

Second Adjacent Exhibit & Waiver Request

Modification of Special Temporary Authority for existing location.

The attached D/U Ratio Study exported from V-Soft FM Probe 4 software calculates of estimated signal strength for WLYF at 93.33 dBuV/m, and WHYI-FM at 95.44 dBuV/m.

With additional 40 dBu protection, WLYF is protected to 133.33 dBuV/m.

Using a single-bay Nicom BKG-77 antenna, a worst-case interference radius of 2.8 meters will fall no lower than 2.4 meters below the center of radiation. Any residual interference will remain sufficiently cleared of any population or 4-laned roadways. No population will receive interference according to the D/U ratio method.

D/U Ratio Study via V-Soft Probe 4 software
Exported calculations of Engineering Study

WLYF signal calculations at reference point

Point Information Report

Latitude: 25-46-42.40 N

Longitude: 080-15-14 W

Signal Strength: 93.331 dBuV/m

Elevation: 0.5 m

Distance From Transmitter: 21.272 km

Azimuth From Transmitter: 191.42 degrees

Call Letters: WLYF

File Number: BLH20090828ADS

Latitude: 25-58-00 N

Longitude: 080-12-42.80 W

ERP: 100.00 kW

Channel: 268

Frequency: 101.5 MHz

AMSL Height: 250.2 m

Elevation: 2.1 m

Horiz. Antenna Pattern: Omni

Vert. Elevation Pattern: No

Point Information Report

Latitude: 25-46-42.40 N

Longitude: 080-15-14 W

Signal Strength: 95.439 dBuV/m

Elevation: 0.5 m

Distance From Transmitter: 21.382 km

Azimuth From Transmitter: 192.03 degrees

Call Letters: WHYI-FM

File Number: BLH20050225AAQ

Latitude: 25-58-02 N

Longitude: 080-12-34 W

ERP: 100.00 kW

Channel: 264

Frequency: 100.7 MHz

AMSL Height: 308.0 m

Elevation: 2.0 m

Horiz. Antenna Pattern: Directional

Vert. Elevation Pattern: No

Study Information:

D/U Ratio Study

Signal Resolution: 0.5 km

Study Date: 09/08/2019

Land Cover was not considered in this study.

Primary Terrain: V-Soft 30 Second US Database

Secondary Terrain: V-Soft 3 Second Alaska Terrain

Coordinate System: NAD27

Transmitters:

Transmitter Information:

Transmitter Information:

Call Letters: WDVS-LP

Latitude: 25-46-42.40 N

Longitude: 080-15-14 W

ERP: 0.01 kW

Channel: 266

Frequency: 101.1 MHz

AMSL Height: 19.0 m

Elevation: 3.0 m

Horiz. Antenna Pattern: Omni

Vert. Elevation Pattern: No

Propagation Model: Longley-Rice

Climate: Continental temperate

Conductivity: 0.0050

Dielectric Constant: 15.0

Refractivity: 311.0

Receiver Height AG: 9.1 m

Receiver Gain: 0 dB

Time Variability: 50.0%

Situation Variability: 50.0%

ITM Mode: Broadcast

Transmitter Information:

Transmitter Information:

Call Letters: WHYI-FM
File Number: BLH20050225AAQ
Latitude: 25-58-02 N
Longitude: 080-12-34 W
ERP: 100.00 kW
Channel: 264
Frequency: 100.7 MHz
AMSL Height: 308.0 m
Elevation: 2.0 m
Horiz. Antenna Pattern: Directional
Vert. Elevation Pattern: No
Propagation Model: Longley-Rice
Climate: Continental temperate
Conductivity: 0.0050
Dielectric Constant: 15.0
Refractivity: 311.0
Receiver Height AG: 9.1 m
Receiver Gain: 0 dB
Time Variability: 10.0%
Situation Variability: 50.0%
ITM Mode: Broadcast

Transmitter Information:

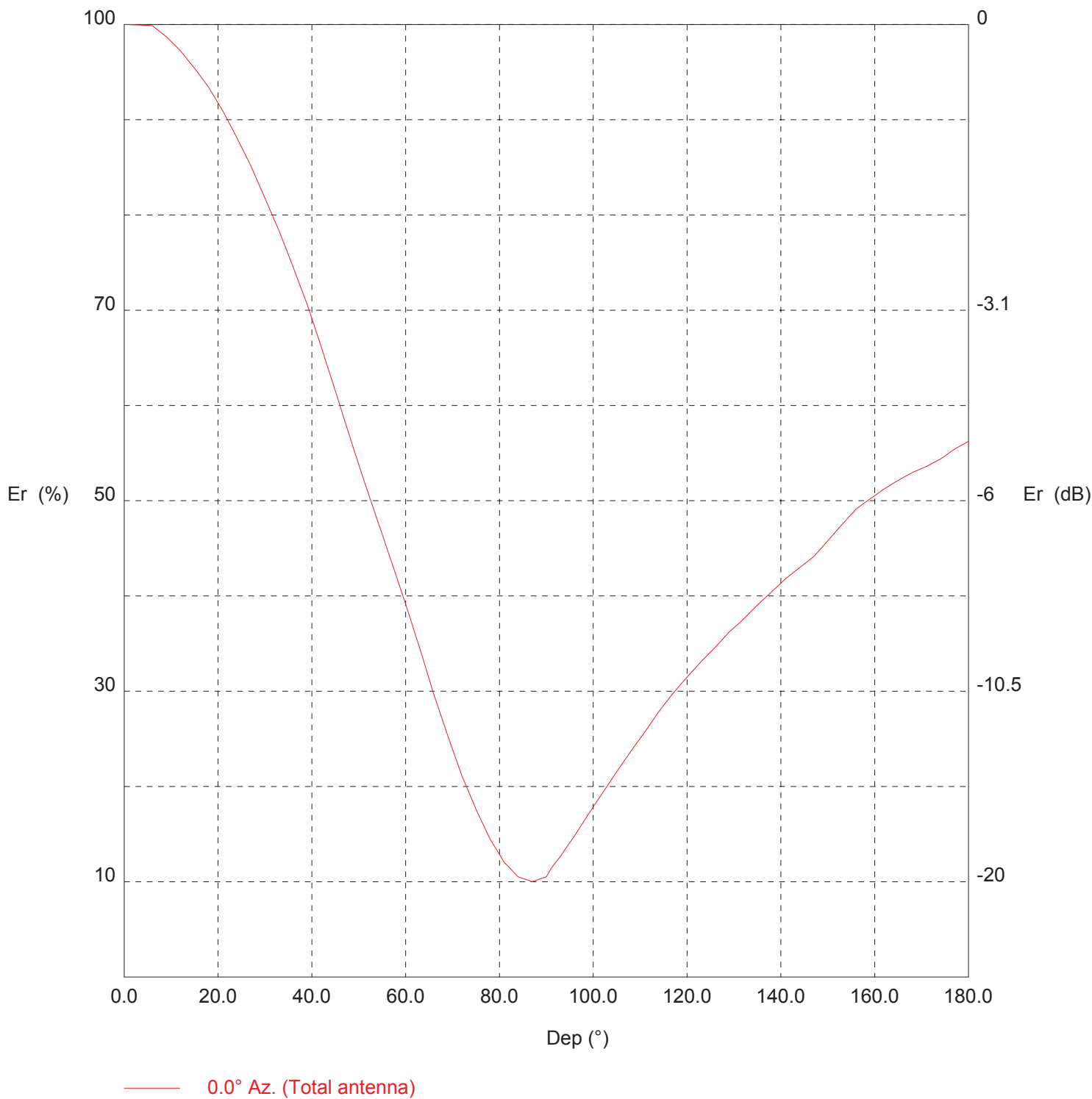
Call Letters: WLYF
File Number: BLH20090828ADS
Latitude: 25-58-00 N
Longitude: 080-12-42.80 W
ERP: 100.00 kW
Channel: 268
Frequency: 101.5 MHz
AMSL Height: 250.2 m
Elevation: 2.1 m
Horiz. Antenna Pattern: Omni
Vert. Elevation Pattern: No
Propagation Model: Longley-Rice
Climate: Continental temperate
Conductivity: 0.0050
Dielectric Constant: 15.0
Refractivity: 311.0
Receiver Height AG: 9.1 m
Receiver Gain: 0 dB
Time Variability: 50.0%
Situation Variability: 50.0%
ITM Mode: Broadcast

TX station:

Site name:

Frequency: 100.00 MHz

Vertical diagram



TX station:

Site name:

Frequency: 100.00 MHz

Vertical diagram at an azimuth of 0° degrees

Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)
0.0	100.0	373.6	60.0	39.1	57.2	120.0	31.5	37.0
1.0	100.0	373.5	61.0	37.6	52.8	121.0	32.0	38.3
2.0	100.0	373.4	62.0	36.1	48.6	122.0	32.6	39.6
3.0	99.9	373.3	63.0	34.5	44.6	123.0	33.1	41.0
4.0	99.9	373.1	64.0	32.9	40.5	124.0	33.6	42.2
5.0	99.9	372.9	65.0	31.3	36.6	125.0	34.1	43.5
6.0	99.9	372.8	66.0	29.7	33.0	126.0	34.6	44.7
7.0	99.5	369.9	67.0	28.2	29.8	127.0	35.2	46.2
8.0	99.1	367.0	68.0	26.8	26.8	128.0	35.7	47.6
9.0	98.7	364.1	69.0	25.3	23.9	129.0	36.2	49.1
10.0	98.2	360.5	70.0	23.9	21.3	130.0	36.7	50.3
11.0	97.7	356.9	71.0	22.5	18.9	131.0	37.1	51.5
12.0	97.2	353.3	72.0	21.1	16.6	132.0	37.6	52.7
13.0	96.6	348.9	73.0	19.9	14.8	133.0	38.1	54.1
14.0	96.0	344.5	74.0	18.8	13.2	134.0	38.6	55.6
15.0	95.4	340.1	75.0	17.6	11.6	135.0	39.1	57.0
16.0	94.7	335.4	76.0	16.6	10.2	136.0	39.5	58.4
17.0	94.1	330.8	77.0	15.5	9.0	137.0	40.0	59.7
18.0	93.4	326.1	78.0	14.5	7.8	138.0	40.4	61.1
19.0	92.6	320.4	79.0	13.7	7.0	139.0	40.9	62.5
20.0	91.8	314.7	80.0	12.9	6.2	140.0	41.4	63.9
21.0	91.0	309.1	81.0	12.0	5.4	141.0	41.8	65.3
22.0	90.0	302.7	82.0	11.5	5.0	142.0	42.2	66.5
23.0	89.1	296.5	83.0	11.0	4.5	143.0	42.6	67.8
24.0	88.1	290.3	84.0	10.5	4.1	144.0	43.0	69.0
25.0	87.2	283.8	85.0	10.3	4.0	145.0	43.4	70.3
26.0	86.2	277.4	86.0	10.2	3.9	146.0	43.8	71.6
27.0	85.2	271.1	87.0	10.0	3.7	147.0	44.1	72.8
28.0	84.0	263.9	88.0	10.2	3.9	148.0	44.7	74.7
29.0	82.9	256.8	89.0	10.4	4.0	149.0	45.3	76.5
30.0	81.8	249.8	90.0	10.5	4.1	150.0	45.8	78.4
31.0	80.6	242.9	91.0	11.4	4.8	151.0	46.4	80.3
32.0	79.5	236.1	92.0	12.0	5.4	152.0	46.9	82.3
33.0	78.3	229.3	93.0	12.7	6.0	153.0	47.5	84.3
34.0	77.1	222.0	94.0	13.4	6.7	154.0	48.0	86.2
35.0	75.8	214.7	95.0	14.1	7.4	155.0	48.6	88.2
36.0	74.5	207.6	96.0	14.8	8.2	156.0	49.1	90.2
37.0	73.2	200.4	97.0	15.6	9.1	157.0	49.5	91.5
38.0	71.9	193.3	98.0	16.4	10.0	158.0	49.8	92.8
39.0	70.6	186.3	99.0	17.1	11.0	159.0	50.2	94.1
40.0	69.1	178.6	100.0	17.9	11.9	160.0	50.5	95.4
41.0	67.6	170.9	101.0	18.6	12.9	161.0	50.9	96.8
42.0	66.1	163.5	102.0	19.3	13.9	162.0	51.2	98.1
43.0	64.6	156.0	103.0	20.1	15.0	163.0	51.5	99.2
44.0	63.1	148.7	104.0	20.8	16.2	164.0	51.8	100.4
45.0	61.6	141.6	105.0	21.5	17.3	165.0	52.1	101.6
46.0	60.0	134.4	106.0	22.3	18.5	166.0	52.4	102.7
47.0	58.4	127.5	107.0	23.0	19.7	167.0	52.7	103.7
48.0	56.8	120.7	108.0	23.7	21.0	168.0	53.0	104.8
49.0	55.3	114.4	109.0	24.4	22.2	169.0	53.2	105.7
50.0	53.8	108.2	110.0	25.1	23.5	170.0	53.4	106.5
51.0	52.3	102.2	111.0	25.7	24.8	171.0	53.6	107.4
52.0	50.8	96.6	112.0	26.5	26.2	172.0	53.9	108.4
53.0	49.4	91.1	113.0	27.2	27.6	173.0	54.1	109.4
54.0	47.9	85.8	114.0	27.9	29.0	174.0	54.4	110.5
55.0	46.5	80.7	115.0	28.5	30.4	175.0	54.7	111.9
56.0	45.0	75.7	116.0	29.2	31.8	176.0	55.1	113.3
57.0	43.6	71.0	117.0	29.8	33.1	177.0	55.4	114.7
58.0	42.1	66.2	118.0	30.4	34.4	178.0	55.7	115.9
59.0	40.6	61.6	119.0	30.9	35.7	179.0	56.0	117.0

Depression angle calculations

Nicom BKG77 – 1 Bay

Power – 10 w

Height – 14.5 m

Contour – 133.33

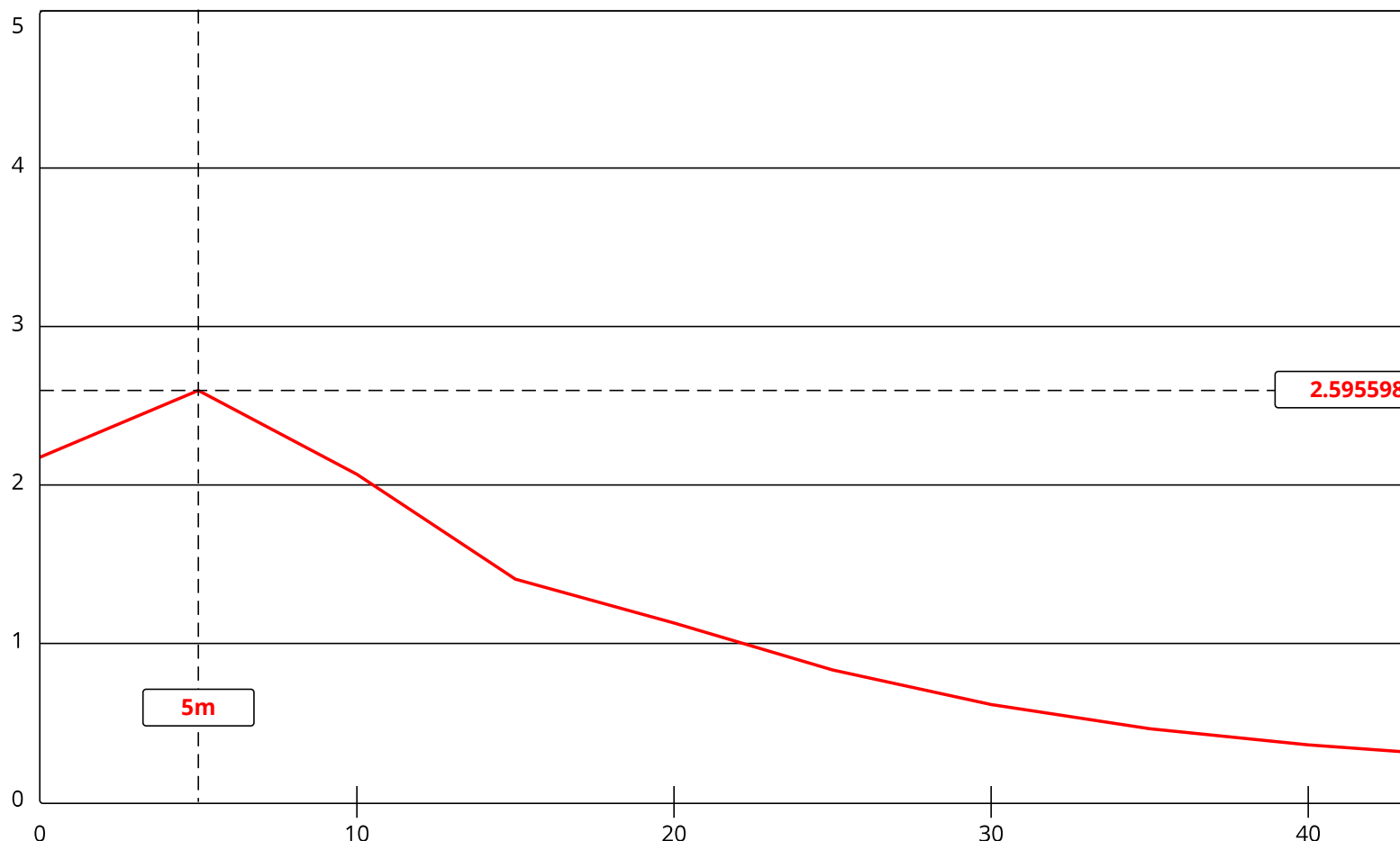
depression angle below horizon	relative field	db from relative	ERP	angular distance to contour	vertical distance	horizontal distance	clearance above ground
0	1.000	0.00	10.00	4.778	0.000	4.778	14.500
5	0.999	-0.01	9.98	4.773	0.416	4.755	14.084
10	0.982	-0.16	9.64	4.692	0.815	4.620	13.685
15	0.954	-0.41	9.10	4.558	1.180	4.403	13.320
20	0.918	-0.74	8.43	4.386	1.500	4.121	13.000
25	0.872	-1.19	7.60	4.166	1.761	3.776	12.739
30	0.818	-1.74	6.69	3.908	1.954	3.385	12.546
35	0.758	-2.41	5.75	3.621	2.077	2.967	12.423
40	0.774	-2.23	5.99	3.698	2.377	2.833	12.123
45	0.616	-4.21	3.79	2.943	2.081	2.081	12.419
50	0.538	-5.38	2.89	2.570	1.969	1.652	12.531
55	0.465	-6.65	2.16	2.222	1.820	1.274	12.680
60	0.391	-8.16	1.53	1.868	1.618	0.934	12.882
65	0.313	-10.09	0.98	1.495	1.355	0.632	13.145
70	0.239	-12.43	0.57	1.142	1.073	0.391	13.427
75	0.176	-15.09	0.31	0.841	0.812	0.218	13.688
80	0.129	-17.79	0.17	0.616	0.607	0.107	13.893
85	0.103	-19.74	0.11	0.492	0.490	0.043	14.010
90	0.105	-19.58	0.11	0.502	0.502	0.000	13.998



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FM Model

The FM Model calculator determines the potential exposure from radiofrequency (RF) electromagnetic fields produced by FM broadcast station antennas at ground level. The FM Model software was originally developed by the FCC in 1997 as a standalone executable program and this improved version provides more precise predictions and runs via a JavaScript enabled web browser. The FM Model is originally based on measured data [published in 1985 by the EPA \(http://nepis.epa.gov/Exe/ZyNET.exe/2000ED2W.TXT?ZyActionD=ZyDocument&Client=EPA&Index=1981+Thru+1985&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A\zyfiles\Index%20Data\81thru85\Txt\00000003\2000ED2W.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h|-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=p|f&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL\)](http://nepis.epa.gov/Exe/ZyNET.exe/2000ED2W.TXT?ZyActionD=ZyDocument&Client=EPA&Index=1981+Thru+1985&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A\zyfiles\Index%20Data\81thru85\Txt\00000003\2000ED2W.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h|-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=p|f&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL). [▼ Show More....](#)



Channel Selection	Channel 250 (97.9 MHz)		
Antenna Type +	EPA Type 1: Ring-and-Stub or "Other"		
Height (m)	14.4	Distance (m)	50
ERP-H (W)	10	ERP-V (W)	10
Num of Elements	1	Element Spacing (λ)	0
Num of Points	10	Apply	

*** To Print - On your browser, please select Shrink to Fit under the Scale tab from Print Preview**

Hide Tabular Results -

Distance (m)	Power Density ($\mu\text{W}/\text{cm}^2$)
0	2.2
5	2.6
10	2.1
15	1.4
20	1.1
25	0.8
30	0.6
35	0.5
40	0.4
45	0.3
50	0.2

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Updated:

Friday, June 8, 2018