

## **FIGURE 29**

### **COMPLIANCE WITH RADIOFREQUENCY RADIATION GUIDELINES**

The potential for human exposure to non-ionizing radiofrequency radiation at the proposed transmitter site has been evaluated. In addition to the proposed KRGH operation, there are multiple sources of radiation originating from the site. Due to several mutually exclusive situations resulting from LPTV Auction 81, only one radiating LPTV application can be granted for each mutually exclusive group. For purposes of this study, the application resulting in the greater risk of human exposure to radiofrequency radiation due to a higher operating power and lower elevation above ground has been assumed. There are no other known broadcast facilities within 315 meters of the shared transmitter site.

The proposed KRGH facility will operate on Channel 275C1, 102.9 MHz, using an ERP of 100.0 kW. The station will use a circularly polarized, ERI Rototiller Type antenna mounted approximately 92 meters AGL. The antenna uses eight (8) EPA Type 3 elements. All other facilities have been assumed to operate with worst case one (1) bay EPA type 1 element.

This site has been evaluated for compliance with the FCC guidelines concerning human exposure to radiofrequency radiation. The standards employed are detailed in OET Bulletin No. 65 (Edition 97-01).

Software packages were used to determine the individual contribution of each station. FM radiofrequency radiation levels were predicted using both the array pattern, the calculations of which are based on the number of bays in the antenna and wavelength spacing between the bays, and the element pattern. The element pattern is determined by using measured element data prepared by the EPA, and published in "An Engineering Assessment of the Potential Impact of Federal Radiation Protection Guidance on the AM, FM and TV Services," by Paul C. Gailey and Richard Tell - April 1985, U.S. Environmental Protection Agency, Las Vegas, NV. The "FM Model" software published on the FCC's OET web site was used to evaluate each contribution. A similar software package designed for use with TV stations (under the previous OST Bulletin No. 65, October 1985) was used to determine the contribution of the television facilities to the non-ionizing radiofrequency radiation present at this site. Both programs use formulas that were originally published in OST Bulletin No. 65, 1985.

The results of the evaluations for all stations are shown in both graphical and tabular forms at the end of this report. The tabulation lists the portion of the tabular output for each station showing the region of maximum radiofrequency radiation. The locations of maximum predicted power density have been highlight using ***bold italic*** type. The FM graphical display has been scaled to show the best definition of the data curve. **The ANSI limit shown on the television graphical display reflects the limit for what are now classed as “controlled” environments.**

To evaluate the total exposure to non-ionizing radio-frequency radiation it is necessary to sum the individual contributions as a decimal fraction of the maximum permissible limit. If the resulting sum is less than or equal to unity, the exposure is concluded to be within the guidelines of OET Bulletin No. 65 (Edition 97-01). To simplify the calculations and produce a “worst case” study, the maximum exposure level produced by each station has been selected without regard to the location of that exposure. The following table is based on the occupational limits set forth in OET Bulletin No. 65 (Edition 97-01).

<u>Contributing Station</u>	<u>Maximum Contribution</u>	<u>Limit</u>	<u>Decimal Fraction of Limit</u>
Proposed KRGN(FM)	75.07 $\mu\text{W}/\text{cm}^2$	1000 $\mu\text{W}/\text{cm}^2$	0.0751
KXLV.C(FM)	48.67 $\mu\text{W}/\text{cm}^2$	1000 $\mu\text{W}/\text{cm}^2$	0.0487
NEW 52-T(TV)	0.0579 mW/cm <sup>2</sup>	2.337 mW/cm <sup>2</sup>	0.0248
KAMT-LPTV	0.0094 mW/cm <sup>2</sup>	1.917 mW/cm <sup>2</sup>	0.0049
NEW 59+T(TV)	0.0006 mW/cm <sup>2</sup>	2.477 mW/cm <sup>2</sup>	0.0002
K20DM(TV)	0.0029 mW/cm <sup>2</sup>	1.697 mW/cm <sup>2</sup>	0.0171
NEW 27+T(TV)	0.0132 mW/cm <sup>2</sup>	1.837 mW/cm <sup>2</sup>	0.0072
NEW39+T(TV)	0.0066 mW/cm <sup>2</sup>	2.077 mW/cm <sup>2</sup>	0.0032
KTXD(TV)	0.0111 mW/cm <sup>2</sup>	2.157 mW/cm <sup>2</sup>	0.0052
NEW 61-T(TV)	0.0080 mW/cm <sup>2</sup>	2.517 mW/cm <sup>2</sup>	0.0032
NEW 16-T(TV)	0.0106 mW/cm <sup>2</sup>	1.617 mW/cm <sup>2</sup>	0.0066
<b>Total Decimal Fraction</b>			<b>0.1962</b>

With the implementation of OET Bulletin No. 65 (Edition 97-01) and the accompanying Supplement A (Edition 97-01), the Commission set forth new guidelines for human exposure to radiofrequency radiation that employ a two-tiered system. The more lenient set of guidelines are for the “controlled environments” noted above, which are defined as “locations where there is exposure that may be incurred by persons who are aware of the potential for exposure as a concomitant of employment, by other cognizant persons, or as the incidental result of transient passage through areas where analysis shows the exposure levels may be above...” the more restrictive guidelines but below the more lenient guidelines. **The dashed line showing “ANSI power density guideline” on the television graphical displays are based on the “controlled environment” guidelines.** The second, more restrictive, set of guidelines is to be applied to “uncontrolled environments” which are defined as “locations where there is the exposure of individuals who have no knowledge or control of their exposure.” The table below sets forth an evaluation of the transmitter site based on the standards for “uncontrolled environments.”

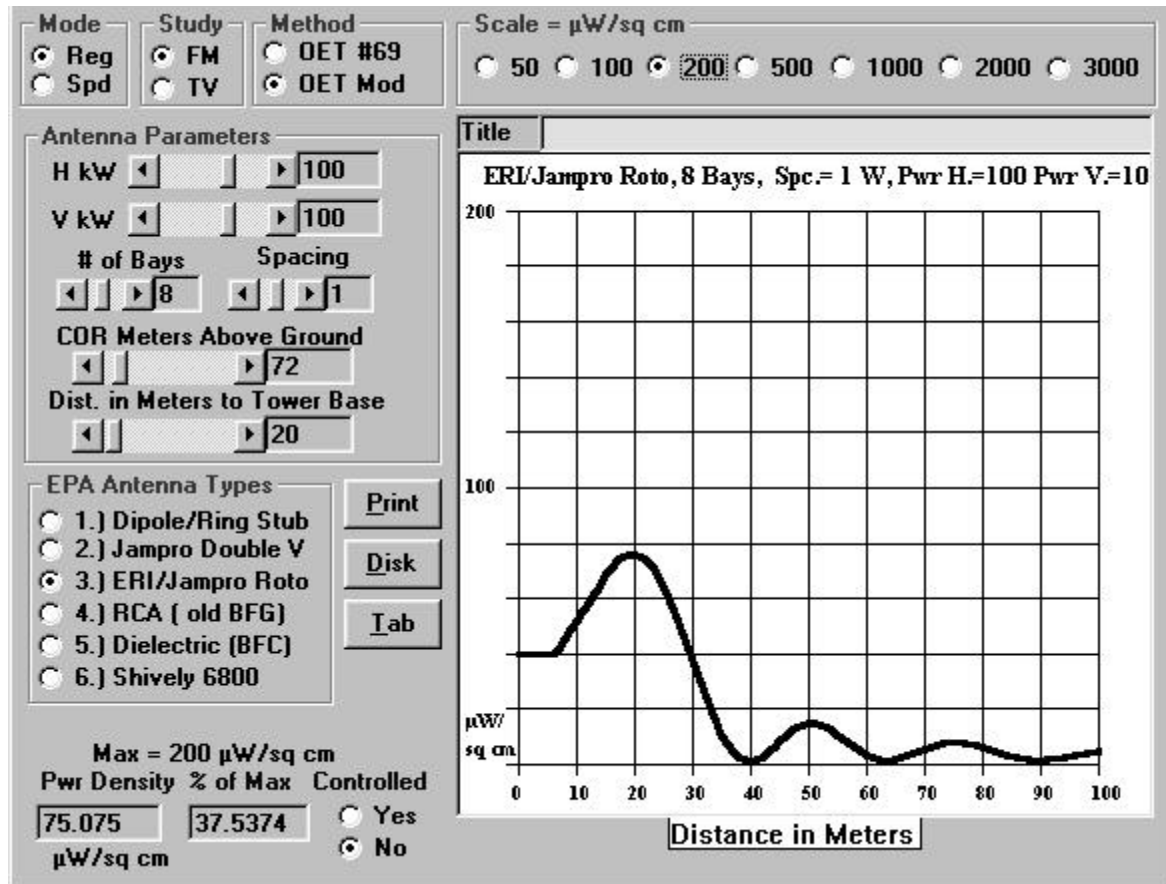
<u>Contributing Station</u>	<u>Maximum Contribution</u>	<u>Uncontrolled Limit</u>	<u>Decimal Fraction of Limit</u>
Proposed KRGN(FM)	75.07 $\mu\text{W}/\text{cm}^2$	200 $\mu\text{W}/\text{cm}^2$	0.3754
KXLV.C(FM)	48.67 $\mu\text{W}/\text{cm}^2$	200 $\mu\text{W}/\text{cm}^2$	0.2434
NEW 52-T(TV)	0.0579 mW/cm <sup>2</sup>	0.467 mW/cm <sup>2</sup>	0.1240
KAMT-LPTV	0.0094 mW/cm <sup>2</sup>	0.383 mW/cm <sup>2</sup>	0.0245
NEW 59+T(TV)	0.0006 mW/cm <sup>2</sup>	0.495 mW/cm <sup>2</sup>	0.0012
K20DM(TV)	0.0029 mW/cm <sup>2</sup>	0.339 mW/cm <sup>2</sup>	0.0855
NEW 27+T(TV)	0.0132 mW/cm <sup>2</sup>	0.367 mW/cm <sup>2</sup>	0.0359
NEW39+T(TV)	0.0066 mW/cm <sup>2</sup>	0.415 mW/cm <sup>2</sup>	0.0159
KTXD(TV)	0.0111 mW/cm <sup>2</sup>	0.431 mW/cm <sup>2</sup>	0.0258
NEW 61-T(TV)	0.0080 mW/cm <sup>2</sup>	0.503 mW/cm <sup>2</sup>	0.0159
NEW 16-T(TV)	0.0106 mW/cm <sup>2</sup>	0.323 mW/cm <sup>2</sup>	0.0328
<b>Total Decimal Fraction</b>			<b>0.9803</b>

Since the Total Decimal Fraction is less than unity for either the controlled or uncontrolled environment guidelines, the proposed installation will comply with the current FCC guidelines.

In addition to the protection afforded by the proposed antenna heights above ground, the facility is properly marked with signs, and entry to the facility is restricted by means of fencing with locked doors and/or gates. Any other means that may be required to protect employees and the general public will be employed.

In the event work is required in proximity to the antenna(s) such that the person or persons working in the area will be potentially exposed to fields in excess of the current guidelines, an agreement signed by all broadcast parties at the site will be in effect for the offending transmitter(s) to reduce power, or cease operation during the critical period.

## PLOT OF TOTAL POWER DENSITY PROPOSED KRGN(FM) – Amarillo, TX



The “COR Meters Above Ground” setting shown on the above graph represents the height of the antenna center of radiation above an observer on the ground who is assumed to be 2 meters in height.

## TABULATION OF TOTAL POWER DENSITY

### PROPOSED KRGN(FM) – Amarillo, TX

Environment = Uncontrolled, Maximum = 200 uW/sq cm

HORZ. DISTANCE FROM FM RADIATOR Vs POWER DENSITY (Microwatt/Square cm)

ERI/Jampro Roto, 8 Spc.= 1 W, Pwr H.=100 Pwr V.=100 COR= 72M

Dist(Meters) PD (H) PD (V) Total(uW/cm2) Percent Max.

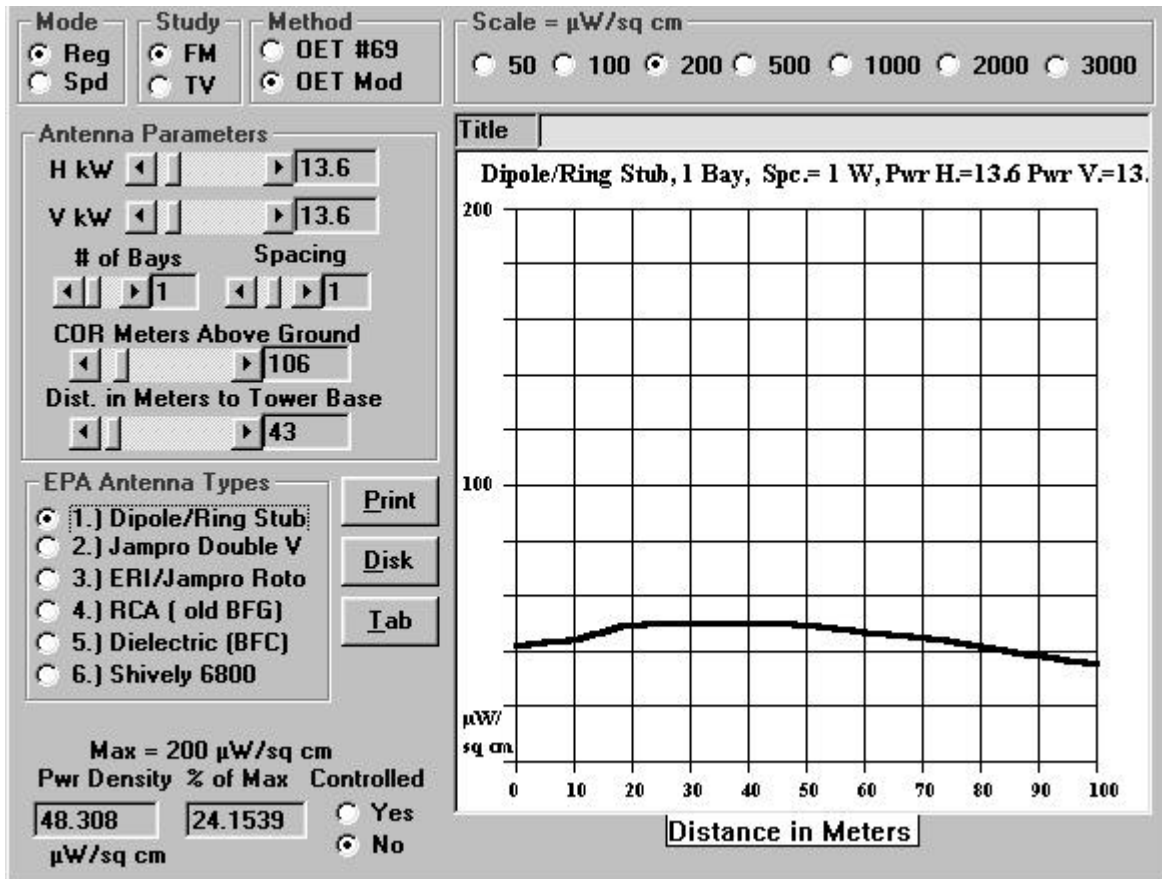
0	19.33	19.33	38.67	19.3
1	19.33	19.33	38.66	19.3
2	19.32	19.32	38.64	19.3
3	19.30	19.30	38.60	19.3
4	19.27	19.27	38.53	19.3
5	19.22	19.22	38.44	19.2
6	19.15	19.15	38.31	19.2
7	20.31	20.31	40.63	20.3
8	22.02	22.02	44.05	22.0
9	23.74	23.74	47.48	23.7
10	25.45	25.45	50.90	25.4
11	27.12	27.12	54.24	27.1
12	28.72	28.72	57.45	28.7
13	30.56	30.11	60.67	30.3
14	33.04	31.10	64.14	32.1
15	35.37	31.92	67.29	33.6
16	37.50	32.55	70.05	35.0
17	39.36	32.95	72.31	36.2
18	40.89	33.10	73.99	37.0
19	42.03	32.97	75.00	37.5
<b>20</b>	<b>41.85</b>	<b>33.22</b>	<b>75.07</b>	<b>37.5</b>
21	40.92	33.37	74.29	37.1
22	39.59	33.11	72.70	36.4
23	37.86	32.44	70.30	35.1
24	35.76	31.34	67.10	33.5
25	33.32	29.82	63.15	31.6
26	30.59	27.93	58.52	29.3
27	27.74	25.72	53.46	26.7
28	24.72	23.22	47.95	24.0
29	21.57	20.52	42.09	21.0
30	18.37	17.69	36.06	18.0
31	15.21	14.81	30.02	15.0
32	12.19	11.99	24.18	12.1
33	9.37	9.32	18.69	9.3
34	6.90	6.86	13.76	6.9
35	4.79	4.70	9.49	4.7
36	3.02	2.92	5.94	3.0
37	1.64	1.57	3.20	1.6
38	0.67	0.64	1.31	0.7
39	0.14	0.13	0.26	0.1
40	0.01	0.00	0.01	0.0
41	0.24	0.22	0.46	0.2
42	0.79	0.72	1.51	0.8
43	1.58	1.43	3.02	1.5
44	2.54	2.29	4.83	2.4
45	3.57	3.20	6.77	3.4

**MUNN-REESE, INC.**

Broadcast Engineering Consultants  
Coldwater, MI 49036

## PLOT OF TOTAL POWER DENSITY

### KXLV.C(FM) – Amarillo, TX



The “COR Meters Above Ground” setting shown on the above graph represents the height of the antenna center of radiation above an observer on the ground who is assumed to be 2 meters in height.

## TABULATION OF TOTAL POWER DENSITY

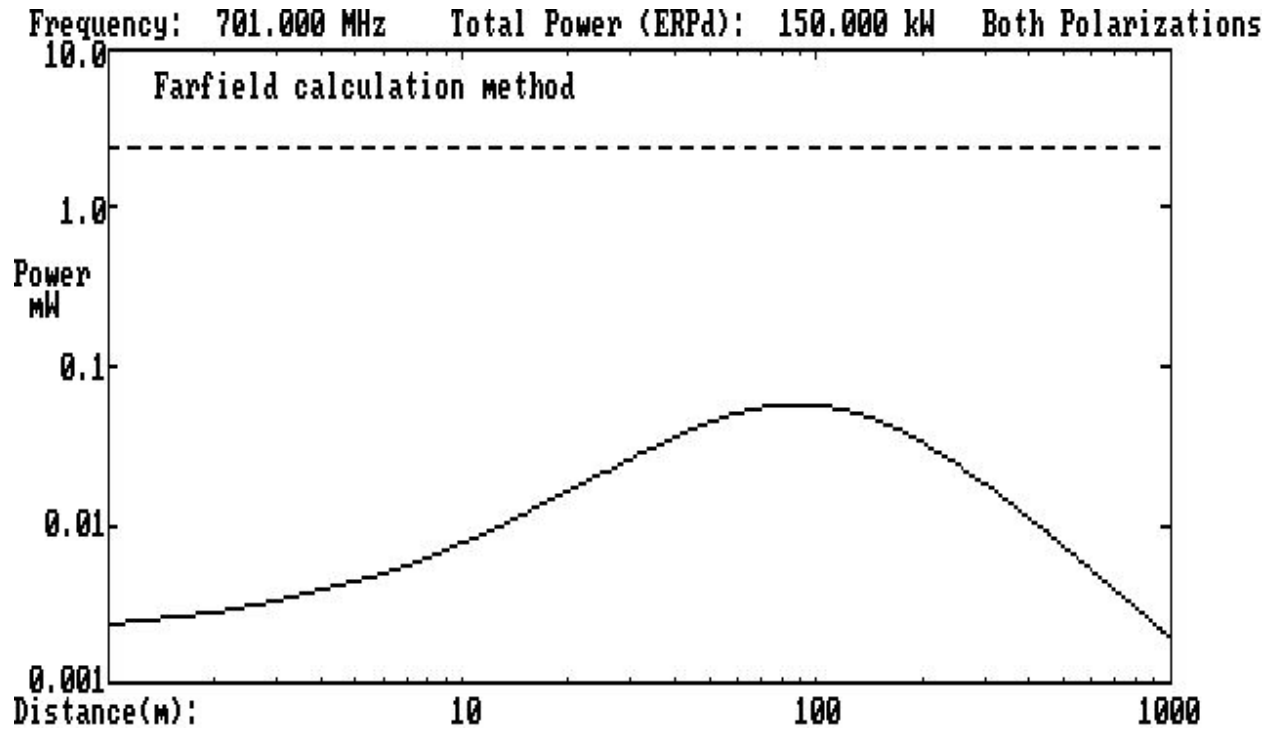
### KXLV.C(FM) – Amarillo, TX

Environment = Uncontrolled, Maximum = 200 uW/sq cm

HORZ. DISTANCE FROM FM RADIATOR Vs POWER DENSITY (Microwatt/Square cm)  
 Dipole/Ring Stub, 1 Spc.= 1 W, Pwr H.=13.6 Pwr V.=13.6 COR= 106M  
 Dist(Meters) PD (H) PD (V) Total(uW/cm2) Percent Max.

0	7.68	32.76	40.44	20.2
1	7.77	32.93	40.69	20.3
2	7.85	33.09	40.94	20.5
3	7.93	33.25	41.18	20.6
4	8.02	33.40	41.42	20.7
5	8.10	33.55	41.65	20.8
6	8.18	33.69	41.87	20.9
7	8.25	33.83	42.08	21.0
8	8.33	33.96	42.29	21.1
9	8.41	34.08	42.49	21.2
10	8.51	34.46	42.97	21.5
11	8.62	34.94	43.56	21.8
12	8.73	35.41	44.14	22.1
13	8.83	35.88	44.72	22.4
14	8.94	36.35	45.28	22.6
15	9.04	36.80	45.85	22.9
16	9.15	37.25	46.40	23.2
17	9.25	37.70	46.95	23.5
18	9.35	38.14	47.48	23.7
19	9.44	38.45	47.89	23.9
20	9.53	38.48	48.01	24.0
21	9.61	38.51	48.12	24.1
22	9.70	38.53	48.22	24.1
23	9.78	38.54	48.32	24.2
24	9.86	38.54	48.40	24.2
25	9.94	38.54	48.48	24.2
26	10.01	38.53	48.55	24.3
27	10.09	38.52	48.60	24.3
28	10.16	38.50	48.65	24.3
<b>29</b>	<b>10.22</b>	<b>38.44</b>	<b>48.67</b>	<b>24.3</b>
30	10.29	38.37	48.65	24.3
31	10.34	38.29	48.63	24.3
32	10.40	38.20	48.60	24.3
33	10.45	38.11	48.56	24.3
34	10.51	38.01	48.52	24.3
35	10.55	37.91	48.46	24.2
36	10.60	37.80	48.40	24.2
37	10.65	37.68	48.33	24.2
38	10.69	37.57	48.25	24.1
39	10.73	37.50	48.22	24.1
40	10.76	37.50	48.26	24.1
41	10.79	37.49	48.28	24.1
42	10.82	37.48	48.30	24.1
43	10.84	37.46	48.31	24.2
44	10.87	37.44	48.31	24.2
45	10.89	37.41	48.30	24.1

**PLOT OF TOTAL POWER DENSITY**  
**PROPOSED NEW 52-T(TV) – Amarillo, TX**



The “COR Meters Above Ground” setting shown on the above graph represents the height of the antenna center of radiation above an observer on the ground who is assumed to be 2 meters in height.



## TABULATION OF TOTAL POWER DENSITY

### PROPOSED NEW 52-T(TV) – Amarillo, TX

#### Summary of Input Data:

-----  
Call: NEW-52

Frequency: 701.000 MHz

Horizontal Power (ERPd): 150.000 kW      Vertical Power (ERPd): .000 kW

Horizontal Input Power : 162.655 kW      Vertical Input Power : .000 kW

Antenna Type: unknown

Horizontal Element Type Number: 2.

Vertical Element Type Number: 0.

Height of observer above reference plane: 2.0 Meters

Element Data:

-----  
Horizontal:

Number of elements: 1

Distance from analysis reference point: .0 meters

Azimuth from analysis reference point: N .0 E

Height of center of radiation above reference plane: 102.0 Meters

#### Calculated Results:

-----  
\* - indicates computed value exceeds ANSI guideline.

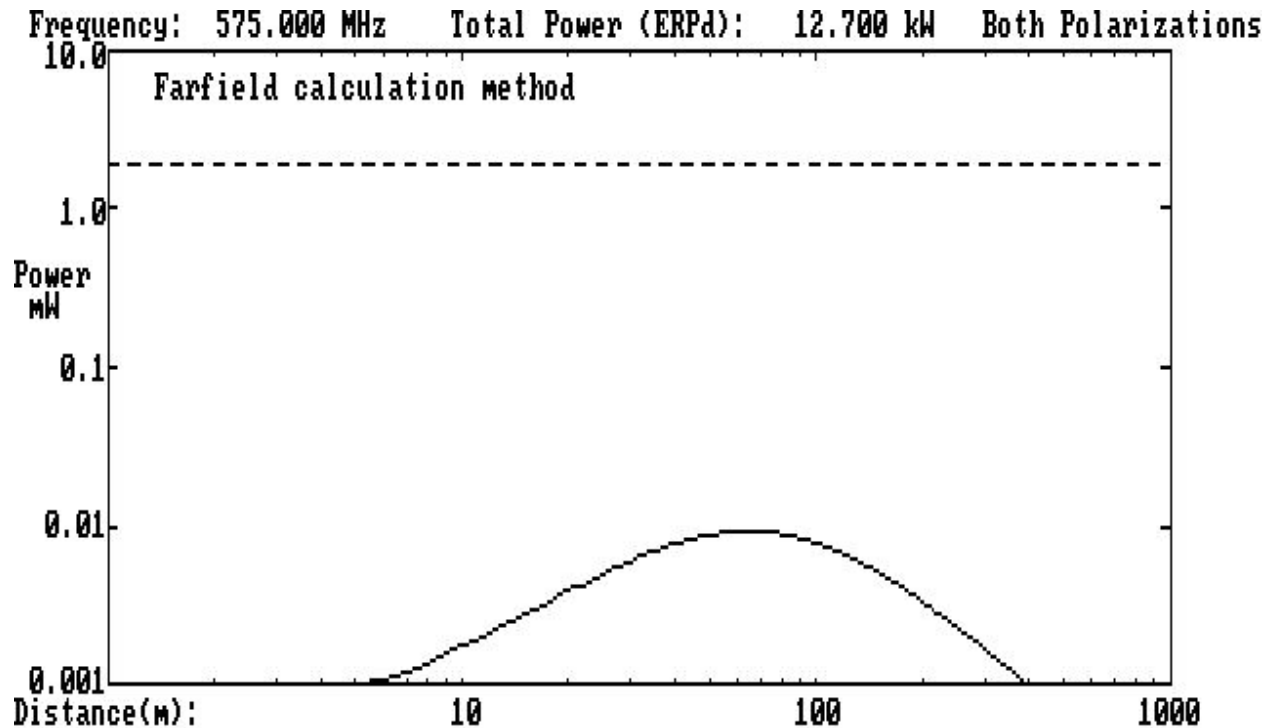
Farfield calculation methods were used.

Distance (meters)	Horizontal Polarization		Vertical Polarization		Total Power Density (mW/cm2)
	E2 Field (V2/m2)	H2 Field (A2/m2)	E2 Field (V2/m2)	H2 Field (A2/m2)	
50.00	168.	.0012	0.	.0000	.0445
52.00	173.	.0012	0.	.0000	.0459
54.00	178.	.0013	0.	.0000	.0473
56.00	183.	.0013	0.	.0000	.0486
58.00	188.	.0013	0.	.0000	.0498
60.00	192.	.0013	0.	.0000	.0509
62.00	196.	.0014	0.	.0000	.0519
64.00	199.	.0014	0.	.0000	.0528
66.00	202.	.0014	0.	.0000	.0537
68.00	205.	.0014	0.	.0000	.0545
70.00	208.	.0015	0.	.0000	.0552
72.00	210.	.0015	0.	.0000	.0557
74.00	212.	.0015	0.	.0000	.0562
76.00	213.	.0015	0.	.0000	.0566
78.00	215.	.0015	0.	.0000	.0570
80.00	216.	.0015	0.	.0000	.0573
82.00	217.	.0015	0.	.0000	.0575
84.00	218.	.0015	0.	.0000	.0578
86.00	218.	.0015	0.	.0000	.0578
<b>88.00</b>	<b>218.</b>	<b>.0015</b>	<b>0.</b>	<b>.0000</b>	<b>.0579</b>
<b>90.00</b>	<b>218.</b>	<b>.0015</b>	<b>0.</b>	<b>.0000</b>	<b>.0579</b>
92.00	218.	.0015	0.	.0000	.0578
94.00	218.	.0015	0.	.0000	.0578
96.00	217.	.0015	0.	.0000	.0577
98.00	217.	.0015	0.	.0000	.0575
100.00	216.	.0015	0.	.0000	.0574

**MUNN-REESE, INC.**

Broadcast Engineering Consultants  
Coldwater, MI 49036

## PLOT OF TOTAL POWER DENSITY KAMT-LPTV – Amarillo, TX



The “COR Meters Above Ground” setting shown on the above graph represents the height of the antenna center of radiation above an observer on the ground who is assumed to be 2 meters in height.

## TABULATION OF TOTAL POWER DENSITY

### KAMT-LPTV – Amarillo, TX

#### Summary of Input Data:

-----  
Call: KAMT

Frequency: 575.000 MHz

Horizontal Power (ERPd): 12.700 kW      Vertical Power (ERPd): .000 kW

Horizontal Input Power : 13.771 kW      Vertical Input Power : .000 kW

Antenna Type: unknown

Horizontal Element Type Number: 2.

Vertical Element Type Number: 0.

Height of observer above reference plane: 2.0 Meters

Element Data:

-----  
Horizontal:

Number of elements: 1

Distance from analysis reference point: .0 meters

Azimuth from analysis reference point: N .0 E

Height of center of radiation above reference plane: 74.3 Meters

#### Calculated Results:

-----  
\* - indicates computed value exceeds ANSI guideline.

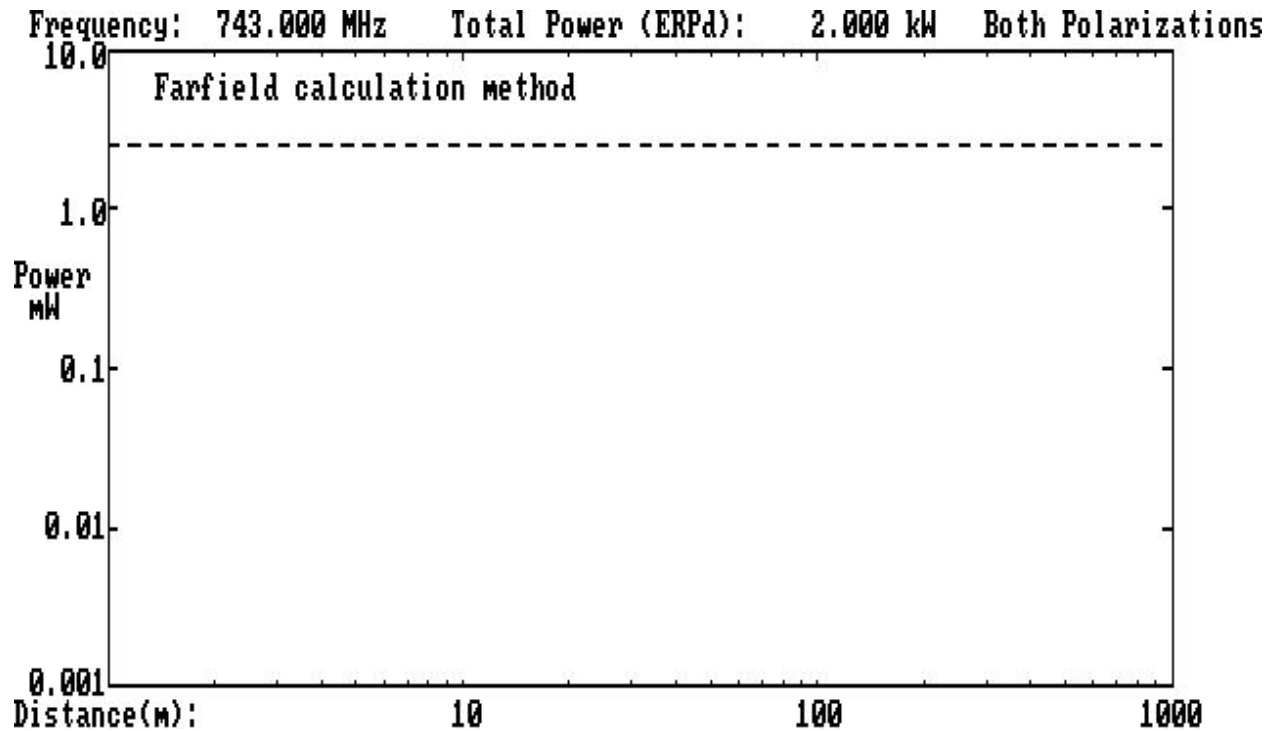
Farfield calculation methods were used.

Distance (meters)	Horizontal Polarization		Vertical Polarization		Total Power Density (mW/cm2)
	E2 Field (V2/m2)	H2 Field (A2/m2)	E2 Field (V2/m2)	H2 Field (A2/m2)	
50.00	34.	.0002	0.	.0000	.0089
52.00	34.	.0002	0.	.0000	.0090
54.00	34.	.0002	0.	.0000	.0091
56.00	35.	.0002	0.	.0000	.0092
58.00	35.	.0002	0.	.0000	.0093
60.00	35.	.0002	0.	.0000	.0093
<b>62.00</b>	<b>35.</b>	<b>.0002</b>	<b>0.</b>	<b>.0000</b>	<b>.0094</b>
<b>64.00</b>	<b>35.</b>	<b>.0002</b>	<b>0.</b>	<b>.0000</b>	<b>.0094</b>
<b>66.00</b>	<b>35.</b>	<b>.0002</b>	<b>0.</b>	<b>.0000</b>	<b>.0094</b>
<b>68.00</b>	<b>35.</b>	<b>.0002</b>	<b>0.</b>	<b>.0000</b>	<b>.0094</b>
70.00	35.	.0002	0.	.0000	.0093
72.00	35.	.0002	0.	.0000	.0093
74.00	35.	.0002	0.	.0000	.0092
76.00	35.	.0002	0.	.0000	.0092
78.00	34.	.0002	0.	.0000	.0091
80.00	34.	.0002	0.	.0000	.0090
82.00	34.	.0002	0.	.0000	.0089
84.00	33.	.0002	0.	.0000	.0088
86.00	33.	.0002	0.	.0000	.0087
88.00	33.	.0002	0.	.0000	.0086
90.00	32.	.0002	0.	.0000	.0085
92.00	32.	.0002	0.	.0000	.0084
94.00	31.	.0002	0.	.0000	.0083
96.00	31.	.0002	0.	.0000	.0082
98.00	30.	.0002	0.	.0000	.0081
100.00	30.	.0002	0.	.0000	.0079

**MUNN-REESE, INC.**

Broadcast Engineering Consultants  
Coldwater, MI 49036

**PLOT OF TOTAL POWER DENSITY**  
**NEW 59+T(TV) – Amarillo, TX**



The “COR Meters Above Ground” setting shown on the above graph represents the height of the antenna center of radiation above an observer on the ground who is assumed to be 2 meters in height.

## TABULATION OF TOTAL POWER DENSITY

### NEW 59+T(TV) – Amarillo, TX

#### Summary of Input Data:

-----  
Call: NEW+59

Frequency: 743.000 MHz

Horizontal Power (ERPd): 2.000 kW      Vertical Power (ERPd): .000 kW

Horizontal Input Power : 2.169 kW      Vertical Input Power : .000 kW

Antenna Type: unknown

Horizontal Element Type Number: 2.

Vertical Element Type Number: 0.

Height of observer above reference plane: 2.0 Meters

Element Data:

-----  
Horizontal:

Number of elements: 1

Distance from analysis reference point: .0 meters

Azimuth from analysis reference point: N .0 E

Height of center of radiation above reference plane: 120.0 Meters

#### Calculated Results:

-----  
\* - indicates computed value exceeds ANSI guideline.

Farfield calculation methods were used.

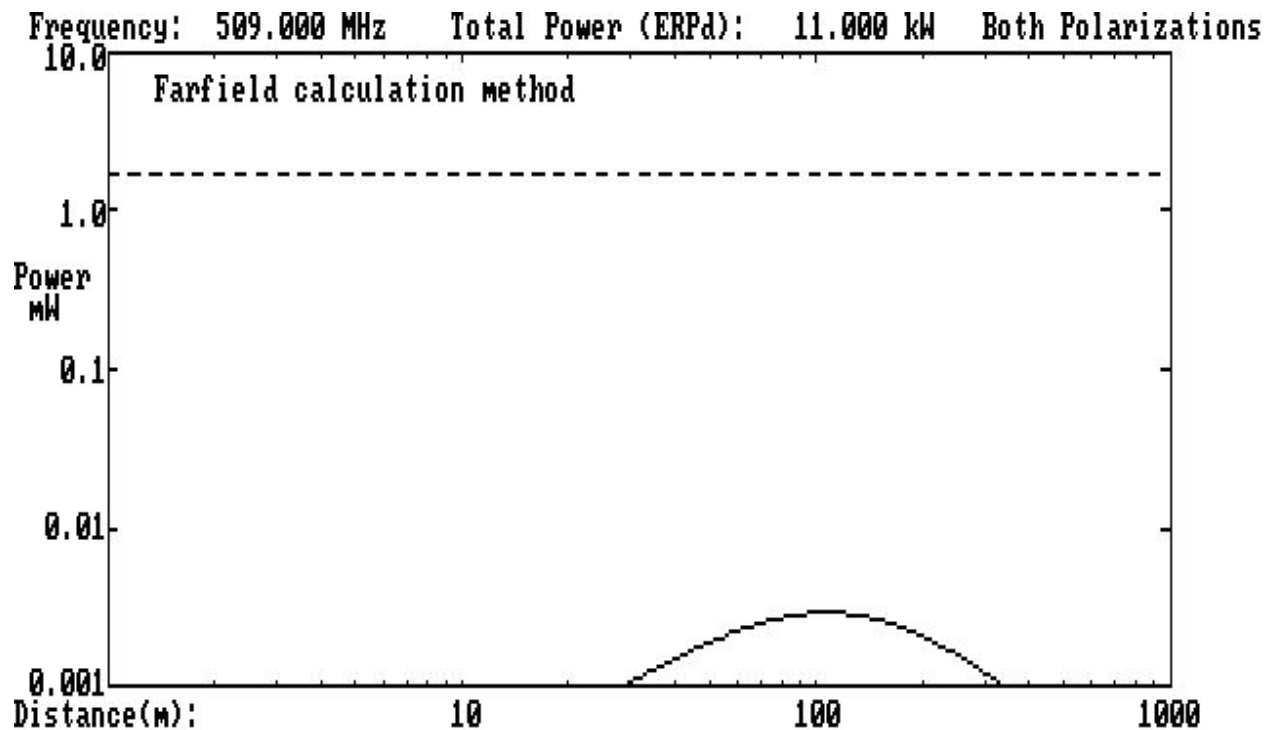
Distance (meters)	Horizontal Polarization		Vertical Polarization		Total Power Density (mW/cm2)
	E2 Field (V2/m2)	H2 Field (A2/m2)	E2 Field (V2/m2)	H2 Field (A2/m2)	
80.00	2.	.0000	0.	.0000	.0005
82.00	2.	.0000	0.	.0000	.0005
84.00	2.	.0000	0.	.0000	.0005
86.00	2.	.0000	0.	.0000	.0005
88.00	2.	.0000	0.	.0000	.0005
90.00	2.	.0000	0.	.0000	.0005
92.00	2.	.0000	0.	.0000	.0005
94.00	2.	.0000	0.	.0000	.0005
96.00	2.	.0000	0.	.0000	.0006
98.00	2.	.0000	0.	.0000	.0006
100.00	2.	.0000	0.	.0000	.0006
102.00	2.	.0000	0.	.0000	.0006
104.00	2.	.0000	0.	.0000	.0006
106.00	2.	.0000	0.	.0000	.0006
108.00	2.	.0000	0.	.0000	.0006
110.00	2.	.0000	0.	.0000	.0006
112.00	2.	.0000	0.	.0000	.0006
114.00	2.	.0000	0.	.0000	.0006
116.00	2.	.0000	0.	.0000	.0006
118.00	2.	.0000	0.	.0000	.0005
120.00	2.	.0000	0.	.0000	.0005
122.00	2.	.0000	0.	.0000	.0005
124.00	2.	.0000	0.	.0000	.0005
126.00	2.	.0000	0.	.0000	.0005
128.00	2.	.0000	0.	.0000	.0005
130.00	2.	.0000	0.	.0000	.0005

**MUNN-REESE, INC.**

Broadcast Engineering Consultants  
Coldwater, MI 49036

## PLOT OF TOTAL POWER DENSITY

### K20DM(TV) – Amarillo, TX



The “COR Meters Above Ground” setting shown on the above graph represents the height of the antenna center of radiation above an observer on the ground who is assumed to be 2 meters in height.

**MUNN-REESE, INC.**

Broadcast Engineering Consultants  
Coldwater, MI 49036

## TABULATION OF TOTAL POWER DENSITY

### K20DM(TV) – Amarillo, TX

#### Summary of Input Data:

-----  
Call: K20DM

Frequency: 509.000 MHz

Horizontal Power (ERPd): 11.000 kW      Vertical Power (ERPd): .000 kW

Horizontal Input Power : 11.928 kW      Vertical Input Power : .000 kW

Antenna Type: unknown

Horizontal Element Type Number: 2.

Vertical Element Type Number: 0.

Height of observer above reference plane: 2.0 Meters

Element Data:

-----  
Horizontal:

Number of elements: 1

Distance from analysis reference point: .0 meters

Azimuth from analysis reference point: N .0 E

Height of center of radiation above reference plane: 122.0 Meters

#### Calculated Results:

-----  
\* - indicates computed value exceeds ANSI guideline.

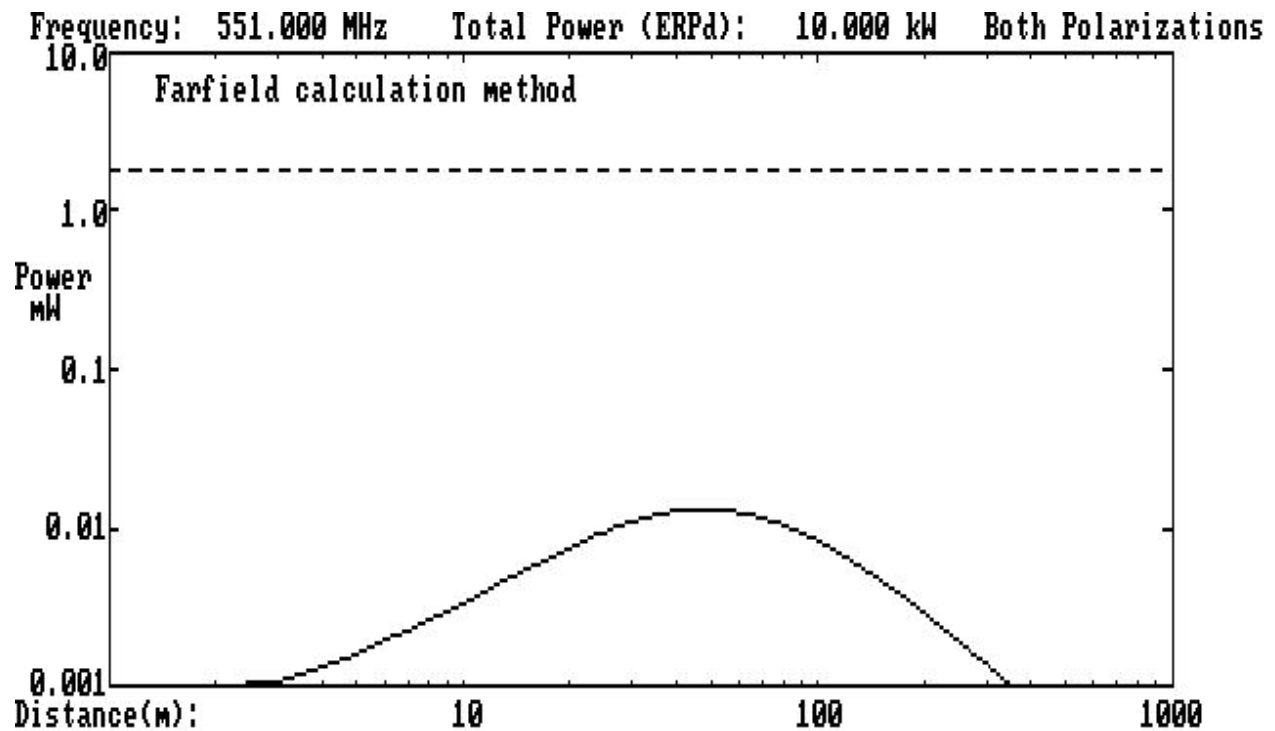
Farfield calculation methods were used.

Distance (meters)	Horizontal Polarization		Vertical Polarization		Total Power Density (mW/cm <sup>2</sup> )
	E2 Field (V <sup>2</sup> /m <sup>2</sup> )	H2 Field (A <sup>2</sup> /m <sup>2</sup> )	E2 Field (V <sup>2</sup> /m <sup>2</sup> )	H2 Field (A <sup>2</sup> /m <sup>2</sup> )	
84.00	11.	.0001	0.	.0000	.0028
86.00	11.	.0001	0.	.0000	.0028
<b>88.00</b>	<b>11.</b>	<b>.0001</b>	<b>0.</b>	<b>.0000</b>	<b>.0029</b>
<b>90.00</b>	<b>11.</b>	<b>.0001</b>	<b>0.</b>	<b>.0000</b>	<b>.0029</b>
<b>92.00</b>	<b>11.</b>	<b>.0001</b>	<b>0.</b>	<b>.0000</b>	<b>.0029</b>
<b>94.00</b>	<b>11.</b>	<b>.0001</b>	<b>0.</b>	<b>.0000</b>	<b>.0029</b>
<b>96.00</b>	<b>11.</b>	<b>.0001</b>	<b>0.</b>	<b>.0000</b>	<b>.0029</b>
<b>98.00</b>	<b>11.</b>	<b>.0001</b>	<b>0.</b>	<b>.0000</b>	<b>.0029</b>
<b>100.00</b>	<b>11.</b>	<b>.0001</b>	<b>0.</b>	<b>.0000</b>	<b>.0029</b>
<b>102.00</b>	<b>11.</b>	<b>.0001</b>	<b>0.</b>	<b>.0000</b>	<b>.0029</b>
<b>104.00</b>	<b>11.</b>	<b>.0001</b>	<b>0.</b>	<b>.0000</b>	<b>.0029</b>
<b>106.00</b>	<b>11.</b>	<b>.0001</b>	<b>0.</b>	<b>.0000</b>	<b>.0029</b>
<b>108.00</b>	<b>11.</b>	<b>.0001</b>	<b>0.</b>	<b>.0000</b>	<b>.0029</b>
<b>110.00</b>	<b>11.</b>	<b>.0001</b>	<b>0.</b>	<b>.0000</b>	<b>.0029</b>
<b>112.00</b>	<b>11.</b>	<b>.0001</b>	<b>0.</b>	<b>.0000</b>	<b>.0029</b>
<b>114.00</b>	<b>11.</b>	<b>.0001</b>	<b>0.</b>	<b>.0000</b>	<b>.0029</b>
<b>116.00</b>	<b>11.</b>	<b>.0001</b>	<b>0.</b>	<b>.0000</b>	<b>.0029</b>
<b>118.00</b>	<b>11.</b>	<b>.0001</b>	<b>0.</b>	<b>.0000</b>	<b>.0029</b>
<b>120.00</b>	<b>11.</b>	<b>.0001</b>	<b>0.</b>	<b>.0000</b>	<b>.0029</b>
<b>122.00</b>	<b>11.</b>	<b>.0001</b>	<b>0.</b>	<b>.0000</b>	<b>.0029</b>
<b>124.00</b>	<b>11.</b>	<b>.0001</b>	<b>0.</b>	<b>.0000</b>	<b>.0029</b>
<b>126.00</b>	<b>11.</b>	<b>.0001</b>	<b>0.</b>	<b>.0000</b>	<b>.0029</b>
<b>128.00</b>	<b>11.</b>	<b>.0001</b>	<b>0.</b>	<b>.0000</b>	<b>.0029</b>
<b>130.00</b>	<b>11.</b>	<b>.0001</b>	<b>0.</b>	<b>.0000</b>	<b>.0029</b>
132.00	11.	.0001	0.	.0000	.0028

**MUNN-REESE, INC.**

Broadcast Engineering Consultants  
Coldwater, MI 49036

## PLOT OF TOTAL POWER DENSITY NEW 27+T(TV) – Amarillo, TX



The “COR Meters Above Ground” setting shown on the above graph represents the height of the antenna center of radiation above an observer on the ground who is assumed to be 2 meters in height.



## TABULATION OF TOTAL POWER DENSITY

### NEW+27(TV) – Amarillo, TX

#### Summary of Input Data:

-----  
Call: NEW+27

Frequency: 551.000 MHz

Horizontal Power (ERPd): 10.000 kW      Vertical Power (ERPd): .000 kW

Horizontal Input Power : 10.844 kW      Vertical Input Power : .000 kW

Antenna Type: unknown

Horizontal Element Type Number: 2.

Vertical Element Type Number: 0.

Height of observer above reference plane: 2.0 Meters

Element Data:

-----  
Horizontal:

Number of elements: 1

Distance from analysis reference point: .0 meters

Azimuth from analysis reference point: N .0 E

Height of center of radiation above reference plane: 56.0 Meters

#### Calculated Results:

-----  
\* - indicates computed value exceeds ANSI guideline.

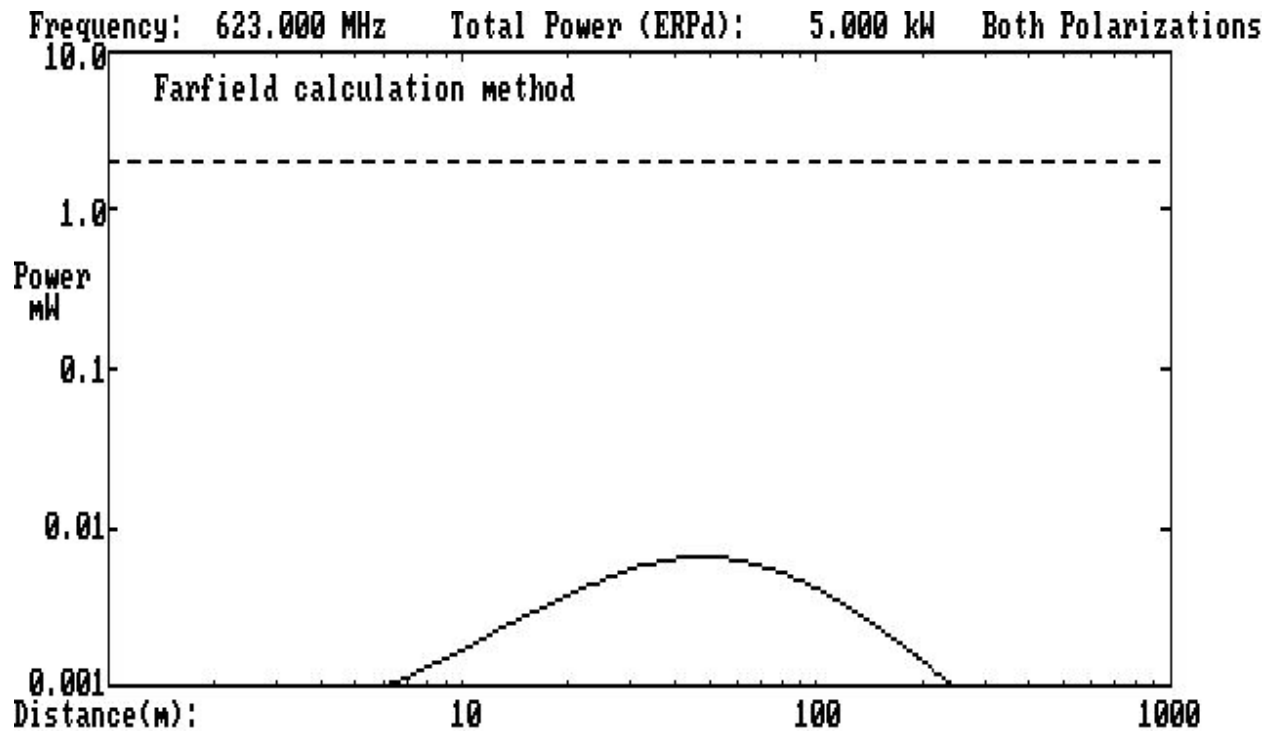
Farfield calculation methods were used.

Distance (meters)	Horizontal Polarization		Vertical Polarization		Total Power Density (mW/cm <sup>2</sup> )
	E2 Field (V <sup>2</sup> /m <sup>2</sup> )	H2 Field (A <sup>2</sup> /m <sup>2</sup> )	E2 Field (V <sup>2</sup> /m <sup>2</sup> )	H2 Field (A <sup>2</sup> /m <sup>2</sup> )	
40.00	48.	.0003	0.	.0000	.0129
41.00	49.	.0003	0.	.0000	.0129
42.00	49.	.0003	0.	.0000	.0130
43.00	49.	.0003	0.	.0000	.0131
44.00	50.	.0003	0.	.0000	.0131
<b>45.00</b>	<b>50.</b>	<b>.0003</b>	<b>0.</b>	<b>.0000</b>	<b>.0132</b>
<b>46.00</b>	<b>50.</b>	<b>.0004</b>	<b>0.</b>	<b>.0000</b>	<b>.0132</b>
<b>47.00</b>	<b>50.</b>	<b>.0004</b>	<b>0.</b>	<b>.0000</b>	<b>.0132</b>
<b>48.00</b>	<b>50.</b>	<b>.0004</b>	<b>0.</b>	<b>.0000</b>	<b>.0132</b>
<b>49.00</b>	<b>50.</b>	<b>.0004</b>	<b>0.</b>	<b>.0000</b>	<b>.0132</b>
<b>50.00</b>	<b>50.</b>	<b>.0004</b>	<b>0.</b>	<b>.0000</b>	<b>.0132</b>
<b>52.00</b>	<b>50.</b>	<b>.0003</b>	<b>0.</b>	<b>.0000</b>	<b>.0132</b>
54.00	49.	.0003	0.	.0000	.0131
56.00	49.	.0003	0.	.0000	.0130
58.00	48.	.0003	0.	.0000	.0128
60.00	48.	.0003	0.	.0000	.0127
62.00	47.	.0003	0.	.0000	.0125
64.00	47.	.0003	0.	.0000	.0124
66.00	46.	.0003	0.	.0000	.0121
68.00	45.	.0003	0.	.0000	.0119
70.00	44.	.0003	0.	.0000	.0117
72.00	43.	.0003	0.	.0000	.0115
74.00	43.	.0003	0.	.0000	.0113
76.00	42.	.0003	0.	.0000	.0111
78.00	41.	.0003	0.	.0000	.0108
80.00	40.	.0003	0.	.0000	.0106

**MUNN-REESE, INC.**

Broadcast Engineering Consultants  
Coldwater, MI 49036

## PLOT OF TOTAL POWER DENSITY NEW 39+T(TV) – Amarillo, TX



The “COR Meters Above Ground” setting shown on the above graph represents the height of the antenna center of radiation above an observer on the ground who is assumed to be 2 meters in height.

## TABULATION OF TOTAL POWER DENSITY

### NEW+39(TV) – Amarillo, TX

#### Summary of Input Data:

-----  
Call: NEW+39

Frequency: 623.000 MHz

Horizontal Power (ERPd): 5.000 kW      Vertical Power (ERPd): .000 kW

Horizontal Input Power : 5.422 kW      Vertical Input Power : .000 kW

Antenna Type: unknown

Horizontal Element Type Number: 2.

Vertical Element Type Number: 0.

Height of observer above reference plane: 2.0 Meters

Element Data:

-----  
Horizontal:

Number of elements: 1

Distance from analysis reference point: .0 meters

Azimuth from analysis reference point: N .0 E

Height of center of radiation above reference plane: 56.0 Meters

#### Calculated Results:

-----  
\* - indicates computed value exceeds ANSI guideline.

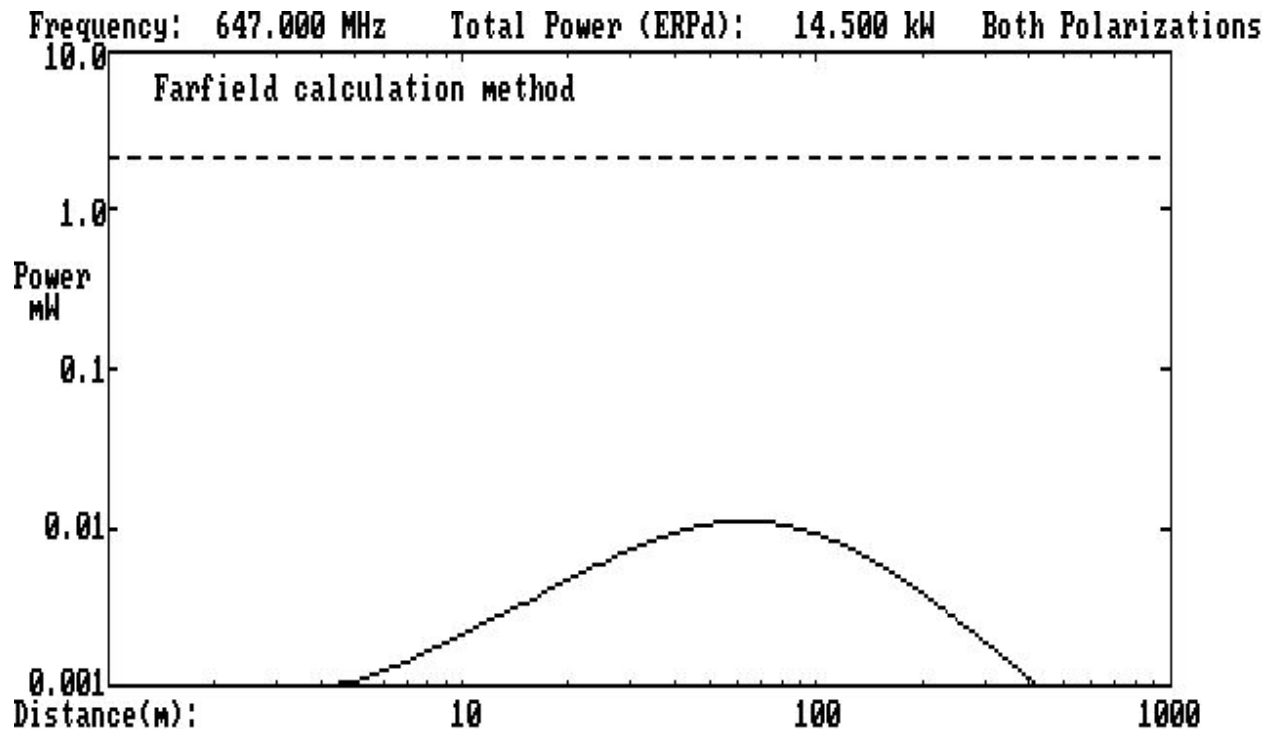
Farfield calculation methods were used.

Distance (meters)	Horizontal Polarization		Vertical Polarization		Total Power Density (mW/cm <sup>2</sup> )
	E2 Field (V <sup>2</sup> /m <sup>2</sup> )	H2 Field (A <sup>2</sup> /m <sup>2</sup> )	E2 Field (V <sup>2</sup> /m <sup>2</sup> )	H2 Field (A <sup>2</sup> /m <sup>2</sup> )	
30.00	21.	.0001	0.	.0000	.0055
31.00	21.	.0001	0.	.0000	.0057
32.00	22.	.0002	0.	.0000	.0058
33.00	22.	.0002	0.	.0000	.0059
34.00	23.	.0002	0.	.0000	.0060
35.00	23.	.0002	0.	.0000	.0061
36.00	23.	.0002	0.	.0000	.0062
37.00	24.	.0002	0.	.0000	.0062
38.00	24.	.0002	0.	.0000	.0063
39.00	24.	.0002	0.	.0000	.0064
40.00	24.	.0002	0.	.0000	.0064
41.00	24.	.0002	0.	.0000	.0065
42.00	25.	.0002	0.	.0000	.0065
43.00	25.	.0002	0.	.0000	.0065
44.00	25.	.0002	0.	.0000	.0066
45.00	25.	.0002	0.	.0000	.0066
46.00	25.	.0002	0.	.0000	.0066
47.00	25.	.0002	0.	.0000	.0066
48.00	25.	.0002	0.	.0000	.0066
49.00	25.	.0002	0.	.0000	.0066
50.00	25.	.0002	0.	.0000	.0066
52.00	25.	.0002	0.	.0000	.0066
54.00	25.	.0002	0.	.0000	.0066
56.00	24.	.0002	0.	.0000	.0065
58.00	24.	.0002	0.	.0000	.0064
60.00	24.	.0002	0.	.0000	.0063

**MUNN-REESE, INC.**

Broadcast Engineering Consultants  
Coldwater, MI 49036

## PLOT OF TOTAL POWER DENSITY KXTD(TV) – Amarillo, TX



The “COR Meters Above Ground” setting shown on the above graph represents the height of the antenna center of radiation above an observer on the ground who is assumed to be 2 meters in height.

## TABULATION OF TOTAL POWER DENSITY

### KXTD(TV) – Amarillo, TX

#### Summary of Input Data:

-----  
Call: KXTD(TV)

Frequency: 647.000 MHz

Horizontal Power (ERPd): 14.500 kW      Vertical Power (ERPd): .000 kW

Horizontal Input Power : 15.723 kW      Vertical Input Power : .000 kW

Antenna Type: unknown

Horizontal Element Type Number: 2.

Vertical Element Type Number: 0.

Height of observer above reference plane: 2.0 Meters

Element Data:

-----  
Horizontal:

Number of elements: 1

Distance from analysis reference point: .0 meters

Azimuth from analysis reference point: N .0 E

Height of center of radiation above reference plane: 72.9 Meters

#### Calculated Results:

-----  
\* - indicates computed value exceeds ANSI guideline.

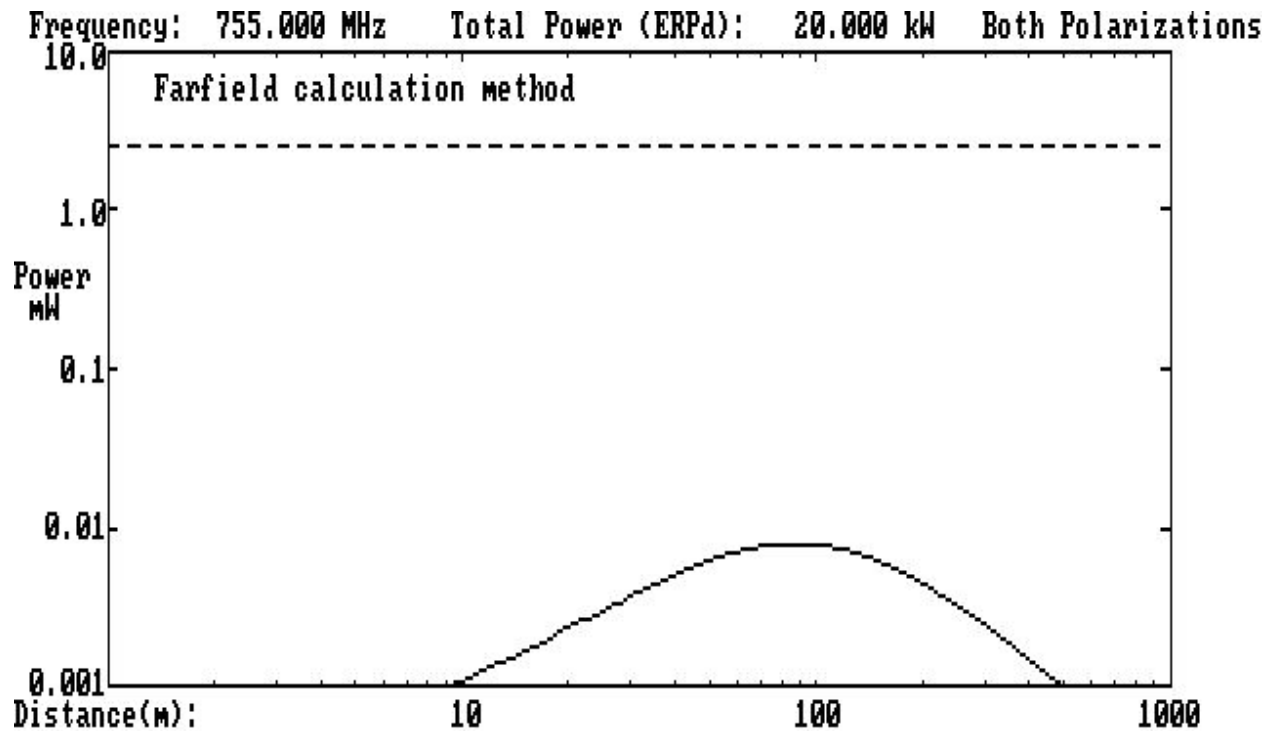
Farfield calculation methods were used.

Distance (meters)	Horizontal Polarization		Vertical Polarization		Total Power Density (mW/cm <sup>2</sup> )
	E2 Field (V <sup>2</sup> /m <sup>2</sup> )	H2 Field (A <sup>2</sup> /m <sup>2</sup> )	E2 Field (V <sup>2</sup> /m <sup>2</sup> )	H2 Field (A <sup>2</sup> /m <sup>2</sup> )	
45.00	38.	.0003	0.	.0000	.0101
46.00	39.	.0003	0.	.0000	.0102
47.00	39.	.0003	0.	.0000	.0103
48.00	39.	.0003	0.	.0000	.0105
49.00	40.	.0003	0.	.0000	.0106
50.00	40.	.0003	0.	.0000	.0106
52.00	41.	.0003	0.	.0000	.0108
54.00	41.	.0003	0.	.0000	.0109
56.00	41.	.0003	0.	.0000	.0110
<b>58.00</b>	<b>42.</b>	<b>.0003</b>	<b>0.</b>	<b>.0000</b>	<b>.0111</b>
<b>60.00</b>	<b>42.</b>	<b>.0003</b>	<b>0.</b>	<b>.0000</b>	<b>.0111</b>
<b>62.00</b>	<b>42.</b>	<b>.0003</b>	<b>0.</b>	<b>.0000</b>	<b>.0111</b>
<b>64.00</b>	<b>42.</b>	<b>.0003</b>	<b>0.</b>	<b>.0000</b>	<b>.0111</b>
<b>66.00</b>	<b>42.</b>	<b>.0003</b>	<b>0.</b>	<b>.0000</b>	<b>.0111</b>
<b>68.00</b>	<b>42.</b>	<b>.0003</b>	<b>0.</b>	<b>.0000</b>	<b>.0111</b>
<b>70.00</b>	<b>42.</b>	<b>.0003</b>	<b>0.</b>	<b>.0000</b>	<b>.0111</b>
72.00	41.	.0003	0.	.0000	.0110
74.00	41.	.0003	0.	.0000	.0109
76.00	41.	.0003	0.	.0000	.0108
78.00	40.	.0003	0.	.0000	.0107
80.00	40.	.0003	0.	.0000	.0106
82.00	40.	.0003	0.	.0000	.0105
84.00	39.	.0003	0.	.0000	.0104
86.00	39.	.0003	0.	.0000	.0103
88.00	38.	.0003	0.	.0000	.0101
90.00	38.	.0003	0.	.0000	.0100

**MUNN-REESE, INC.**

Broadcast Engineering Consultants  
Coldwater, MI 49036

## PLOT OF TOTAL POWER DENSITY NEW 61-T(TV) – Amarillo, TX



The “COR Meters Above Ground” setting shown on the above graph represents the height of the antenna center of radiation above an observer on the ground who is assumed to be 2 meters in height.

**MUNN-REESE, INC.**

Broadcast Engineering Consultants  
Coldwater, MI 49036

## TABULATION OF TOTAL POWER DENSITY

### NEW 61-T(TV) – Amarillo, TX

#### Summary of Input Data:

```

-----
Call: NEW-61
Frequency: 755.000 MHz
Horizontal Power (ERPd): 20.000 kW   Vertical Power (ERPd): .000 kW
Horizontal Input Power : 21.687 kW   Vertical Input Power : .000 kW
Antenna Type: unknown
Horizontal Element Type Number: 2.
Vertical Element Type Number: 0.
Height of observer above reference plane: 2.0 Meters
Element Data:
-----
Horizontal:
Number of elements: 1
Distance from analysis reference point: .0 meters
Azimuth from analysis reference point: N .0 E
Height of center of radiation above reference plane: 100.0 Meters

```

#### Calculated Results:

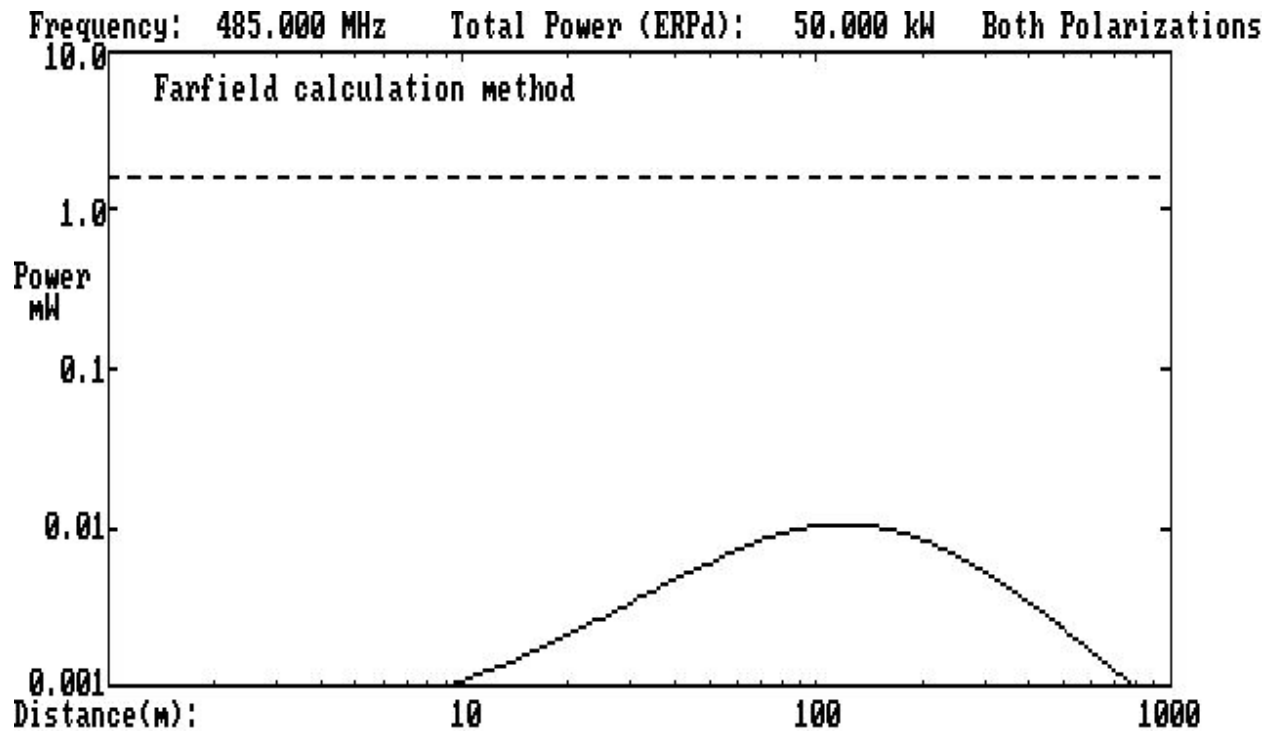
```

-----
* - indicates computed value exceeds ANSI guideline.
Farfield calculation methods were used.

```

Distance (meters)	Horizontal Polarization		Vertical Polarization		Total Power Density (mW/cm <sup>2</sup> )
	E2 Field (V <sup>2</sup> /m <sup>2</sup> )	H2 Field (A <sup>2</sup> /m <sup>2</sup> )	E2 Field (V <sup>2</sup> /m <sup>2</sup> )	H2 Field (A <sup>2</sup> /m <sup>2</sup> )	
60.00	27.	.0002	0.	.0000	.0071
62.00	27.	.0002	0.	.0000	.0073
64.00	28.	.0002	0.	.0000	.0074
66.00	28.	.0002	0.	.0000	.0075
68.00	29.	.0002	0.	.0000	.0076
70.00	29.	.0002	0.	.0000	.0077
72.00	29.	.0002	0.	.0000	.0078
74.00	30.	.0002	0.	.0000	.0078
76.00	30.	.0002	0.	.0000	.0079
78.00	30.	.0002	0.	.0000	.0079
<b>80.00</b>	<b>30.</b>	<b>.0002</b>	<b>0.</b>	<b>.0000</b>	<b>.0080</b>
<b>82.00</b>	<b>30.</b>	<b>.0002</b>	<b>0.</b>	<b>.0000</b>	<b>.0080</b>
<b>84.00</b>	<b>30.</b>	<b>.0002</b>	<b>0.</b>	<b>.0000</b>	<b>.0080</b>
<b>86.00</b>	<b>30.</b>	<b>.0002</b>	<b>0.</b>	<b>.0000</b>	<b>.0080</b>
<b>88.00</b>	<b>30.</b>	<b>.0002</b>	<b>0.</b>	<b>.0000</b>	<b>.0080</b>
<b>90.00</b>	<b>30.</b>	<b>.0002</b>	<b>0.</b>	<b>.0000</b>	<b>.0080</b>
<b>92.00</b>	<b>30.</b>	<b>.0002</b>	<b>0.</b>	<b>.0000</b>	<b>.0080</b>
<b>94.00</b>	<b>30.</b>	<b>.0002</b>	<b>0.</b>	<b>.0000</b>	<b>.0080</b>
<b>96.00</b>	<b>30.</b>	<b>.0002</b>	<b>0.</b>	<b>.0000</b>	<b>.0080</b>
<b>98.00</b>	<b>30.</b>	<b>.0002</b>	<b>0.</b>	<b>.0000</b>	<b>.0080</b>
100.00	30.	.0002	0.	.0000	.0079
102.00	30.	.0002	0.	.0000	.0079
104.00	30.	.0002	0.	.0000	.0078
106.00	29.	.0002	0.	.0000	.0078
108.00	29.	.0002	0.	.0000	.0077

## PLOT OF TOTAL POWER DENSITY NEW 16-T(TV) – Amarillo, TX



The “COR Meters Above Ground” setting shown on the above graph represents the height of the antenna center of radiation above an observer on the ground who is assumed to be 2 meters in height.

**MUNN-REESE, INC.**

Broadcast Engineering Consultants  
Coldwater, MI 49036



# TABULATION OF TOTAL POWER DENSITY

## NEW 16-T(TV) – Amarillo, TX

### Summary of Input Data:

-----  
Call: NEW-16

Frequency: 485.000 MHz

Horizontal Power (ERPd): 50.000 kW      Vertical Power (ERPd): .000 kW

Horizontal Input Power : 54.218 kW      Vertical Input Power : .000 kW

Antenna Type: unknown

Horizontal Element Type Number: 2.

Vertical Element Type Number: 0.

Height of observer above reference plane: 2.0 Meters

Element Data:

-----  
Horizontal:

Number of elements: 1

Distance from analysis reference point: .0 meters

Azimuth from analysis reference point: N .0 E

Height of center of radiation above reference plane: 137.0 Meters

### Calculated Results:

-----  
\* - indicates computed value exceeds ANSI guideline.

Farfield calculation methods were used.

Distance (meters)	Horizontal Polarization		Vertical Polarization		Total Power Density (mW/cm <sup>2</sup> )
	E2 Field (V <sup>2</sup> /m <sup>2</sup> )	H2 Field (A <sup>2</sup> /m <sup>2</sup> )	E2 Field (V <sup>2</sup> /m <sup>2</sup> )	H2 Field (A <sup>2</sup> /m <sup>2</sup> )	
90.00	37.	.0003	0.	.0000	.0099
92.00	38.	.0003	0.	.0000	.0100
94.00	38.	.0003	0.	.0000	.0101
96.00	38.	.0003	0.	.0000	.0102
98.00	39.	.0003	0.	.0000	.0102
100.00	39.	.0003	0.	.0000	.0103
102.00	39.	.0003	0.	.0000	.0103
104.00	39.	.0003	0.	.0000	.0104
106.00	39.	.0003	0.	.0000	.0104
108.00	40.	.0003	0.	.0000	.0105
110.00	40.	.0003	0.	.0000	.0105
112.00	40.	.0003	0.	.0000	.0105
<b>114.00</b>	<b>40.</b>	<b>.0003</b>	<b>0.</b>	<b>.0000</b>	<b>.0106</b>
<b>116.00</b>	<b>40.</b>	<b>.0003</b>	<b>0.</b>	<b>.0000</b>	<b>.0106</b>
<b>118.00</b>	<b>40.</b>	<b>.0003</b>	<b>0.</b>	<b>.0000</b>	<b>.0106</b>
<b>120.00</b>	<b>40.</b>	<b>.0003</b>	<b>0.</b>	<b>.0000</b>	<b>.0106</b>
<b>122.00</b>	<b>40.</b>	<b>.0003</b>	<b>0.</b>	<b>.0000</b>	<b>.0106</b>
<b>124.00</b>	<b>40.</b>	<b>.0003</b>	<b>0.</b>	<b>.0000</b>	<b>.0106</b>
<b>126.00</b>	<b>40.</b>	<b>.0003</b>	<b>0.</b>	<b>.0000</b>	<b>.0106</b>
<b>128.00</b>	<b>40.</b>	<b>.0003</b>	<b>0.</b>	<b>.0000</b>	<b>.0106</b>
130.00	40.	.0003	0.	.0000	.0105
132.00	40.	.0003	0.	.0000	.0105
134.00	40.	.0003	0.	.0000	.0105
136.00	39.	.0003	0.	.0000	.0105
138.00	39.	.0003	0.	.0000	.0104
140.00	39.	.0003	0.	.0000	.0104

**MUNN-REESE, INC.**

Broadcast Engineering Consultants  
Coldwater, MI 49036