBSI-DT CURRENT PROPOSAL**  
**PROTECTED COVERAGE CONTOUR**  
41 dBu F(50,90)  
Total Area = 30,821.46 Square kilometers



**WPSD-TV EXISTING FACILITY**  
**GRADE B PROTECTED COVERAGE CONTOUR**  
47 dBu F(50,50)  
Total Area = 44,930 Square kilometers

**SUMMARY OF RADIOFREQUENCY  
RADIATION STUDY**  
KBSI-DT, CAPE GIRARDEAU, MISSOURI  
CHANNEL 22, 435 kW ERP, 543.0 m HAAT  
JUNE, 2004

<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>
KBSI-DT	DT	22	521	H	466.6	435.000	0.300	0.00601	0.347	1.73%
KBSI(TV)	DT	23	527	H	466.6	1860.000	0.300	0.02568	0.351	7.31%
KEZS-FM	DT	289	803	H & V	216.6	100.000	1.000	0.14238	0.535	26.60%

**TOTAL PERCENTAGE OF ANSI VALUE= 35.64%**

*\*\* 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.*