

ENGINEERING STATEMENT
RE MINOR CHANGE APPLICATION FOR
OUTSTANDING DTV CONSTRUCTION PERMIT
(BMPEDT-20041101AHH) ON BEHALF OF
EASTERN ILLINOIS UNIVERSITY
WEIU-DT, CHARLESTON, ILLINOIS
CHANNEL 50 255 KW ERP DA 146 METERS HAAT

APRIL 2005

COHEN, DIPPELL AND EVERIST, P.C.
CONSULTING ENGINEERS
RADIO AND TELEVISION
WASHINGTON, D.C.

COHEN, DIPPELL AND EVERIST, P. C.

City of Washington)
) ss
District of Columbia)

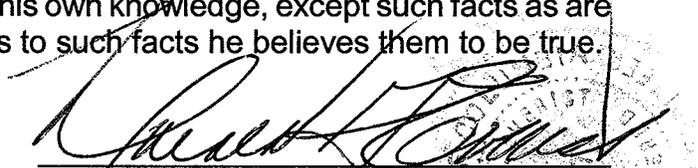
Donald G. Everist, being duly sworn upon his oath, deposes and states that:

He is a graduate electrical engineer, a Registered Professional Engineer in the District of Columbia, and is President, Secretary and Treasurer of Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1300 L Street, N.W., Suite 1100, Washington, D.C. 20005;

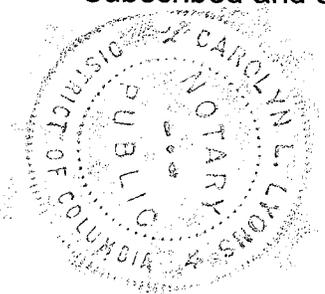
That his qualifications are a matter of record in the Federal Communications Commission;

That the attached engineering report was prepared by him or under his supervision and direction and

That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true.


Donald G. Everist
District of Columbia
Professional Engineer
Registration No. 5714

Subscribed and sworn to before me this 29th day of April, 2005.




Notary Public

My Commission Expires: 2/28/2008

COHEN, DIPPELL AND EVERIST, P. C.

City of Washington)
) ss
District of Columbia)

Martin R. Doczkat being duly sworn upon his oath, deposes and states that:

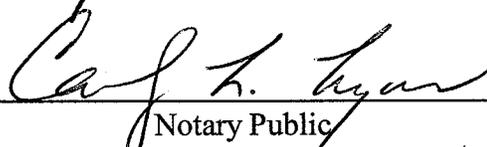
He is a graduate electrical engineer of the Pennsylvania State University, and is a staff engineer at Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1300 L Street, N.W., Suite 1100, Washington, D.C. 20005;

That the attached engineering report was prepared by him or under his supervision and direction and

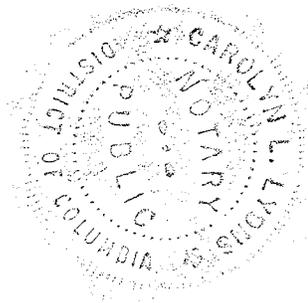
That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true.


Martin R. Doczkat

Subscribed and sworn to before me this 29th day of April, 2005.


Notary Public

My Commission Expires: 2/28/2008



Introduction

This engineering statement has been prepared on behalf of Eastern Illinois University (“WEIU”), licensee of TV station WEIU-TV, Charleston, Illinois, in support of its request to make a minor modification in its DTV construction permit (FCC File No. BMPEDT-20041101AHH). WEIU-TV has been allotted Channel 50 (686-692 MHz) with 50 kW (directional maximum ERP) and 70.0 meters HAAT. In its construction permit (FCC File No. BMPEDT-20041101AHH), WEIU-TV is authorized facilities of 255 kW (non-directional) with a HAAT of 146 meters. This engineering statement and accompanying Section VII of FCC Form 340 and related exhibits propose to amend the construction permit by proposing a directional antenna requesting facilities of 255 kW ERP (directional) and an HAAT of 146 meters.

Further, at present, WEIU-TV has a construction permit for NTSC TV Channel 51+ (692-698 MHz) with 50.0 kW non-directional effective radiated power (“ERP”) and 180.2 meters antenna height above average terrain (“HAAT”). WEIU-TV also has an application for modification of its NTSC construction permit requesting facilities of 72.5 kW ERP and a HAAT of 146 meters.

It is important to note that WEIU-TV will be simultaneously submitting a request to amend its pending NTSC application for construction permit (FCC File No. BMPET-20041101AHI) which proposes to duplex these two stations using the same proposed directional antenna.

Antenna Site

The proposed WEIU-DT antenna site is the same site as previously requested in the outstanding construction permit, 7 miles north-northwest of the Coles County Memorial, Charleston, Illinois. The FAA has approved the structure (FAA Study No. 2004-AGL-5279-OE). The Antenna Structure Registration number is 1245858.

The geographic coordinates of this structure are as follows:

North Latitude: 39° 34' 15.0"

West Longitude: 88° 18' 25.5"

(NAD-27)

The WEIU-DT antenna will be side-mounted at a radiation center of at 144.0 meters (472.3 feet) above ground level. The following data shows the pertinent information concerning the proposed operation.

Power Data

Transmitter output	7.80 kW	8.92 dBk
Combiner loss (STF N-1 combiner or equivalent)	89.1%	0.50 dB
Transmission line loss	85.6%	0.67 dB
Input power to the antenna	5.96 kW	7.75 dBk
Antenna power gain, Main Lobe	42.9	16.32 dB
Effective Radiated Power, Maximum	255 kW	24.07 dBk

Antenna and Elevation Data

Antenna:	ERI	ALP24M2-HSOC-50
	Beam Tilt	0.5° electrical
	Directional Max. Power Gain	42.9 16.32 dB (See Exhibits E-2a - E-2c per §73.625(c))
Elevation of the site above mean sea level:		207.3 meters (680 feet)
Elevation of the top of the existing supporting structure above ground including appurtenances		150 meters (492 feet)

Elevation of the top of supporting structure above mean sea level including appurtenances	357.3 meters (1172 feet)
Height of DTV antenna radiation center meters above ground	144.0 meters (472.3 feet)
Height of DTV antenna radiation center above mean sea level	351.3 meters (1152.6 feet)
Height of DTV antenna radiation center above average terrain	146 meters (479 feet)

Authorized Effective Radiated Power

The maximum ERP authorized by the outstanding construction permit for the DTV operation is 255 kW non-directional at 146 meters HAAT. Station WEIU-DT is proposing to operate its facility with a maximum ERP of 255 kW directional at 146 meters HAAT using a directional transmitting antenna from the same site authorized by the existing construction permit.

The attached coverage map (Exhibit E-3) shows the computed F(50,90) 48 dBu and 41 dBu contour as predicted according to Section 73.625(b) of the Commission's rules. Exhibit E-4 shows the computed F(50,90) 41 dBu contours for the proposed directional operation and the currently authorized construction permit. The proposed operation does not extend beyond the authorized F(50,90) 41 dBu contour in any direction.

Principal Community Coverage

In MM Docket No. 00-39, the Commission adopted rules to require DTV stations to place a stronger TV signal over the principal community. The operation proposed by WEIU-DT places a predicted 48 dBu contour over the entire community of Charleston, Illinois.

Topographic Data

The average elevation data along each radial spaced at 10° beginning with True North from 3.2 to 16.1 kilometers, are based on the NGDC 3-second computerized terrain database.

Contour Data

Utilizing the formula in Section 73.625(b)(2) for the effective heights shown on the attached tabulation, the depression angle A_n , for each azimuth has been calculated. The maximum radiation value has been used to calculate ERP where the vertical radiation pattern at these angles is greater than 90% of the maximum.

Table I provides the distances along radials for every ten degrees to the predicted F(50,90) 48 dBu and 41 dBu contours, the average elevations, and the effective antenna heights.

The distances along each radial to the limits of F(50,90) 48 dBu and 41 dBu contours were determined as specified in Section 73.625(b) by reference to the propagation data for Channels 14-69, as published by the Commission in Figures 10b and 10c, Section 73.699 of its rules.

Interference Study in Accordance with §73.622 of the FCC's Rules

Since the only change proposed from the authorized facility is a directional antenna which is predicted to be contained completely within that authorized, a comprehensive Longley-Rice study is not required. The current proposal should cause no new interference above that allowed by the currently authorized construction permit and the Commission's rules.

Other Proposed or Licensed Broadcast Facilities

There is no FM station and one other proposed TV station (WEIU-TV) located within 100 meters of the proposed site. No objectionable interference problems are anticipated. However, if any problems occur, the permittee will take the necessary steps to resolve them. There are no AM stations within 3.22 km of the proposed site.

Environment Statement

The diplexed NTSC and DTV antenna will be side-mounted on the existing tower at 144.0 meters (472.3 feet) above ground. The following broadcast stations propose to operate from the tower:

WEIU-TV

WEIU-DT

The radiofrequency field level (“RFF”) contribution of the two stations will be calculated and summed to form a total representative value for a point 2 meters above ground at the base of the tower.

Station WEIU-TV (proposed, yet to be filed)

Channel 51+ Freq: 692-698 MHz Range

$$S = \frac{33.4 (F^2) ERP}{R^2}$$

ERP =	72.5 kW (Horizontal only)
R =	142.0 meters (antenna height above ground -2 meters)
F =	0.3 (based on maximum field from 10 to 90 degrees below the horizontal)

$$S = 5.4 \mu\text{W}/\text{cm}^2$$

The limit for an uncontrolled environment (general population) for this frequency is 463.3 $\mu\text{W}/\text{cm}^2$.

WEIU-TV contributes less than 1.2% RFF level for an uncontrolled environment (general population) two meters above the ground.

Station WEIU-DT (proposed)

Channel 50 Freq: 686-692 MHz Range

$$S = \frac{33.4 (F^2) ERP}{R^2}$$

ERP =	255 kW (Horizontal only)
R =	142.0 meters (antenna height above ground -2 meters)
F =	0.3 (based on maximum field from 10 to 90 degrees below the horizontal, see Exhibit E-2)

$$S = 38.0 \mu\text{W}/\text{cm}^2$$

The limit for an uncontrolled environment (general population) for this frequency is 459.3 $\mu\text{W}/\text{cm}^2$.

WEIU-DT contributes less than 8.3% RFF level for an uncontrolled environment (general population) two meters above the ground.

Therefore the total RFF percentage two meters above the ground at the highest RFF point will still be less than 10% of the limit, when all transmitting antennas on the tower are operational.

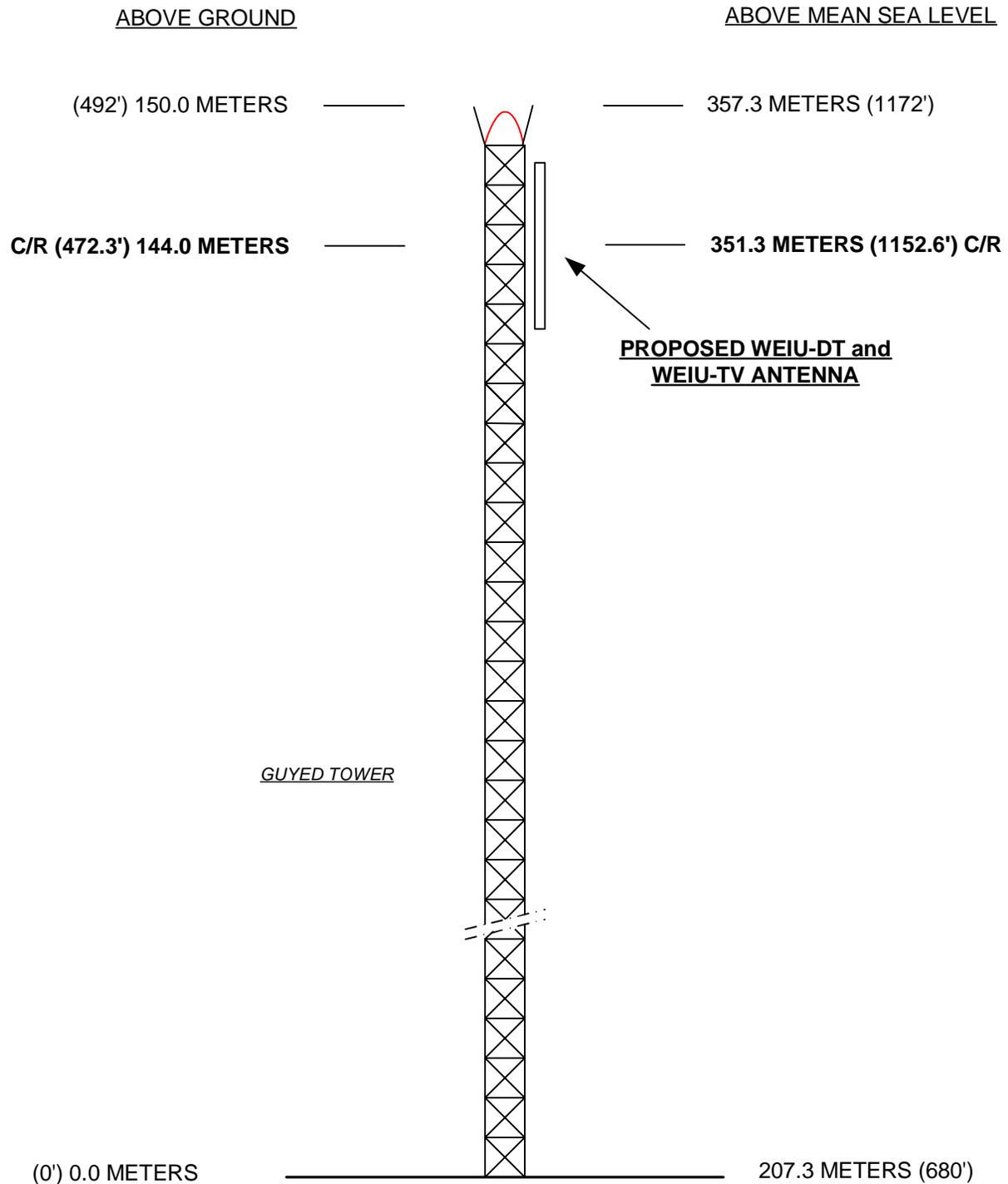
The permittee indicates that all authorized personnel climbing the tower will be alerted to the potential zones of high radiation, and if necessary, the station will operate with reduced power or terminated power should the situation require.

Summary of Environmental Assessment

An environmental assessment (“EA”) is categorically excluded under Section 1.1306 of the FCC Rules and Regulations since the permittee indicates:

- (a)(1) The proposed facilities will not be located in an officially designated wilderness area.
- (a)(2) The proposed facilities will not be located in an officially designated wildlife preserve.
- (a)(3) The proposed facilities will not affect any listed threatened or endangered species or habitats.
- (a)(3)(ii) The proposed facilities will not jeopardize the continued existence of any proposed endangered or threatened species or likely to result in the destruction or adverse modification of proposed critical habitats.
- (a)(4) The proposed facilities will not affect any known districts, sites, buildings, structures, or objects significant in American history, architecture, archaeology, engineering, or culture.
- (a)(5) The proposed facilities will not be located near any known Indian religious sites.
- (a)(6) The proposed facilities will not be located in a flood plain.
- (a)(7) The installation of the DTV facilities will not involve a significant change in surface features of the ground in the vicinity of the tower.
- (a)(8) It is not proposed to equip the tower with high intensity white lights unless required by the FAA.

- (b) Workers and the general public will not be subjected to RFF levels in excess of the current FCC guidelines in accordance with OET Bulletin 65 (Edition 97-01) and Supplement A. Authorized personnel will be alerted to areas of the antennas where potential radiation levels are in excess of the FCC guidelines.



NOT TO SCALE

EXHIBIT E - 1
 VERTICAL SKETCH
 FOR THE PROPOSED OPERATION OF
WEIU-DT, CHARLESTON, ILLINOIS
 APRIL 2005

TABLE I
COMPUTED COVERAGE DATA
FOR THE PROPOSED DTV OPERATION OF
WEIU-DT, CHARLESTON, ILLINOIS
CHANNEL 50 255 KW ERP 146 METERS HAAT
APRIL 2005

<u>Radial</u> N ° E, T	<u>Average*</u>	<u>Effective</u>	<u>Depression</u>	<u>ERP</u> kW	<u>Distance to Contour</u>	
	<u>Elevation</u> meters	<u>Height</u> meters	<u>Angle</u> degrees		<u>48 dBu</u> km	<u>41 dBu</u> km
0	202.9	149.1	0.338	94.3	59.0	66.2
10	201.1	150.9	0.340	92.4	59.0	66.3
20	201.6	150.4	0.340	94.6	59.1	66.4
30	202.0	150.0	0.339	101.5	59.4	66.6
40	203.3	148.7	0.338	113.8	59.9	67.1
50	205.1	146.9	0.336	130.4	60.4	67.5
60	207.0	145.0	0.333	150.0	60.9	68.0
70	206.3	145.7	0.334	171.5	61.5	68.7
80	207.1	144.9	0.333	193.5	62.0	69.2
90	208.2	143.8	0.332	213.5	62.4	69.6
100	208.6	143.4	0.332	230.6	62.7	70.0
110	206.7	145.3	0.334	243.9	63.1	70.4
120	203.5	148.5	0.338	251.9	63.4	70.9
130	203.5	148.5	0.338	255.0	63.5	70.9
140	196.0	156.0	0.346	251.9	64.0	71.5
150	203.3	148.7	0.338	243.9	63.3	70.7
160	207.7	144.3	0.333	230.6	62.7	70.1
170	210.9	141.1	0.329	213.5	62.2	69.4
180	213.3	138.7	0.326	193.5	61.5	68.7
190	215.9	136.1	0.323	171.5	60.8	67.9
200	216.6	135.4	0.322	150.0	60.1	67.3
210	214.8	137.2	0.324	130.4	59.6	66.8
220	214.2	137.8	0.325	113.8	59.0	66.2
230	214.0	138.0	0.325	101.5	58.5	65.7
240	207.2	144.8	0.333	94.6	58.7	65.9
250	204.2	147.8	0.337	92.4	58.8	66.0
260	202.8	149.2	0.338	94.3	59.0	66.2
270	200.2	151.8	0.341	99.0	59.4	66.7
280	200.9	151.1	0.340	105.1	59.7	66.9

TABLE I
COMPUTED COVERAGE DATA
FOR THE PROPOSED DTV OPERATION OF
WEIU-DT, CHARLESTON, ILLINOIS
CHANNEL 50 255 KW ERP 146 METERS HAAT
APRIL 2005
(continued)

<u>Radial</u> N ° E, T	<u>Average*</u>	<u>Effective</u>	<u>Depression</u>	<u>ERP</u> kW	<u>Distance to Contour</u>	
	<u>Elevation</u> meters	<u>Height</u> meters	<u>Angle</u> degrees		<u>48 dBu</u> km	<u>41 dBu</u> km
290	200.9	151.1	0.340	110.7	59.9	67.1
300	200.1	151.9	0.341	115.2	60.2	67.4
310	200.0	152.0	0.342	116.5	60.2	67.4
320	198.5	153.5	0.343	115.2	60.3	67.5
330	197.5	154.5	0.344	110.7	60.2	67.4
340	198.8	153.2	0.343	105.1	59.8	67.0
350	202.3	149.7	0.339	99.0	59.3	66.5

*Based on data from FCC 3-second data base.

DTV Channel 50 (686-692 MHz)
Average Elevation 3.2 to 16.1 km 205.3 meters AMSL
Center of Radiation 351.3 meters AMSL
Antenna Height Above Average Terrain 146 meters
Effective Radiated Power 255 kW (24.07 dBk) Max

North Latitude: 39° 34' 15"
West Longitude: 88° 18' 25.5"

(NAD-27)

EXHIBIT E-2

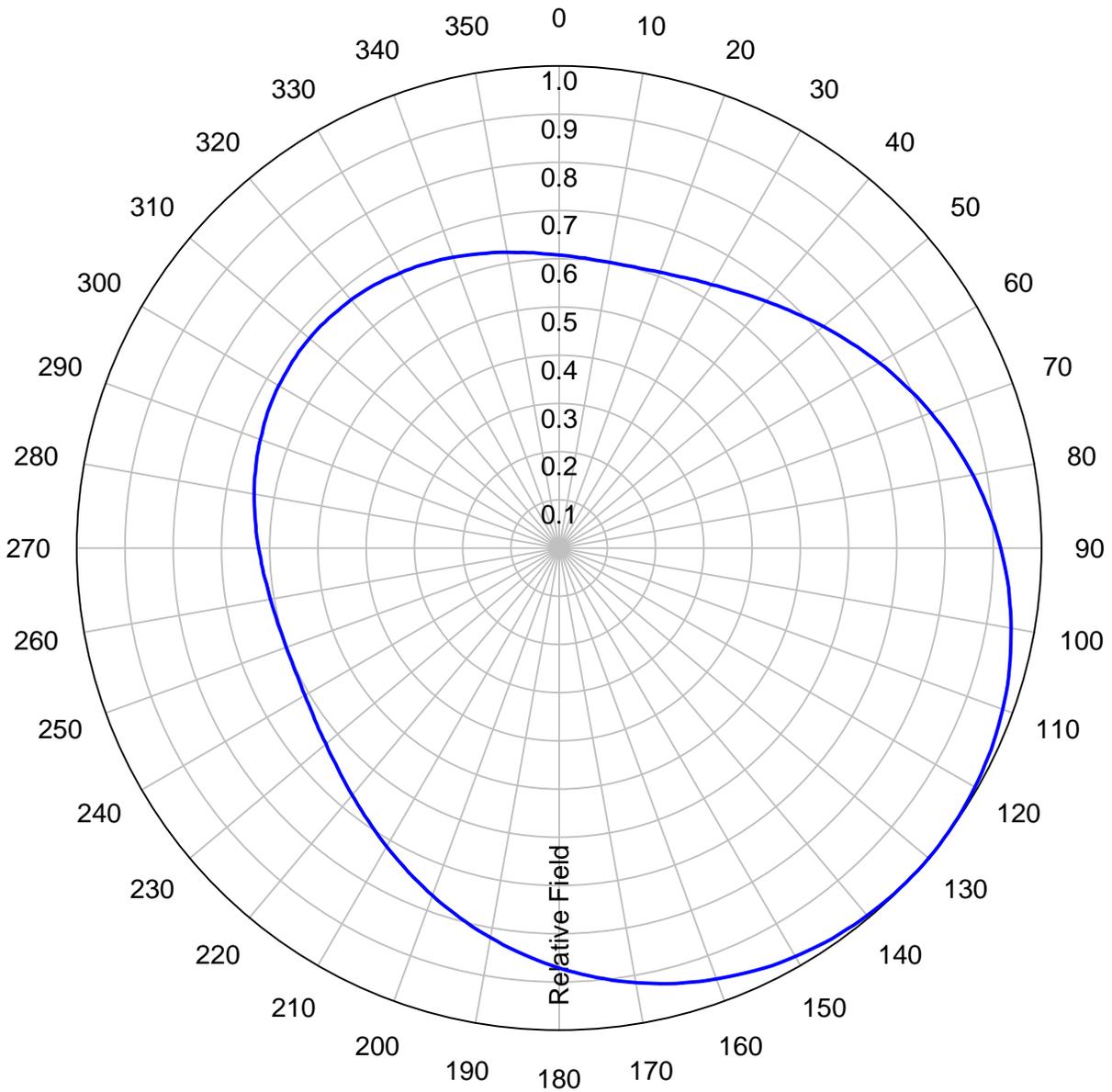
ANTENNA MANUFACTURER DATA
WEIU-DT, CHARLESTON, ILLINOIS



AZIMUTH PATTERN

Type: ALP-OC

	Numeric	dBd
Directivity:	<u>1.70</u>	<u>2.30</u>
Peak(s) at:		
Polarization:	<u>Horizontal</u>	
Channel:	<u>50</u>	
Location:		
Note:		



Electronics Research, Inc.
7777 Gardner Road
Chandler, Indiana U.S.A 47610



AZIMUTH TABULATED DATA

Type: ALP-OC

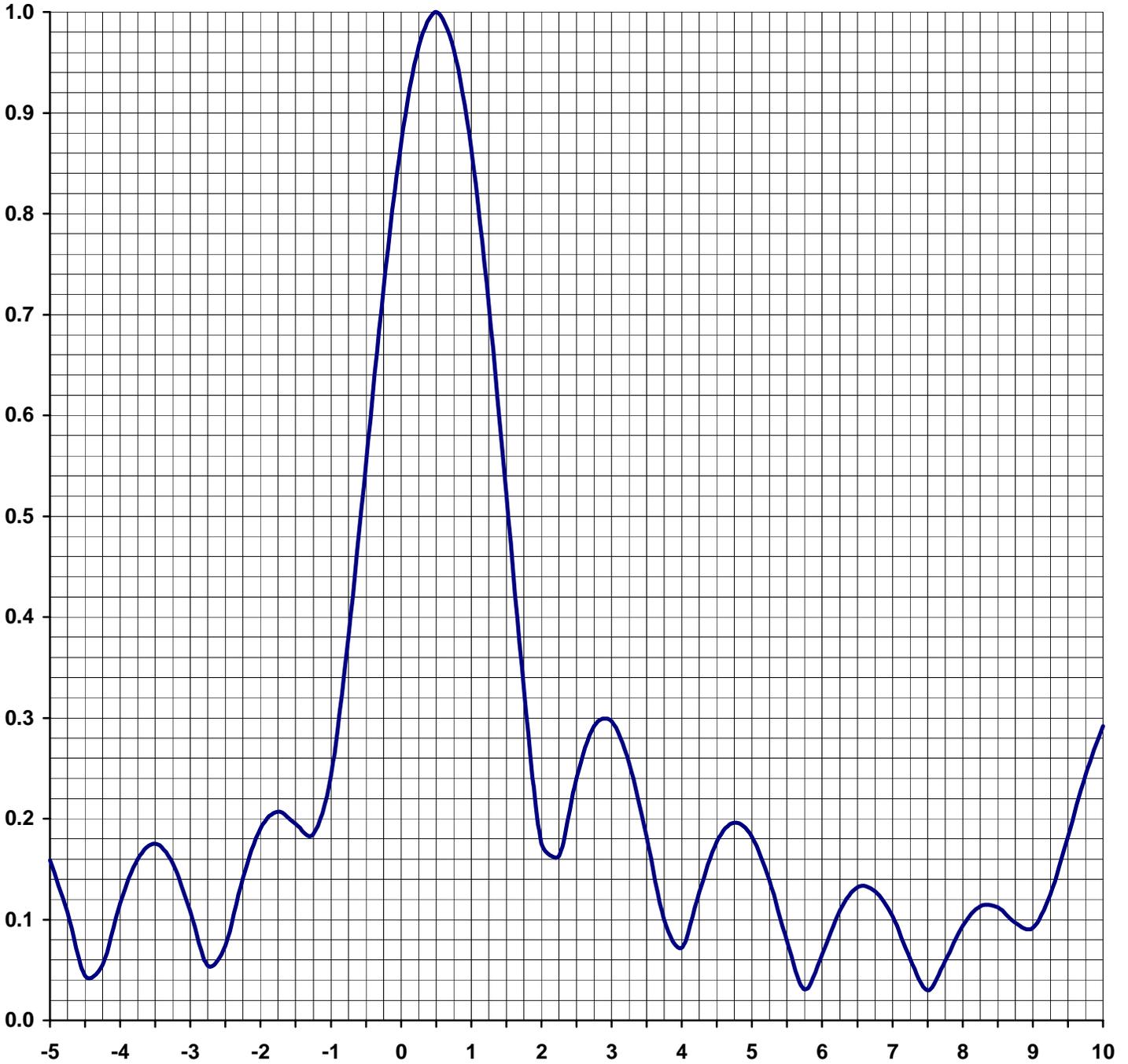
Polarization: Horizontal

Angle	Field	dB									
0	0.608	-4.32	92	0.923	-0.70	184	0.851	-1.40	276	0.634	-3.96
2	0.606	-4.35	94	0.931	-0.62	186	0.841	-1.50	278	0.638	-3.90
4	0.604	-4.38	96	0.938	-0.56	188	0.831	-1.61	280	0.642	-3.85
6	0.603	-4.39	98	0.945	-0.49	190	0.820	-1.72	282	0.646	-3.80
8	0.602	-4.41	100	0.951	-0.44	192	0.810	-1.83	284	0.649	-3.76
10	0.602	-4.41	102	0.957	-0.38	194	0.799	-1.95	286	0.653	-3.70
12	0.602	-4.41	104	0.963	-0.33	196	0.788	-2.07	288	0.656	-3.66
14	0.603	-4.39	106	0.969	-0.27	198	0.778	-2.18	290	0.659	-3.62
16	0.604	-4.38	108	0.974	-0.23	200	0.767	-2.30	292	0.662	-3.58
18	0.606	-4.35	110	0.978	-0.19	202	0.756	-2.43	294	0.665	-3.54
20	0.609	-4.31	112	0.982	-0.16	204	0.746	-2.55	296	0.668	-3.50
22	0.612	-4.26	114	0.986	-0.12	206	0.735	-2.67	298	0.670	-3.48
24	0.616	-4.21	116	0.989	-0.10	208	0.725	-2.79	300	0.672	-3.45
26	0.621	-4.14	118	0.992	-0.07	210	0.715	-2.91	302	0.673	-3.44
28	0.626	-4.07	120	0.994	-0.05	212	0.705	-3.04	304	0.674	-3.43
30	0.631	-4.00	122	0.996	-0.03	214	0.695	-3.16	306	0.675	-3.41
32	0.638	-3.90	124	0.998	-0.02	216	0.686	-3.27	308	0.676	-3.40
34	0.644	-3.82	126	0.999	-0.01	218	0.677	-3.39	310	0.676	-3.40
36	0.652	-3.72	128	1.000	0.00	220	0.668	-3.50	312	0.676	-3.40
38	0.660	-3.61	130	1.000	0.00	222	0.660	-3.61	314	0.675	-3.41
40	0.668	-3.50	132	1.000	0.00	224	0.652	-3.72	316	0.674	-3.43
42	0.677	-3.39	134	0.999	-0.01	226	0.644	-3.82	318	0.673	-3.44
44	0.686	-3.27	136	0.998	-0.02	228	0.638	-3.90	320	0.672	-3.45
46	0.695	-3.16	138	0.996	-0.03	230	0.631	-4.00	322	0.670	-3.48
48	0.705	-3.04	140	0.994	-0.05	232	0.626	-4.07	324	0.668	-3.50
50	0.715	-2.91	142	0.992	-0.07	234	0.621	-4.14	326	0.665	-3.54
52	0.725	-2.79	144	0.989	-0.10	236	0.616	-4.21	328	0.662	-3.58
54	0.735	-2.67	146	0.986	-0.12	238	0.612	-4.26	330	0.659	-3.62
56	0.746	-2.55	148	0.982	-0.16	240	0.609	-4.31	332	0.656	-3.66
58	0.756	-2.43	150	0.978	-0.19	242	0.606	-4.35	334	0.653	-3.70
60	0.767	-2.30	152	0.974	-0.23	244	0.604	-4.38	336	0.649	-3.76
62	0.778	-2.18	154	0.969	-0.27	246	0.603	-4.39	338	0.646	-3.80
64	0.788	-2.07	156	0.963	-0.33	248	0.602	-4.41	340	0.642	-3.85
66	0.799	-1.95	158	0.957	-0.38	250	0.602	-4.41	342	0.638	-3.90
68	0.810	-1.83	160	0.951	-0.44	252	0.602	-4.41	344	0.634	-3.96
70	0.820	-1.72	162	0.945	-0.49	254	0.603	-4.39	346	0.630	-4.01
72	0.831	-1.61	164	0.938	-0.56	256	0.604	-4.38	348	0.627	-4.05
74	0.841	-1.50	166	0.931	-0.62	258	0.606	-4.35	350	0.623	-4.11
76	0.851	-1.40	168	0.923	-0.70	260	0.608	-4.32	352	0.619	-4.17
78	0.861	-1.30	170	0.915	-0.77	262	0.610	-4.29	354	0.616	-4.21
80	0.871	-1.20	172	0.907	-0.85	264	0.613	-4.25	356	0.613	-4.25
82	0.880	-1.11	174	0.898	-0.93	266	0.616	-4.21	358	0.610	-4.29
84	0.889	-1.02	176	0.889	-1.02	268	0.619	-4.17	360	0.608	-4.32
86	0.898	-0.93	178	0.880	-1.11	270	0.623	-4.11			
88	0.907	-0.85	180	0.871	-1.20	272	0.627	-4.05			
90	0.915	-0.77	182	0.861	-1.30	274	0.630	-4.01			



ELEVATION PATTERN

TYPE:	ALP24M2H	
Directivity:	Numeric	dBd
Main Lobe:	25.21	14.02
Horizontal:	19.08	12.81
Beam Tilt:	0.50	
Polarization:	Horizontal	
Frequency:	51(NTSC)/50(DTV)	
Location:	Charleston, IL	



TABULATED DATA FOR ELEVATION PATTERN

TYPE: ALP24M2H

-5 to 10 degrees in 0.25 increments

10 to 90 degrees in 0.50 increments

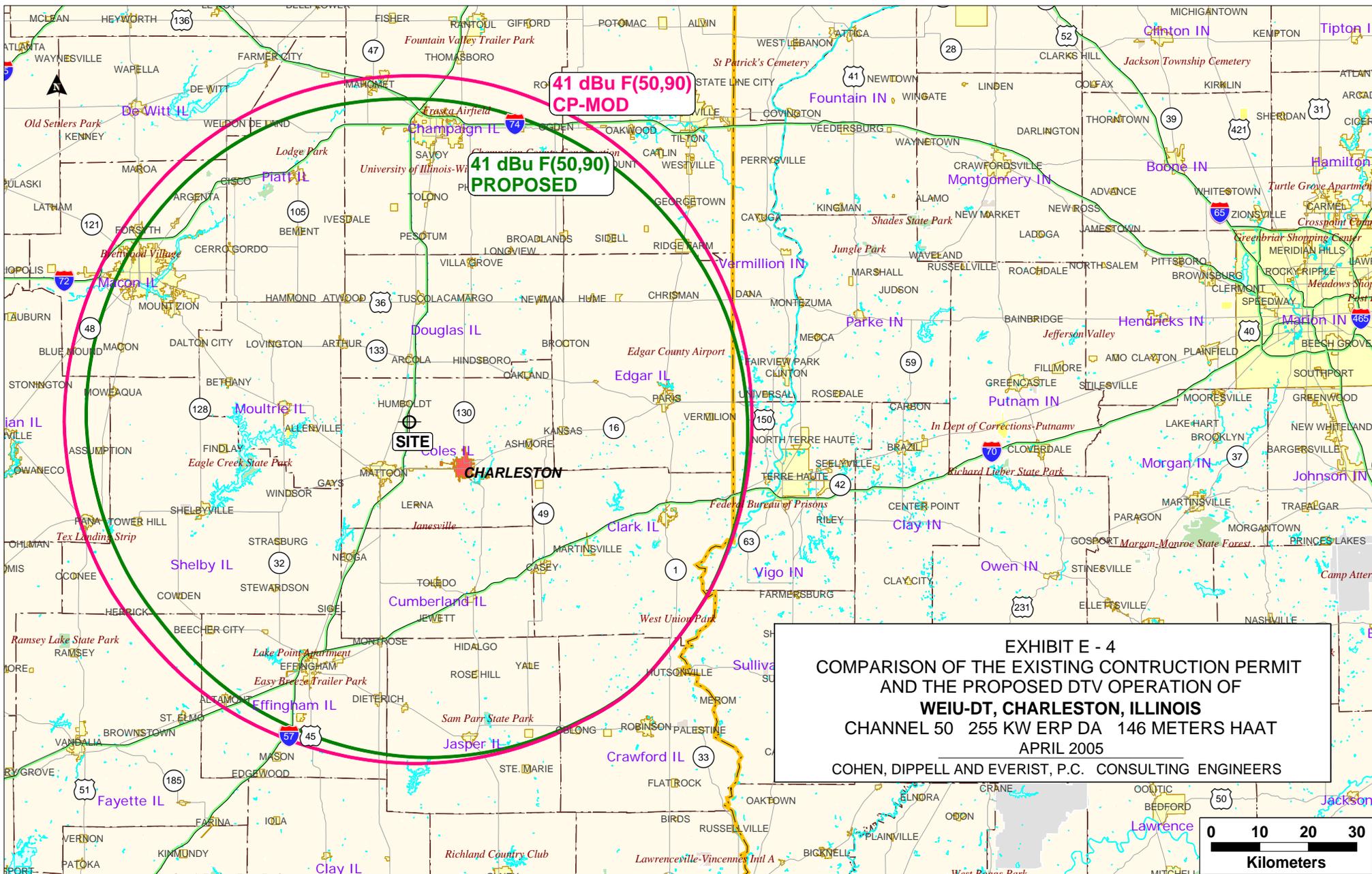
ANGLE	FIELD	dB												
-5.00	0.159	-15.97	6.75	0.128	-17.86	27.00	0.005	-46.02	50.50	0.009	-40.92	74.00	0.036	-28.87
-4.75	0.107	-19.41	7.00	0.103	-19.74	27.50	0.013	-37.72	51.00	0.005	-46.02	74.50	0.042	-27.54
-4.50	0.044	-27.13	7.25	0.061	-24.29	28.00	0.015	-36.48	51.50	0.012	-38.42	75.00	0.045	-26.94
-4.25	0.055	-25.19	7.50	0.030	-30.46	28.50	0.008	-41.94	52.00	0.022	-33.15	75.50	0.046	-26.74
-4.00	0.116	-18.71	7.75	0.059	-24.58	29.00	0.002	-53.98	52.50	0.026	-31.70	76.00	0.044	-27.13
-3.75	0.160	-15.92	8.00	0.094	-20.54	29.50	0.003	-50.46	53.00	0.024	-32.40	76.50	0.041	-27.74
-3.50	0.175	-15.14	8.25	0.113	-18.94	30.00	0.000	#NUM!	53.50	0.015	-36.48	77.00	0.037	-28.64
-3.25	0.156	-16.14	8.50	0.112	-19.02	30.50	0.003	-50.46	54.00	0.005	-46.02	77.50	0.032	-29.90
-3.00	0.108	-19.33	8.75	0.097	-20.26	31.00	0.010	-40.00	54.50	0.017	-35.39	78.00	0.026	-31.70
-2.75	0.054	-25.35	9.00	0.092	-20.72	31.50	0.030	-30.46	55.00	0.029	-30.75	78.50	0.020	-33.98
-2.50	0.074	-22.62	9.25	0.125	-18.06	32.00	0.060	-24.44	55.50	0.035	-29.12	79.00	0.015	-36.48
-2.25	0.141	-17.02	9.50	0.182	-14.80	32.50	0.088	-21.11	56.00	0.033	-29.63	79.50	0.010	-40.00
-2.00	0.190	-14.42	9.75	0.243	-12.29	33.00	0.101	-19.91	56.50	0.022	-33.15	80.00	0.006	-44.44
-1.75	0.207	-13.68	10.00	0.292	-10.69	33.50	0.092	-20.72	57.00	0.010	-40.00	80.50	0.005	-46.02
-1.50	0.195	-14.20	10.50	0.331	-9.60	34.00	0.061	-24.29	57.50	0.022	-33.15	81.00	0.006	-44.44
-1.25	0.185	-14.66	11.00	0.280	-11.06	34.50	0.026	-31.70	58.00	0.038	-28.40	81.50	0.008	-41.94
-1.00	0.243	-12.29	11.50	0.173	-15.24	35.00	0.035	-29.12	58.50	0.049	-26.20	82.00	0.010	-40.00
-0.75	0.381	-8.38	12.00	0.066	-23.61	35.50	0.052	-25.68	59.00	0.051	-25.85	82.50	0.011	-39.17
-0.50	0.553	-5.15	12.50	0.027	-31.37	36.00	0.049	-26.20	59.50	0.047	-26.56	83.00	0.012	-38.42
-0.25	0.726	-2.78	13.00	0.036	-28.87	36.50	0.027	-31.37	60.00	0.051	-25.85	83.50	0.012	-38.42
0.00	0.870	-1.21	13.50	0.021	-33.56	37.00	0.016	-35.92	60.50	0.078	-22.16	84.00	0.012	-38.42
0.25	0.966	-0.30	14.00	0.004	-47.96	37.50	0.037	-28.64	61.00	0.120	-18.42	84.50	0.012	-38.42
0.50	1.000	0.00	14.50	0.000	#NUM!	38.00	0.045	-26.94	61.50	0.167	-15.55	85.00	0.012	-38.42
0.75	0.963	-0.33	15.00	0.008	-41.94	38.50	0.035	-29.12	62.00	0.211	-13.51	85.50	0.011	-39.17
1.00	0.864	-1.27	15.50	0.013	-37.72	39.00	0.012	-38.42	62.50	0.246	-12.18	86.00	0.010	-40.00
1.25	0.709	-2.99	16.00	0.005	-46.02	39.50	0.017	-35.39	63.00	0.268	-11.44	86.50	0.009	-40.92
1.50	0.522	-5.65	16.50	0.016	-35.92	40.00	0.033	-29.63	63.50	0.276	-11.18	87.00	0.008	-41.94
1.75	0.329	-9.66	17.00	0.029	-30.75	40.50	0.034	-29.37	64.00	0.267	-11.47	87.50	0.006	-44.44
2.00	0.175	-15.14	17.50	0.023	-32.77	41.00	0.021	-33.56	64.50	0.245	-12.22	88.00	0.005	-46.02
2.25	0.163	-15.76	18.00	0.011	-39.17	41.50	0.009	-40.92	65.00	0.212	-13.47	88.50	0.004	-47.96
2.50	0.240	-12.40	18.50	0.036	-28.87	42.00	0.024	-32.40	65.50	0.170	-15.39	89.00	0.003	-50.46
2.75	0.292	-10.69	19.00	0.046	-26.74	42.50	0.033	-29.63	66.00	0.126	-17.99	89.50	0.001	-60.00
3.00	0.297	-10.54	19.50	0.044	-27.13	43.00	0.029	-30.75	66.50	0.083	-21.62	90.00	0.000	#NUM!
3.25	0.255	-11.87	20.00	0.098	-20.18	43.50	0.027	-31.37	67.00	0.050	-26.02			
3.50	0.182	-14.80	20.50	0.179	-14.94	44.00	0.044	-27.13	67.50	0.042	-27.54			
3.75	0.100	-20.00	21.00	0.236	-12.54	44.50	0.068	-23.35	68.00	0.056	-25.04			
4.00	0.072	-22.85	21.50	0.241	-12.36	45.00	0.084	-21.51	68.50	0.071	-22.97			
4.25	0.127	-17.92	22.00	0.189	-14.47	45.50	0.086	-21.31	69.00	0.080	-21.94			
4.50	0.177	-15.04	22.50	0.103	-19.74	46.00	0.074	-22.62	69.50	0.082	-21.72			
4.75	0.196	-14.15	23.00	0.036	-28.87	46.50	0.054	-25.35	70.00	0.078	-22.16			
5.00	0.182	-14.80	23.50	0.059	-24.58	47.00	0.032	-29.90	70.50	0.068	-23.35			
5.25	0.139	-17.14	24.00	0.067	-23.48	47.50	0.014	-37.08	71.00	0.055	-25.19			
5.50	0.079	-22.05	24.50	0.043	-27.33	48.00	0.003	-50.46	71.50	0.040	-27.96			
5.75	0.031	-30.17	25.00	0.014	-37.08	48.50	0.000	#NUM!	72.00	0.026	-31.70			
6.00	0.065	-23.74	25.50	0.030	-30.46	49.00	0.004	-47.96	72.50	0.018	-34.89			
6.25	0.109	-19.25	26.00	0.036	-28.87	49.50	0.009	-40.92	73.00	0.020	-33.98			
6.50	0.132	-17.59	26.50	0.023	-32.77	50.00	0.011	-39.17	73.50	0.028	-31.06			



EXHIBIT E - 3
COMPUTED COVERAGE CONTOURS
FOR THE PROPOSED DTV OPERATION OF
WEIU-DT, CHARLESTON, ILLINOIS
CHANNEL 50 255 KW ERP DA 146 METERS HAAT
 APRIL 2005

COHEN, DIPPPELL AND EVERIST, P.C. CONSULTING ENGINEERS

0 10 20 30
 Kilometers
 CREATED WITH MAPITUDE(r) GIS FOR WINDOWS FROM CALIPER CORPORATION



SECTION VII- DTV Engineering

Complete Questions 1-5 of the Certification Checklist and provide all data and information for the proposed facility, as requested in Technical Specifications, Items 1-13.

Certification Checklist: A correct answer of "Yes" to all of the questions below will ensure an expeditious grant of a construction permit. However, if the proposed facility is located within the Canadian or Mexican borders, coordination of the proposal under the appropriate treaties may be required prior to grant of the application. An answer of "No" will require additional evaluation of the applicable information in this form before a construction permit can be granted.

1. The proposed DTV facility complies with 47 C.F.R. Section 73.622 in the following respects:

- (a) It will operate on the DTV channel for this station as established in 47 C.F.R. Section 73.622. Yes No
- (b) It will operate from a transmitting antenna located within 5.0 km (3.1 miles) of the DTV reference site for this station as established in 47 C.F.R. Section 73.622. Yes No
- (c) It will operate with an effective radiated power (ERP) and antenna height above average terrain (HAAT) that do not exceed the DTV reference ERP and HAAT for this station as established in 47 C.F.R. Section 73.622. Yes No

2. The proposed facility will not have a significant environmental impact, including exposure of workers or the general public to levels of RF radiation exceeding the applicable health and safety guidelines, and therefore will not come within 47 C.F.R. Section 1.1307. Yes No

Applicant must **submit the Exhibit** called for in Item 13.

3. Pursuant to 47 C.F.R. Section 73.625, the DTV coverage contour of the proposed facility will encompass the allotted principal community. Yes No
4. The requirements of 47 C.F.R. Section 73.1030 regarding notification to radio astronomy installations, radio receiving installations and FCC monitoring stations have either been satisfied or are not applicable. Yes No
5. The antenna structure to be used by this facility has been registered by the Commission and will not require reregistration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely effect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7. Yes No

SECTION VII - DTV Engineering

TECHNICAL SPECIFICATIONS

Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

TECH BOX

1. Channel Number: DTV _____ Analog TV, if any _____

2. Zone: I II III

3. Antenna Location Coordinates: (NAD 27)

_____ ° _____ ' _____ " N S Latitude
_____ ° _____ ' _____ " E W Longitude

4. Antenna Structure Registration Number: _____

Not applicable FAA Notification Filed with FAA

5. Antenna Location Site Elevation Above Mean Sea Level: _____ meters

6. Overall Tower Height Above Ground Level: _____ meters

7. Height of Radiation Center Above Ground Level: _____ meters

8. Height of Radiation Center Above Average Terrain: _____ meters

9. Maximum Effective Radiated Power (average power): _____ kW

10. Antenna Specifications:

a.	Manufacturer	Model
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b. Electrical Beam Tilt: _____ degrees Not Applicable

c. Mechanical Beam Tilt: _____ degrees toward azimuth _____ degrees True Not Applicable

Attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(c).

Exhibit No.

d. Polarization: Horizontal Circular Elliptical

TECH BOX

e. Directional Antenna Relative Field Values: Not applicable (Nondirectional)
 Rotation: _____ ° No rotation

Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value
0		60		120		180		240		300	
10		70		130		190		250		310	
20		80		140		200		260		320	
30		90		150		210		270		330	
40		100		160		220		280		340	
50		110		170		230		290		350	
Additional Azimuths											

If a directional antenna is proposed, the requirements of 47 C.F.R. Section 73.625(c) must be satisfied. **Exhibit required.**

Exhibit No.

11. Does the proposed facility satisfy the interference protection provisions of 47 C.F.R. Section 73.623(a)? (Applicable only if **Certification Checklist** Items 1(a), (b), or (c) are answered "No.") Yes No

If "No," attach as an Exhibit justification therefor, including a summary of any related previously granted waivers.

Exhibit No.

12. If the proposed facility will not satisfy the coverage requirement of 47 C.F.R. Section 73.625, attach as an Exhibit justification therefor. (Applicable only if **Certification Checklist** Item 3 is answered "No.")

Exhibit No.

13. **Environmental Protection Act. Submit in an Exhibit** the following:

Exhibit No.

a. If **Certification Checklist** Item 2 is answered "Yes," a brief explanation of why an Environmental Assessment is not required. Also describe in the Exhibit the steps that will be taken to limit RF radiation exposure to the public and to persons authorized access to the tower site.

By checking "Yes" to **Certification Checklist** Item 2, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic exposure in excess of FCC guidelines.

If **Certification Checklist** Item 2 is answered "No," an Environmental Assessment as required by 47 C.F.R. Section 1.1311.

PREPARER'S CERTIFICATION ON PAGE 8 MUST BE COMPLETED AND SIGNED.

Section VII -- Preparer's Certification

I certify that I have prepared Section VII (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name Martin R. Doczkat Cohen, Dippell and Everist, P.C.		Relationship to Applicant (e.g., Consulting Engineer) Consulting Engineer	
Signature <i>M R Doczkat</i>		Date <i>April 29, 2005</i>	
Mailing Address 1300 L Street, NW Suite 1100			
City Washington		State or Country (if foreign address) DC	ZIP Code 20005
Telephone Number (include area code) (202) 898-0111		E-Mail Address (if available) cde@attglobal.net	

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001),
AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)),
AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).