



**STATEMENT OF JOHN E. HIDLE, P.E.
IN SUPPORT OF AN APPLICATION FOR
MODIFICATION OF CONSTRUCTION PERMIT
BMPCDT-20020712ABS
WTVG-DT – TOLEDO, OHIO
CHANNEL 19, 795 kW, 221.5 m HAAT**

Prepared for: WTVG, Inc.

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 registered Professional Engineer in the Commonwealth of Virginia, Registration No. 7418, and in the State of New York, Registration No. 63418.

GENERAL

WTVG, Inc. licensee of WTVG(TV), channel 13, Toledo, Ohio, and permittee of paired DTV allotment WTVG-DT, channel 19, has authorized this office to prepare this statement, FCC Form 301, Section III and III-D and associated exhibits to be part of an application for modification of construction permit BMPCDT-20020712ABS. It is proposed herein to designate the DTV antenna currently used by WTVG-DT under special temporary authorization as its permanent DTV broadcast antenna. The antenna currently authorized by STA is a Dielectric model TFU-24DSC-R 3C200SP which is mounted on WTVG's tower at a height above ground level of 224.6 meters. The permittee seeks to modify its construction permit because the antenna's horizontal azimuth pattern closely matches WTVG-DT's allotment replication antenna's azimuth pattern and will provide for a closer

replication of WTVG's NTSC service area. It is also proposed herein to increase WTVG-DT's effective radiated power from 397 kW to 795 kW. No other changes are proposed.

DIRECTIONAL ANTENNA

The directional transmitting antenna employs an electrical beam tilt of 0.50 degrees below the horizontal plane. The antenna manufacturer's horizontal plane azimuth radiation pattern, illustrating the proposed antenna's directional pattern characteristics is shown in exhibit 1, and tabulated in exhibit 2, and the vertical plane radiation pattern, illustrating the proposed antenna's radiation characteristics above and below the horizontal plane, is shown in exhibits 3A and 3B, and is tabulated in exhibit 4.

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. The predicted principal community (48 dBu) contour completely encompasses the principal community of license, shown in exhibit 5, as required by Section 73.625(a) of the Commission's rules. The predicted 41 dBu contour is also shown

in exhibit 5. A comparison of WTVG-DT's predicted 41 dBu allotment contour with the 41 dBu contour based on the facilities requested herein is shown in exhibit 6.

ALLOCATION CONSIDERATIONS

NTSC Allocation Considerations

An interference study was performed, using the Commission's application analysis program, tv_process, to ensure that the proposed DTV facility is in compliance with the Commission's *de minimis* interference requirement contained in Section 73.623(c)(2) of the Commission's rules. The study showed that the DTV facility proposed herein is predicted to cause no increase in the interference population in excess of the Commission's *de minimis* criteria to any authorized NTSC television facility.

DTV Allocation Considerations

The same study was evaluated to determine if the proposed modification of WTVG-DT is predicted to cause any level of new prohibited interference to other authorized DTV facilities, including other DTV stations, DTV expansion construction permits, DTV allotments or pending DTV applications. The study results indicate that the instant proposal is predicted to cause no unacceptable level of new interference to the populations served by any other 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 73.623(c)(5) of the FCC's Rules, a study of interference contour overlap was performed, based on the WTVG-DT facility proposed herein, to

establish compliance with the protection requirements contained therein. As shown in exhibit 7 the ERP of 795 kW proposed herein for WTVG-DT slightly reduces existing interference contour overlap with WCLL-LP, channel 19, Columbus, Ohio, when compared to WTVG-DT's allotment facility. The study shows that, as a result of the changes proposed herein, no increase in prohibited contour overlap is predicted to occur with WCLL-LP, or any other LPTV station which has subsequently been granted class A license status. The applicant proposes no other changes which will affect any other aspect of the station's allocation.

BLANKETING AND INTERMODULATION INTERFERENCE

A number of broadcast and non-broadcast facilities are located within 10 km of the proposed WTVG-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

GENERAL

The proposal described herein meets the criteria specified in Section 1.1306 of the FCC Rules and Regulations as an action, which is categorically excluded from environmental processing. The location of the proposed modified TV facility is not in an officially designated wilderness area or wildlife preserve, nor will it affect any endangered species or their habitats, nor will it affect any area significant in American history, culture,

archaeology or any area eligible for designation or inclusion in the National Registry of Historic Places. No construction is proposed. It is only proposed to install a new DTV antenna on WTVG's existing tower.

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 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 (mW/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 TV stations, is derived from the formula, (frequency/1500). The MPE level for "controlled" environments is 1.0 milliwatts per centimeter squared (mW/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, (frequency/300).

For WTVG(TV), which operates on television Channel 13 (213 MHz), the MPE is 0.200 milliwatts per centimeter squared (mW/cm^2) in an "uncontrolled" environment and 1.000 mW/cm^2 in a "controlled" environment. For WTVG-DT, which will operate on channel 19 (503 MHz), the MPE lever for "uncontrolled" environments is 0.335 mW/cm^2 , and for "controlled" environments is 1.677 mW/cm^2 .

The existing WTVG(TV) facility operates with a maximum ERP of 316 kW from a horizontally polarized omnidirectional transmitting antenna with a centerline height of 308.6meters above ground level (AGL). Considering a very conservative vertical plane relative field factor of 0.3, the WTVG(TV) facility produces a predicted power density at two meters above ground level of .00494 mW/cm^2 , which is 2.47% of the FCC guideline value for "uncontrolled" environments, and 0.494% of the FCC guideline value for "controlled" environments.

The proposed WTVG-DT facility, channel 19 (500-506 MHz), will operate with a maximum ERP of 795 kW from a horizontally polarized directional transmitting antenna with a centerline height of 224.6 meters above ground level (AGL). Considering a very

conservative vertical plane relative field factor of 0.3, the WTVG-DT facility produces a predicted power density at two meters above ground level of 0.04822 mW/cm^2 , which is 14.39% of the FCC guideline value for "uncontrolled" environments, and 2.88% of the FCC guideline value for "controlled" environments.

As shown in Appendix A, the total predicted percentage of the MPE value at WTVG's site, considering the cumulative predicted radiation of all of the stations which are located at the site, is only 16.86% of the limit for "uncontrolled" environments, and 3.37% 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 WTVG-DT is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WTVG-DT antenna. The applicant 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. The entire site is fenced and marked with signs which state "NO TRESPASSING". The tower base and all guy anchors are fenced and posted with signs which state "NO TRESPASSING" and "HIGH RADIO FREQUENCY ENERGY AREA".

In light of the above, the proposed modification of the WTVG-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, and the associated 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: November 20, 2002


John E. Hidle, P.E.





Proposal Number

DCA-8539

Exhibit 1

Date

7-Dec-99

Call Letters

WTVG-DT

Channel

19

Location

Toledo, OH

Customer

ABC

Antenna Type

TFU-24DSC-R 3C200SP

AZIMUTH PATTERN

Gain

2.00

(3.01 dB)

Frequency

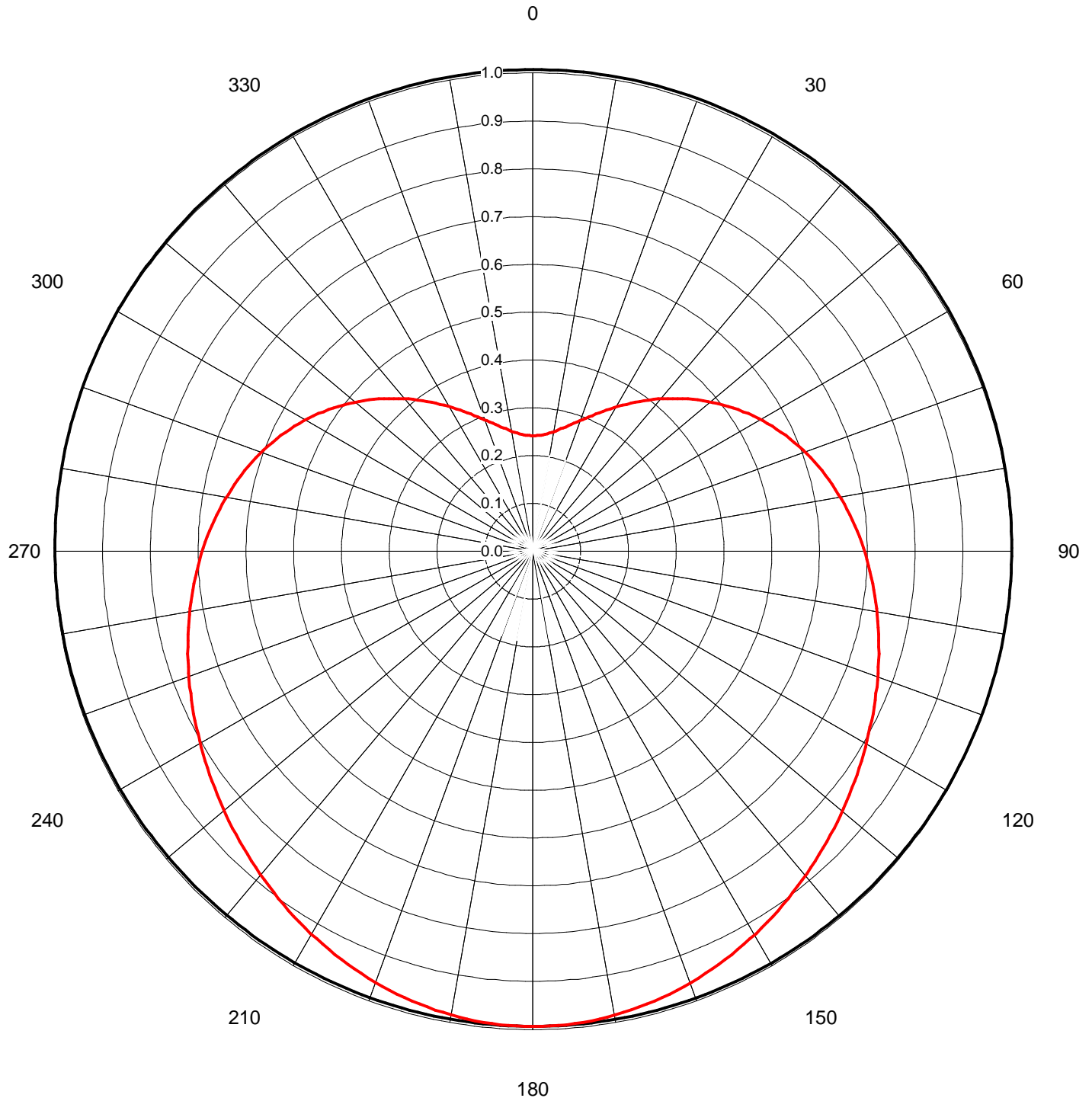
503.00 MHz

Calculated / Measured

Calculated

Drawing #

TFU-3C200SP-19





Proposal Number **DCA-8539**
 Date **7-Dec-99**
 Call Letters **WTVG-DT** Channel **19**
 Location **Toledo, OH**
 Customer **ABC**
 Antenna Type **TFU-24DSC-R 3C200SP**

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **TFU-3C200SP-19**

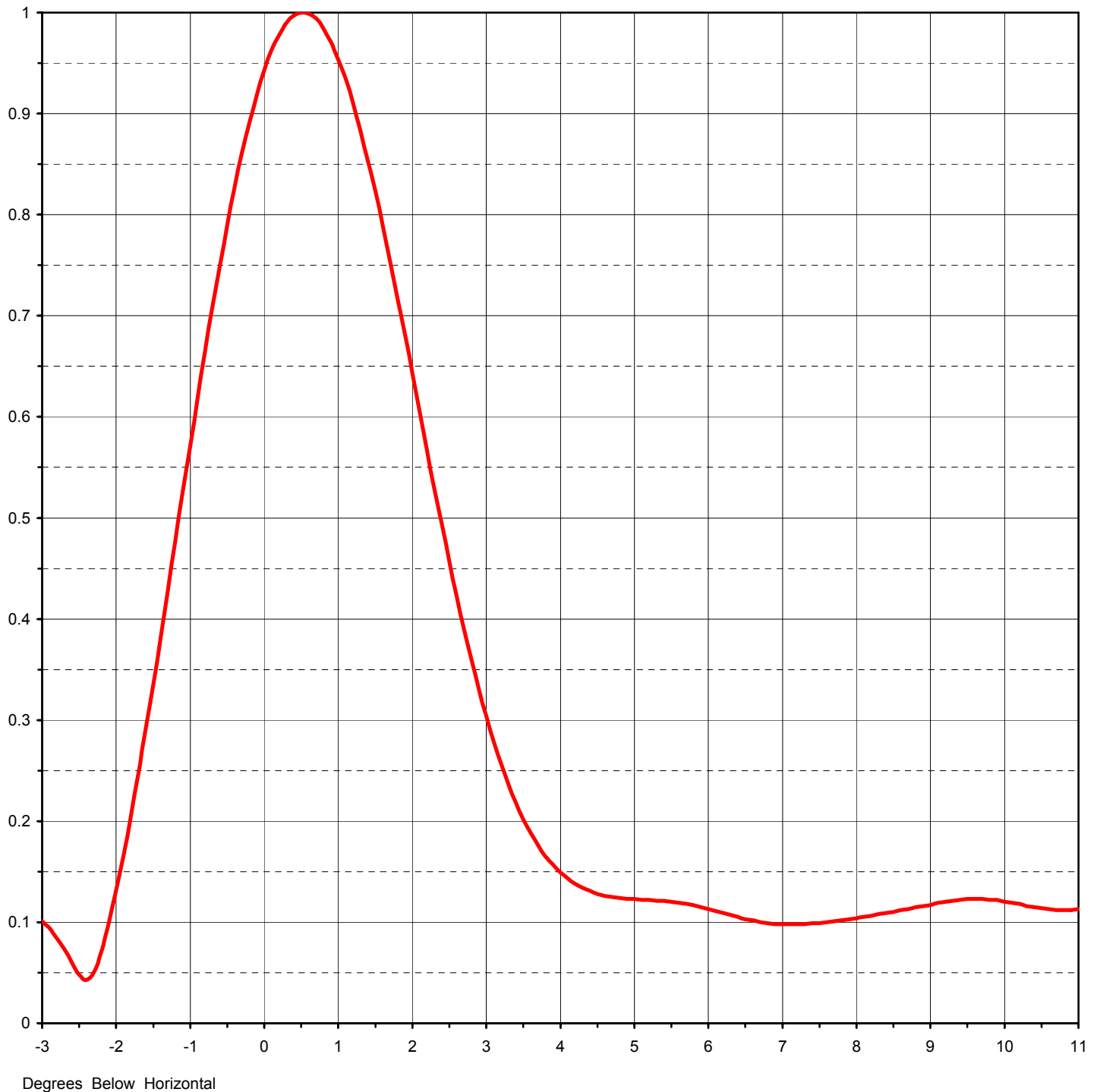
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0	0.235	45	0.442	90	0.690	135	0.868	180	1.000	225	0.868	270	0.690	315	0.442
1	0.235	46	0.449	91	0.694	136	0.872	181	1.000	226	0.863	271	0.686	316	0.434
2	0.235	47	0.456	92	0.698	137	0.876	182	1.000	227	0.859	272	0.682	317	0.427
3	0.236	48	0.463	93	0.702	138	0.880	183	0.999	228	0.855	273	0.678	318	0.420
4	0.236	49	0.470	94	0.706	139	0.885	184	0.999	229	0.851	274	0.674	319	0.413
5	0.238	50	0.476	95	0.709	140	0.889	185	0.998	230	0.847	275	0.669	320	0.406
6	0.239	51	0.483	96	0.713	141	0.893	186	0.997	231	0.842	276	0.665	321	0.399
7	0.241	52	0.490	97	0.717	142	0.897	187	0.996	232	0.838	277	0.661	322	0.392
8	0.242	53	0.497	98	0.721	143	0.902	188	0.994	233	0.834	278	0.657	323	0.385
9	0.245	54	0.504	99	0.725	144	0.906	189	0.993	234	0.830	279	0.652	324	0.378
10	0.247	55	0.510	100	0.729	145	0.910	190	0.991	235	0.826	280	0.648	325	0.372
11	0.250	56	0.517	101	0.732	146	0.914	191	0.989	236	0.822	281	0.643	326	0.365
12	0.252	57	0.523	102	0.736	147	0.918	192	0.987	237	0.818	282	0.639	327	0.358
13	0.255	58	0.530	103	0.740	148	0.922	193	0.985	238	0.814	283	0.634	328	0.352
14	0.259	59	0.536	104	0.744	149	0.926	194	0.983	239	0.810	284	0.629	329	0.345
15	0.262	60	0.542	105	0.747	150	0.930	195	0.980	240	0.806	285	0.624	330	0.339
16	0.266	61	0.548	106	0.751	151	0.934	196	0.978	241	0.802	286	0.620	331	0.332
17	0.270	62	0.554	107	0.755	152	0.938	197	0.975	242	0.798	287	0.615	332	0.326
18	0.274	63	0.560	108	0.759	153	0.942	198	0.972	243	0.794	288	0.610	333	0.320
19	0.278	64	0.566	109	0.763	154	0.946	199	0.969	244	0.790	289	0.604	334	0.314
20	0.283	65	0.572	110	0.767	155	0.949	200	0.966	245	0.786	290	0.599	335	0.309
21	0.288	66	0.577	111	0.770	156	0.953	201	0.963	246	0.782	291	0.594	336	0.303
22	0.293	67	0.583	112	0.774	157	0.956	202	0.960	247	0.778	292	0.589	337	0.298
23	0.298	68	0.589	113	0.778	158	0.960	203	0.956	248	0.774	293	0.583	338	0.293
24	0.303	69	0.594	114	0.782	159	0.963	204	0.953	249	0.770	294	0.577	339	0.288
25	0.309	70	0.599	115	0.786	160	0.966	205	0.949	250	0.767	295	0.572	340	0.283
26	0.314	71	0.604	116	0.790	161	0.969	206	0.946	251	0.763	296	0.566	341	0.278
27	0.320	72	0.610	117	0.794	162	0.972	207	0.942	252	0.759	297	0.560	342	0.274
28	0.326	73	0.615	118	0.798	163	0.975	208	0.938	253	0.755	298	0.554	343	0.270
29	0.332	74	0.620	119	0.802	164	0.978	209	0.934	254	0.751	299	0.548	344	0.266
30	0.339	75	0.624	120	0.806	165	0.980	210	0.930	255	0.747	300	0.542	345	0.262
31	0.345	76	0.629	121	0.810	166	0.983	211	0.926	256	0.744	301	0.536	346	0.259
32	0.352	77	0.634	122	0.814	167	0.985	212	0.922	257	0.740	302	0.530	347	0.255
33	0.358	78	0.639	123	0.818	168	0.987	213	0.918	258	0.736	303	0.523	348	0.252
34	0.365	79	0.643	124	0.822	169	0.989	214	0.914	259	0.732	304	0.517	349	0.250
35	0.372	80	0.648	125	0.826	170	0.991	215	0.910	260	0.729	305	0.510	350	0.247
36	0.378	81	0.652	126	0.830	171	0.993	216	0.906	261	0.725	306	0.504	351	0.245
37	0.385	82	0.657	127	0.834	172	0.994	217	0.902	262	0.721	307	0.497	352	0.242
38	0.392	83	0.661	128	0.838	173	0.996	218	0.897	263	0.717	308	0.490	353	0.241
39	0.399	84	0.665	129	0.842	174	0.997	219	0.893	264	0.713	309	0.483	354	0.239
40	0.406	85	0.669	130	0.847	175	0.998	220	0.889	265	0.709	310	0.476	355	0.238
41	0.413	86	0.674	131	0.851	176	0.999	221	0.885	266	0.706	311	0.470	356	0.236
42	0.420	87	0.678	132	0.855	177	0.999	222	0.880	267	0.702	312	0.463	357	0.236
43	0.427	88	0.682	133	0.859	178	1.000	223	0.876	268	0.698	313	0.456	358	0.235
44	0.434	89	0.686	134	0.863	179	1.000	224	0.872	269	0.694	314	0.449	359	0.235



Proposal Number	DCA-8539	Exhibit 3A
Date	7-Dec-99	
Call Letters	WTVG-DT	Channel 19
Location	Toledo, OH	
Customer	ABC	
Antenna Type	TFU-24DSC-R 3C200SP	

ELEVATION PATTERN

RMS Gain at Main Lobe	19.50 (12.90 dB)	Beam Tilt	0.50 deg
RMS Gain at Horizontal	17.30 (12.38 dB)	Frequency	503.00 MHz
Calculated / Measured	Calculated	Drawing #	24Q195050



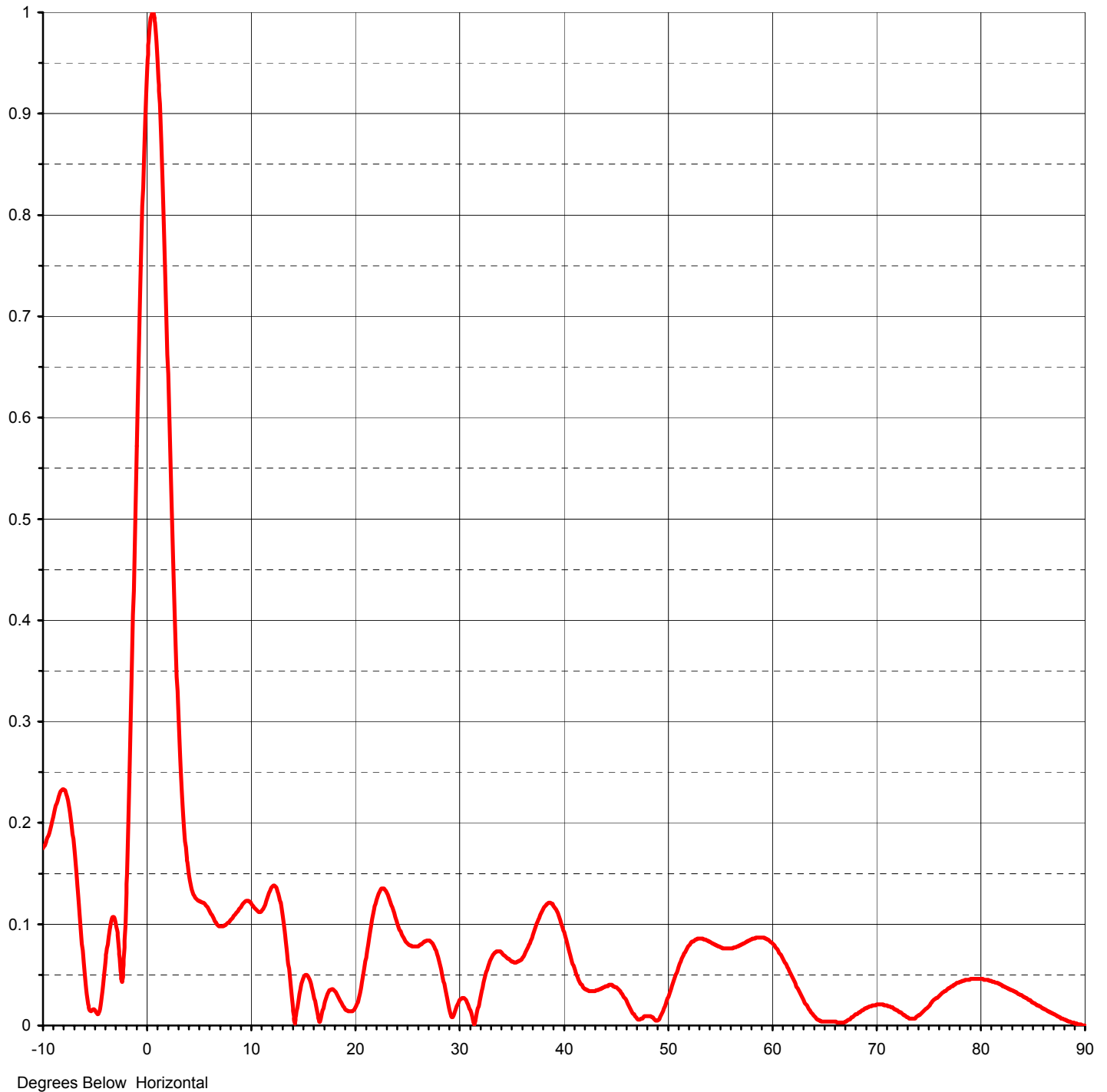


Proposal Number	DCA-8539	Exhibit 3B
Date	7-Dec-99	
Call Letters	WTVG-DT	Channel 19
Location	Toledo, OH	
Customer	ABC	
Antenna Type	TFU-24DSC-R 3C200SP	

ELEVATION PATTERN

RMS Gain at Main Lobe	19.50 (12.90 dB)
RMS Gain at Horizontal	17.30 (12.38 dB)
Calculated / Measured	Calculated

Beam Tilt	0.50 deg
Frequency	503.00 MHz
Drawing #	24Q195050-90





Proposal Number **DCA-8539**

Exhibit 4

Date **7-Dec-99**

Call Letters **WTVG-DT**

Channel **19**

Location **Toledo, OH**

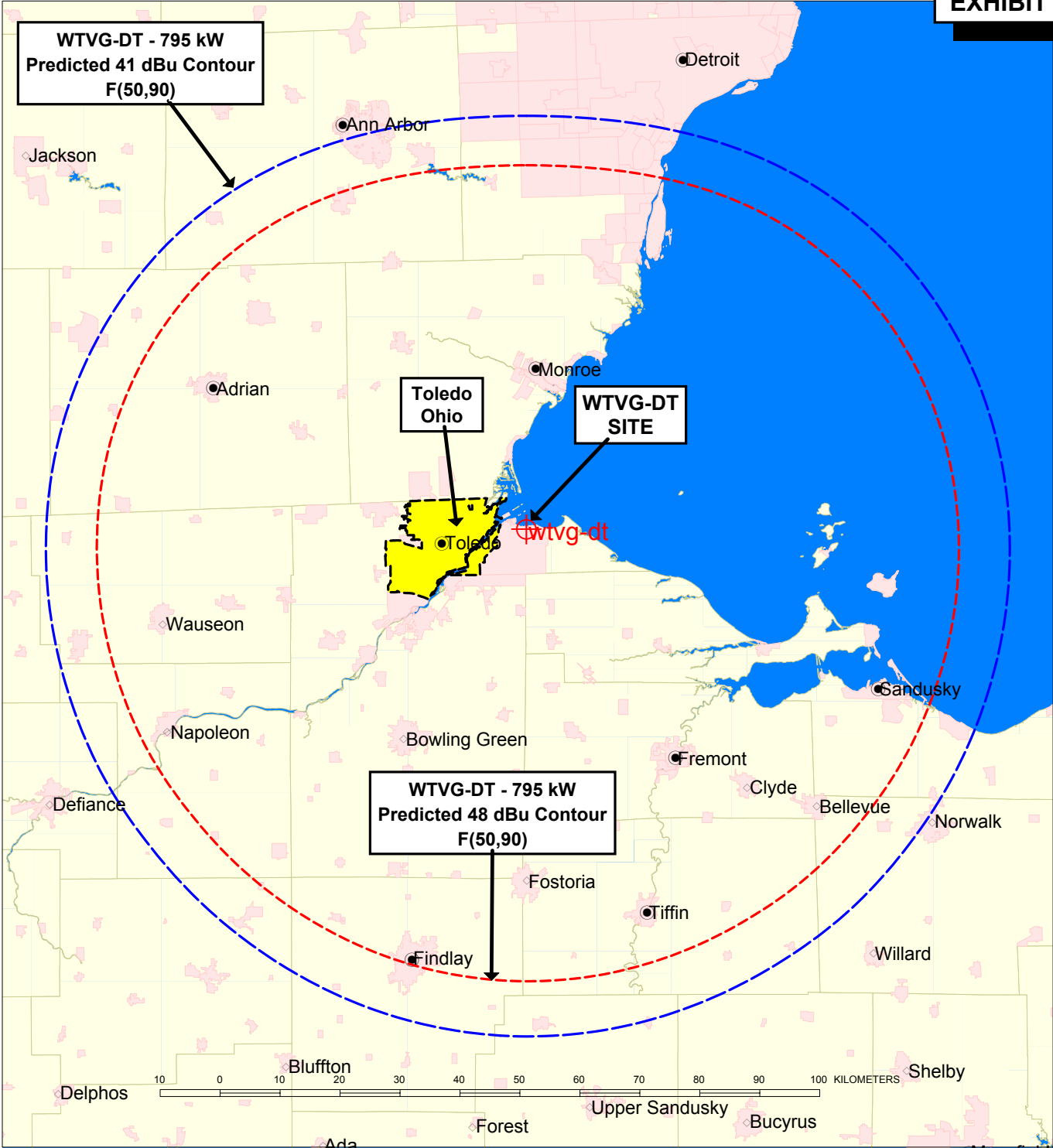
Customer **ABC**

Antenna Type **TFU-24DSC-R 3C200SP**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **24Q195050-90**

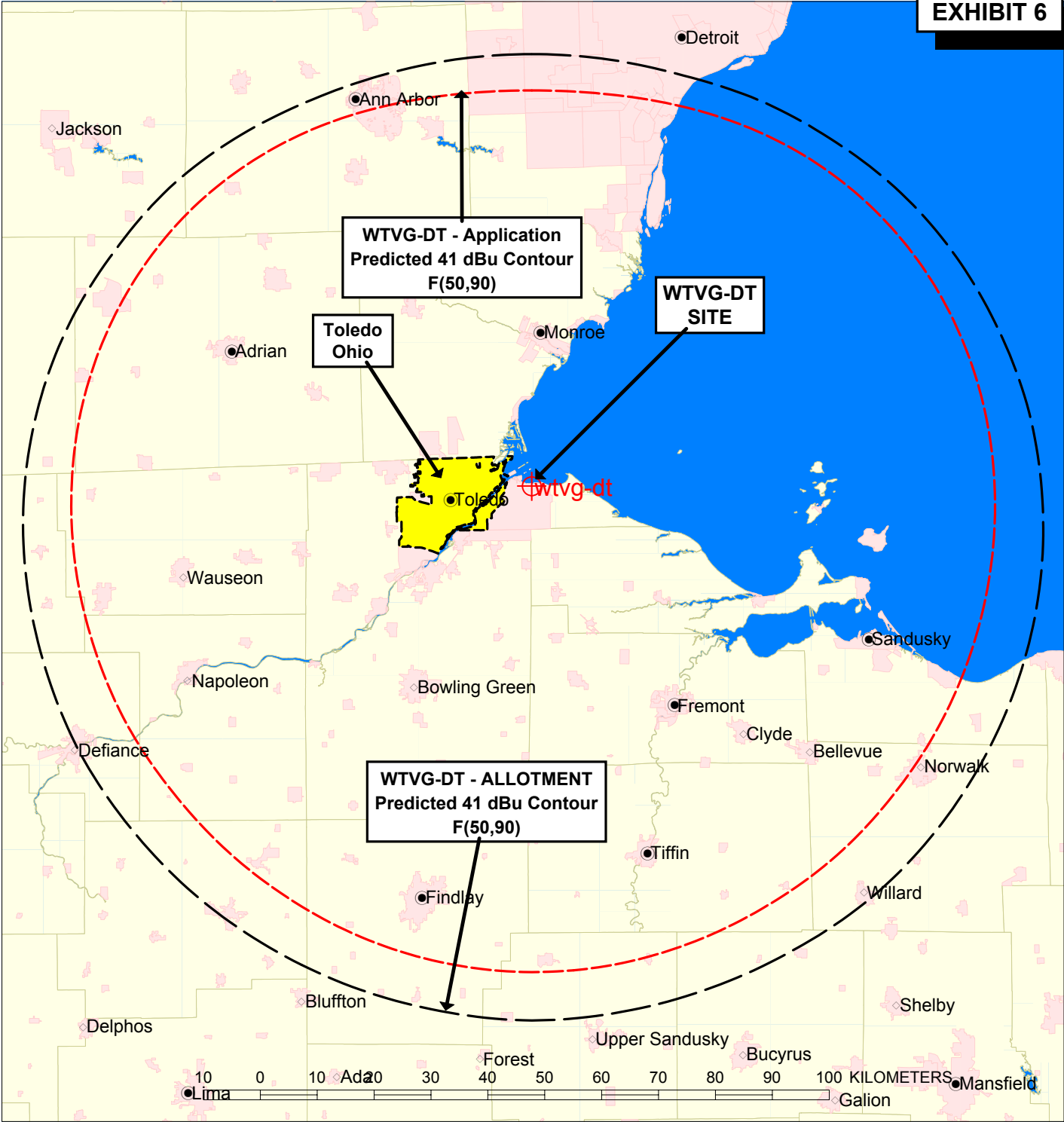
Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.175	2.4	0.493	10.6	0.114	30.5	0.027	51.0	0.055	71.5	0.018
-9.5	0.187	2.6	0.423	10.8	0.112	31.0	0.018	51.5	0.068	72.0	0.015
-9.0	0.206	2.8	0.359	11.0	0.112	31.5	0.001	52.0	0.078	72.5	0.011
-8.5	0.226	3.0	0.304	11.5	0.122	32.0	0.024	52.5	0.083	73.0	0.008
-8.0	0.233	3.2	0.256	12.0	0.135	32.5	0.047	53.0	0.086	73.5	0.007
-7.5	0.216	3.4	0.218	12.5	0.136	33.0	0.064	53.5	0.085	74.0	0.010
-7.0	0.174	3.6	0.188	13.0	0.115	33.5	0.072	54.0	0.083	74.5	0.014
-6.5	0.113	3.8	0.165	13.5	0.075	34.0	0.073	54.5	0.080	75.0	0.019
-6.0	0.051	4.0	0.149	14.0	0.026	34.5	0.068	55.0	0.078	75.5	0.025
-5.5	0.015	4.2	0.138	14.5	0.018	35.0	0.064	55.5	0.076	76.0	0.029
-5.0	0.015	4.4	0.131	15.0	0.044	35.5	0.062	56.0	0.076	76.5	0.034
-4.5	0.019	4.6	0.126	15.5	0.049	36.0	0.065	56.5	0.077	77.0	0.037
-4.0	0.062	4.8	0.124	16.0	0.034	36.5	0.074	57.0	0.079	77.5	0.040
-3.5	0.101	5.0	0.123	16.5	0.009	37.0	0.086	57.5	0.082	78.0	0.043
-3.0	0.101	5.2	0.122	17.0	0.017	37.5	0.101	58.0	0.085	78.5	0.045
-2.8	0.084	5.4	0.121	17.5	0.033	38.0	0.113	58.5	0.087	79.0	0.046
-2.6	0.060	5.6	0.119	18.0	0.035	38.5	0.120	59.0	0.087	79.5	0.046
-2.4	0.043	5.8	0.117	18.5	0.027	39.0	0.120	59.5	0.086	80.0	0.046
-2.2	0.071	6.0	0.113	19.0	0.018	39.5	0.111	60.0	0.082	80.5	0.045
-2.0	0.131	6.2	0.109	19.5	0.014	40.0	0.096	60.5	0.076	81.0	0.044
-1.8	0.206	6.4	0.105	20.0	0.016	40.5	0.077	61.0	0.068	81.5	0.042
-1.6	0.291	6.6	0.102	20.5	0.031	41.0	0.059	61.5	0.059	82.0	0.040
-1.4	0.382	6.8	0.099	21.0	0.060	41.5	0.045	62.0	0.048	82.5	0.037
-1.2	0.477	7.0	0.098	21.5	0.093	42.0	0.037	62.5	0.037	83.0	0.035
-1.0	0.572	7.2	0.098	22.0	0.120	42.5	0.034	63.0	0.027	83.5	0.032
-0.8	0.664	7.4	0.099	22.5	0.134	43.0	0.034	63.5	0.018	84.0	0.029
-0.6	0.750	7.6	0.100	23.0	0.133	43.5	0.036	64.0	0.011	84.5	0.026
-0.4	0.827	7.8	0.102	23.5	0.120	44.0	0.038	64.5	0.005	85.0	0.023
-0.2	0.892	8.0	0.104	24.0	0.104	44.5	0.040	65.0	0.004	85.5	0.020
0.0	0.943	8.2	0.106	24.5	0.090	45.0	0.038	65.5	0.004	86.0	0.017
0.2	0.978	8.4	0.109	25.0	0.082	45.5	0.034	66.0	0.004	86.5	0.014
0.4	0.997	8.6	0.112	25.5	0.078	46.0	0.026	66.5	0.003	87.0	0.011
0.6	0.999	8.8	0.115	26.0	0.078	46.5	0.016	67.0	0.004	87.5	0.008
0.8	0.984	9.0	0.117	26.5	0.081	47.0	0.008	67.5	0.007	88.0	0.006
1.0	0.954	9.2	0.120	27.0	0.084	47.5	0.007	68.0	0.011	88.5	0.004
1.2	0.910	9.4	0.122	27.5	0.081	48.0	0.009	68.5	0.014	89.0	0.002
1.4	0.854	9.6	0.123	28.0	0.068	48.5	0.008	69.0	0.017	89.5	0.001
1.6	0.789	9.8	0.123	28.5	0.046	49.0	0.005	69.5	0.019	90.0	0.000
1.8	0.718	10.0	0.122	29.0	0.021	49.5	0.012	70.0	0.021		
2.0	0.643	10.2	0.119	29.5	0.010	50.0	0.025	70.5	0.021		
2.2	0.567	10.4	0.116	30.0	0.023	50.5	0.040	71.0	0.020		



**PREDICTED COVERAGE CONTOURS
WTVG-DT - TOLEDO, OHIO
CH. 19 - 795 kW(DA-MAX) - 221.5 m HAAT**

48 dBu - Principal Community Contour
POPULATION = 1,367,759
AREA = 5,918 Square Miles

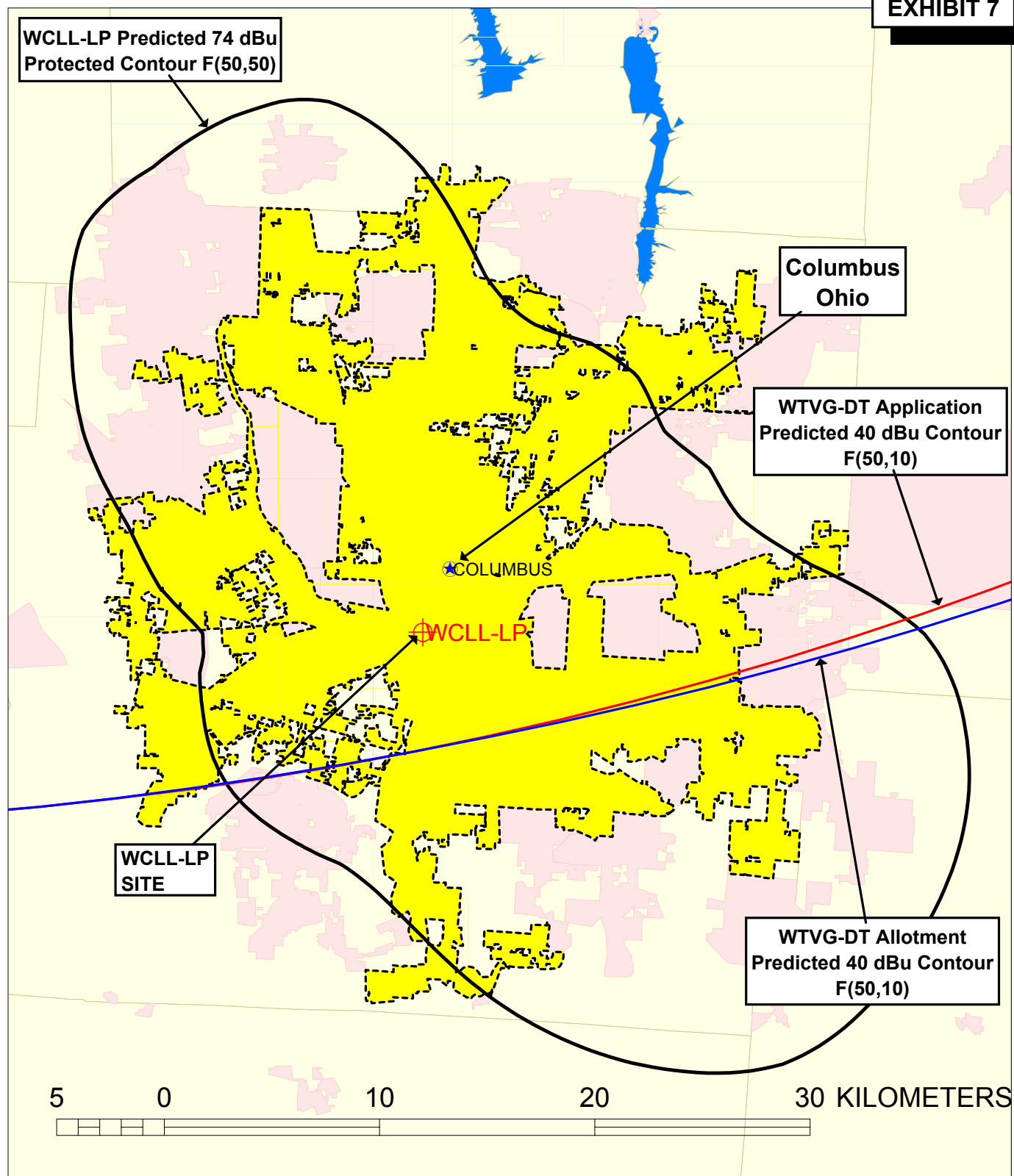
41 dBu - Noise Limited Contour
POPULATION = 1,911,904
AREA = 7,446 Square Miles



PREDICTED COVERAGE CONTOURS
41 dBu - F(50,90) - Noise Limited
WTVG-DT - TOLEDO, OHIO

ALLOTMENT FACILITY
CH. 19 - 559 kW(DA-MAX)
305 meters HAAT

APPLICATION - MODIFICATION of CP
CH. 19 - 795 kW(DA-MAX)
221.5 meters HAAT



PREDICTED F(50,50) 74 dBu PROTECTED SERVICE CONTOUR

WCLL-LP - Class A Station
37.7 kW - 156 meters HAAT

PREDICTED F(50,10) 40 dBu INTERFERENCE CONTOURS

WTVG-DT - Allotment
559 kW - 305 m HAAT

NOVEMBER 2002
CARL T. JONES
CORPORATION

WTVG-DT - Application
795 kW - 221.5 m HAAT

**SUMMARY OF RADIOFREQUENCY
RADIATION STUDY**
WTVG-DT, TOLEDO, OHIO
CHANNEL 19, 795 kW ERP, 221.5 m HAAT
NOVEMBER, 2002

<u>CALL</u>	<u>SERVICE</u>	<u>CHANNEL</u>	<u>FREQUENCY</u>	<u>POLARIZATION</u>	<u>ANTENNA HEIGHT **</u>	<u>ERP (kW)</u>	<u>VERT. RELATIVE FIELD FACTOR</u>	<u>PREDICTED POWER DENSITY (mW/cm²)</u>	<u>FCC UNCONTROLLED LIMIT (mW/cm²)</u>	<u>PERCENT OF UNCONTROLLED LIMIT</u>
WTVG-DT	DT	19	503	H	222.6	795.000	0.300	0.04822	0.335	14.39%
WTVG(TV)	TV	13	213	H	310	316.000	0.300	0.00494	0.200	2.47%

TOTAL PERCENTAGE OF ANSI VALUE= 16.86%

*** 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.*