

## **EXHIBIT 22**

### **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 auxiliary FM operation of WCSG(FM) on Channel 217B, the transmitter site will also be shared with one other existing FM station and one Translator application tendered for filing. There are no other known broadcast facilities within 315 meters of the shared transmitter site.

The proposed auxiliary WCSG(FM) facility will operate on Channel 217B with a maximum effective radiated power (ERP) of 10.0 kW (H)&(V). The antenna will be an ERI two (2) bay fully spaced antenna mounted 33 meters AGL. The antenna will use EPA Type 3 elements.

Existing FM station WGRD-FM operates on Channel 250B with a maximum effective radiated power (ERP) of 13.0 kW (H)&(V). The WGRD-FM staff engineer has indicated the antenna is an ERI two (2) bay fully spaced antenna mounted 99 meters AGL. The antenna employs EPA Type 3 elements.

Tendered Application BNPFT-20030310ATM proposes operation on Channel 243D with a maximum effective radiated power (ERP) of 0.01 kW (V). The antenna will be mounted 90 meters AGL. A worst case one (1) bay EPA type 1 element has been assumed.

The WCSG(FM) main facility is also located within 315 meters of the shared site, however the facility has been excluded from this study as the WCSG(FM) main facility will not be in operation while the WCSG(FM) auxiliary facility is broadcasting.

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 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.

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 uncontrolled limits set forth in OET Bulletin No. 65 (Edition 97-01).

<u>Contributing Station</u>	<u>Maximum Contribution</u>	<u>Uncontrolled Limit</u>	<u>Decimal Fraction of Limit</u>
WCSG (FM) aux	99.83 $\mu\text{W}/\text{cm}^2$	200 $\mu\text{W}/\text{cm}^2$	0.4992
WGRD-FM	13.26 $\mu\text{W}/\text{cm}^2$	200 $\mu\text{W}/\text{cm}^2$	0.0663
BNPFT-20030310ATM	0.04 $\mu\text{W}/\text{cm}^2$	200 $\mu\text{W}/\text{cm}^2$	<u>0.0002</u>
<b>Total Decimal Fraction</b>			<b>0.5657</b>

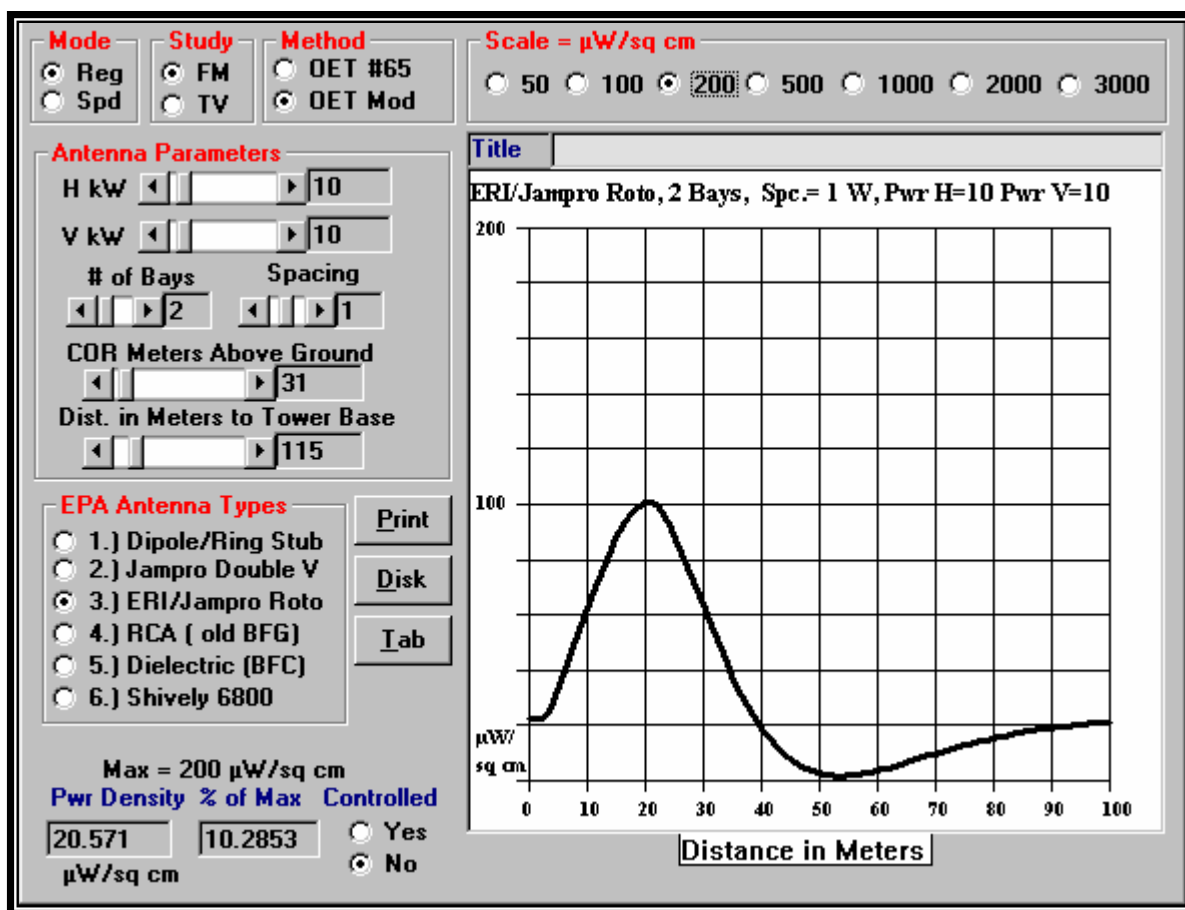
With the implementation of OET Bulletin No. 65 (Edition 97-01) and the accompanying Supplement A (Edition 97-01), the Commission set forth new guidelines for human exposure to radiofrequency radiation that employ a two-tiered system. The more lenient set of guidelines are for the “controlled environments,” 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 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 above sets forth an evaluation of the transmitter site based on the standards for “uncontrolled environments.”

Since the Total Decimal Fraction is less than unity for the more stringent 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**  
**WCSG(FM) aux – Grand Rapids, MI**  
**Using a 2-Bay EPA Type 3 Antenna Mounted 33 meters AGL**



The “Dist to COR” value 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.

# TAB OF TOTAL POWER DENSITY

## WCSG(FM) aux – Grand Rapids, MI

### Using a 2-Bay EPA Type 3 Antenna Mounted 33 meters AGL

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Environment = Uncontrolled, Maximum = 200 µW/sq cm

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

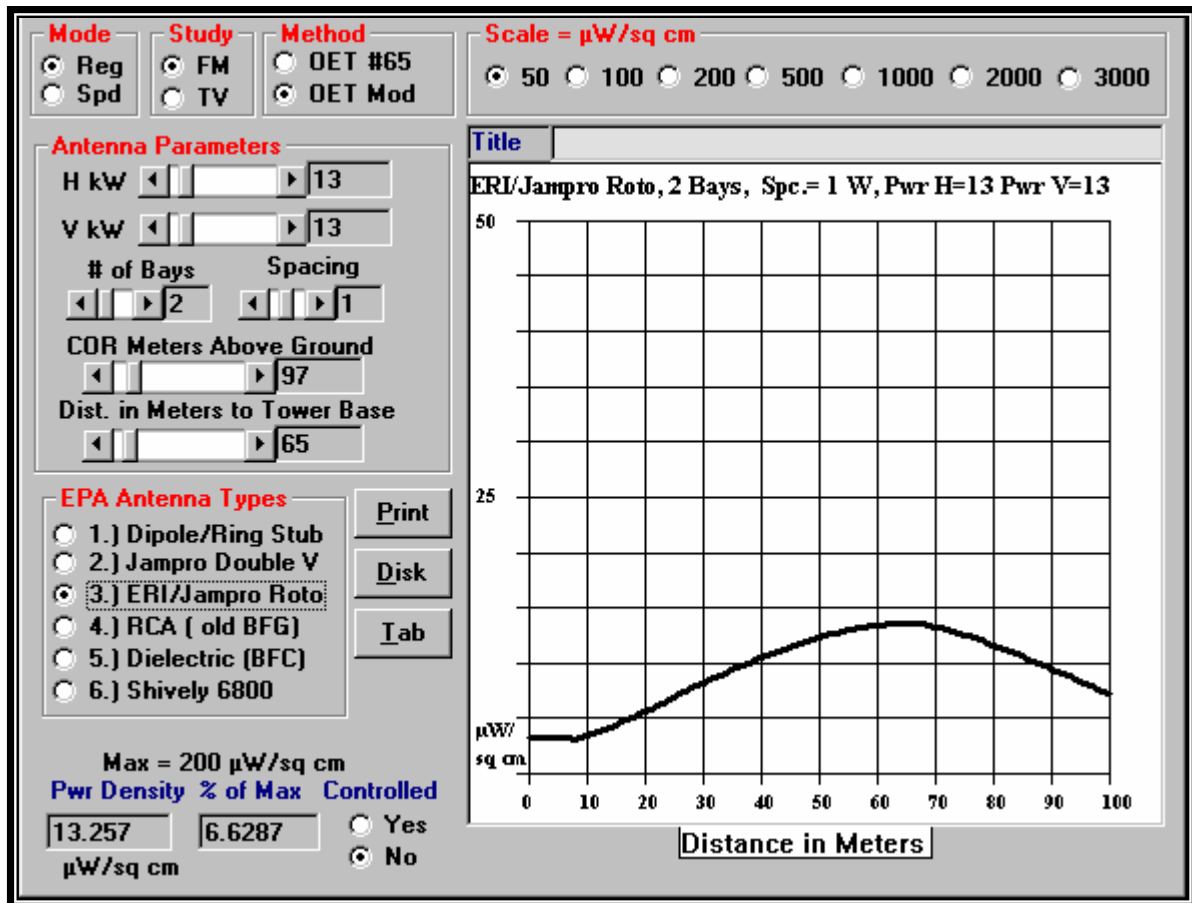
ERI/Jampro Roto, 2 Spc.= 1 W, Pwr H.=10 Pwr V.=10 COR= 31M

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

1	10.43	10.43	20.86	10.4
2	10.42	10.42	20.84	10.4
3	10.39	10.39	20.77	10.4
4	10.97	10.97	21.95	11.0
5	13.25	13.25	26.50	13.3
6	15.66	15.66	31.32	15.7
7	18.95	17.89	36.84	18.4
8	23.13	19.89	43.02	21.5
9	27.50	21.86	49.35	24.7
10	30.54	24.84	55.38	27.7
11	32.85	28.29	61.13	30.6
12	34.97	31.65	66.62	33.3
13	37.21	34.90	72.12	36.1
14	39.33	37.95	77.28	38.6
15	41.13	40.71	81.84	40.9
16	43.49	42.76	86.24	43.1
17	46.18	44.13	90.31	45.2
18	48.40	45.10	93.50	46.7
19	50.15	45.72	95.87	47.9
20	51.69	46.53	98.22	49.1
21	52.66	46.87	99.53	49.8
22	53.08	46.75	99.83	49.9
23	52.68	45.99	98.68	49.3
24	51.23	44.39	95.62	47.8
25	49.42	42.52	91.94	46.0
26	47.30	40.45	87.75	43.9
27	44.94	38.20	83.14	41.6
28	42.60	35.51	78.11	39.1
29	40.07	32.80	72.87	36.4
30	37.41	30.10	67.51	33.8
31	34.67	27.45	62.12	31.1
32	31.89	24.87	56.76	28.4
33	28.62	22.74	51.36	25.7
34	25.52	20.62	46.14	23.1
35	22.60	18.56	41.16	20.6
36	19.87	16.57	36.44	18.2
37	17.34	14.67	32.01	16.0
38	15.01	12.88	27.88	13.9
39	12.90	11.25	24.15	12.1
40	10.98	9.73	20.71	10.4
41	9.24	8.32	17.56	8.8
42	7.69	7.02	14.71	7.4
43	6.31	5.84	12.15	6.1
44	5.10	4.78	9.88	4.9
45	4.04	3.84	7.88	3.9
46	3.11	3.01	6.12	3.1
47	2.33	2.29	4.62	2.3
48	1.68	1.68	3.36	1.7

48	1.16	1.18	2.34	1.2
49	0.75	0.78	1.53	0.8
50	0.44	0.47	0.91	0.5
51	0.22	0.24	0.46	0.2
52	0.08	0.09	0.18	0.1
53	0.01	0.01	0.03	0.0
54	0.00	0.00	0.01	0.0
55	0.04	0.05	0.09	0.0
56	0.13	0.15	0.28	0.1
57	0.26	0.30	0.55	0.3
58	0.42	0.49	0.91	0.5
59	0.61	0.72	1.32	0.7
60	0.82	0.98	1.80	0.9
61	1.06	1.27	2.32	1.2
62	1.31	1.58	2.89	1.4
63	1.57	1.92	3.49	1.7
64	1.85	2.27	4.12	2.1
65	2.13	2.64	4.77	2.4
66	2.42	3.02	5.43	2.7
67	2.71	3.38	6.09	3.0
68	3.01	3.73	6.74	3.4
69	3.31	4.08	7.39	3.7
70	3.61	4.41	8.03	4.0
71	3.91	4.75	8.66	4.3
72	4.20	5.07	9.28	4.6
73	4.50	5.39	9.89	4.9
74	4.78	5.70	10.48	5.2
75	5.06	5.99	11.06	5.5
76	5.33	6.28	11.62	5.8
77	5.60	6.56	12.16	6.1
78	5.86	6.82	12.68	6.3
79	6.11	7.08	13.18	6.6
80	6.35	7.32	13.67	6.8
81	6.59	7.55	14.13	7.1
82	6.81	7.77	14.58	7.3
83	7.03	7.98	15.01	7.5
84	7.24	8.17	15.41	7.7
85	7.44	8.36	15.80	7.9
86	7.62	8.55	16.17	8.1
87	7.79	8.74	16.53	8.3
88	7.95	8.91	16.87	8.4
89	8.11	9.08	17.19	8.6
90	8.25	9.23	17.49	8.7
91	8.39	9.38	17.77	8.9
92	8.52	9.52	18.04	9.0
93	8.64	9.65	18.29	9.1
94	8.76	9.77	18.53	9.3
95	8.87	9.88	18.75	9.4
96	8.97	9.99	18.95	9.5
97	9.06	10.08	19.14	9.6
98	9.14	10.17	19.31	9.7
99	9.22	10.25	19.48	9.7
100	9.30	10.33	19.62	9.8

**PLOT OF TOTAL POWER DENSITY**  
**WGRD-FM – Grand Rapids, MI**  
**Using a 2-Bay EPA Type 3 Antenna Mounted 99 meters AGL**



The "Dist to COR" value 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.

# TAB OF TOTAL POWER DENSITY

## WGRD-FM – Grand Rapids, MI

### Using a 2-Bay EPA Type 3 Antenna Mounted 99 meters AGL

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Environment = Uncontrolled, Maximum = 200 µW/sq cm

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

ERI/Jampro Roto, 2 Spc.= 1 W, Pwr H.=13 Pwr V.=13 COR= 97M

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

	1.38	1.38	2.77	1.4
1	1.38	1.38	2.77	1.4
2	1.38	1.38	2.77	1.4
3	1.38	1.38	2.77	1.4
4	1.38	1.38	2.76	1.4
5	1.38	1.38	2.76	1.4
6	1.38	1.38	2.76	1.4
7	1.38	1.38	2.76	1.4
8	1.38	1.38	2.75	1.4
9	1.42	1.42	2.84	1.4
10	1.51	1.51	3.03	1.5
11	1.61	1.61	3.22	1.6
12	1.71	1.71	3.42	1.7
13	1.81	1.81	3.62	1.8
14	1.91	1.91	3.82	1.9
15	2.01	2.01	4.02	2.0
16	2.12	2.12	4.23	2.1
17	2.22	2.22	4.44	2.2
18	2.38	2.31	4.69	2.3
19	2.55	2.39	4.95	2.5
20	2.73	2.48	5.21	2.6
21	2.91	2.56	5.47	2.7
22	3.09	2.65	5.74	2.9
23	3.27	2.73	6.01	3.0
24	3.46	2.82	6.27	3.1
25	3.65	2.90	6.54	3.3
26	3.83	2.98	6.81	3.4
27	3.94	3.13	7.06	3.5
28	4.04	3.27	7.31	3.7
29	4.14	3.42	7.56	3.8
30	4.24	3.57	7.81	3.9
31	4.33	3.71	8.05	4.0
32	4.43	3.86	8.29	4.1
33	4.52	4.00	8.52	4.3
34	4.61	4.14	8.75	4.4
35	4.69	4.28	8.97	4.5
36	4.79	4.42	9.21	4.6
37	4.89	4.56	9.45	4.7
38	4.98	4.69	9.68	4.8
39	5.08	4.83	9.90	5.0
40	5.16	4.95	10.12	5.1
41	5.25	5.08	10.33	5.2
42	5.33	5.20	10.53	5.3
43	5.40	5.31	10.72	5.4
44	5.48	5.43	10.90	5.5
45	5.54	5.53	11.07	5.5
46	5.66	5.61	11.27	5.6
47	5.78	5.68	11.46	5.7

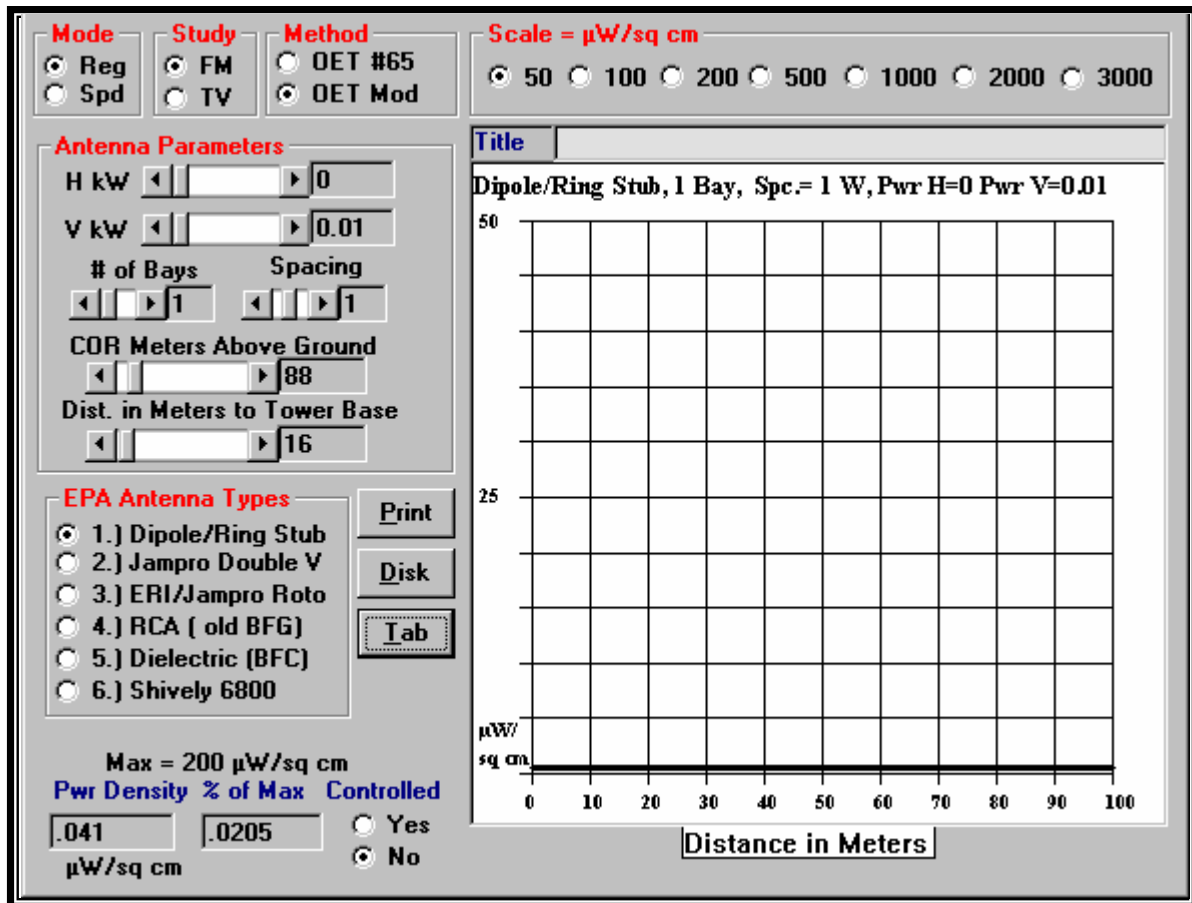
Dist (M)	PD (H)	PD (V)	Total (uW/cm2)	Percent max.
48	5.90	5.74	11.65	5.8
49	6.02	5.80	11.82	5.9
50	6.12	5.86	11.98	6.0
51	6.23	5.90	12.13	6.1
52	6.32	5.95	12.27	6.1
53	6.41	5.98	12.39	6.2
54	6.49	6.01	12.50	6.3
55	6.57	6.04	12.60	6.3
56	6.63	6.06	12.69	6.3
57	6.71	6.10	12.81	6.4
58	6.78	6.14	12.91	6.5
59	6.84	6.17	13.00	6.5
60	6.89	6.19	13.08	6.5
61	6.94	6.21	13.14	6.6
62	6.97	6.22	13.19	6.6
63	7.00	6.22	13.23	6.6
64	7.03	6.22	13.25	6.6
65	7.04	6.22	13.26	6.6
66	7.05	6.20	13.25	6.6
67	7.05	6.18	13.23	6.6
68	7.04	6.16	13.20	6.6
69	6.99	6.10	13.08	6.5
70	6.93	6.03	12.96	6.5
71	6.87	5.96	12.83	6.4
72	6.80	5.89	12.69	6.3
73	6.73	5.82	12.54	6.3
74	6.65	5.74	12.39	6.2
75	6.57	5.65	12.22	6.1
76	6.48	5.57	12.05	6.0
77	6.40	5.48	11.88	5.9
78	6.30	5.39	11.69	5.8
79	6.21	5.30	11.50	5.8
80	6.11	5.20	11.31	5.7
81	6.00	5.11	11.11	5.6
82	5.90	5.00	10.90	5.5
83	5.81	4.89	10.69	5.3
84	5.71	4.77	10.48	5.2
85	5.60	4.66	10.26	5.1
86	5.50	4.54	10.04	5.0
87	5.39	4.43	9.81	4.9
88	5.28	4.31	9.59	4.8
89	5.17	4.20	9.36	4.7
90	5.05	4.08	9.13	4.6
91	4.94	3.97	8.90	4.5
92	4.82	3.85	8.68	4.3
93	4.71	3.74	8.45	4.2
94	4.59	3.63	8.22	4.1
95	4.47	3.52	7.99	4.0
96	4.35	3.41	7.76	3.9
97	4.23	3.30	7.54	3.8
98	4.09	3.21	7.30	3.7
99	3.95	3.12	7.08	3.5
100	3.82	3.03	6.85	3.4

**Munn-Reese, Inc.**

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Coldwater, MI 49036

**PLOT OF TOTAL POWER DENSITY**  
**AP243D – Kentwood, MI**  
**Using a 1-Bay EPA Type 1 Antenna Mounted 88 meters AGL**



The "Dist to COR" value 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.

# TAB OF TOTAL POWER DENSITY

## AP243D – Kentwood, MI

### Using a 1-Bay EPA Type 1 Antenna Mounted 90 meters AGL

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Dist (M) PD (H) PD (V) Total (uW/cm2) Percent max.

Environment = Uncontrolled, Maximum = 200  $\mu$ W/sq cm

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

Dipole/Ring Stub, 1 Spc.= 1 W, Pwr H.=0 Pwr V.=0.01 COR= 88M

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

	0.00	0.03	0.03	0.0
1	0.00	0.04	0.04	0.0
2	0.00	0.04	0.04	0.0
3	0.00	0.04	0.04	0.0
4	0.00	0.04	0.04	0.0
5	0.00	0.04	0.04	0.0
6	0.00	0.04	0.04	0.0
7	0.00	0.04	0.04	0.0
8	0.00	0.04	0.04	0.0
9	0.00	0.04	0.04	0.0
10	0.00	0.04	0.04	0.0
11	0.00	0.04	0.04	0.0
12	0.00	0.04	0.04	0.0
13	0.00	0.04	0.04	0.0
14	0.00	0.04	0.04	0.0
15	0.00	0.04	0.04	0.0
16	0.00	0.04	0.04	0.0
17	0.00	0.04	0.04	0.0
18	0.00	0.04	0.04	0.0
19	0.00	0.04	0.04	0.0
20	0.00	0.04	0.04	0.0
21	0.00	0.04	0.04	0.0
22	0.00	0.04	0.04	0.0
23	0.00	0.04	0.04	0.0
24	0.00	0.04	0.04	0.0
25	0.00	0.04	0.04	0.0
26	0.00	0.04	0.04	0.0
27	0.00	0.04	0.04	0.0
28	0.00	0.04	0.04	0.0
29	0.00	0.04	0.04	0.0
30	0.00	0.04	0.04	0.0
31	0.00	0.04	0.04	0.0
32	0.00	0.04	0.04	0.0
33	0.00	0.04	0.04	0.0
34	0.00	0.04	0.04	0.0
35	0.00	0.04	0.04	0.0
36	0.00	0.04	0.04	0.0
37	0.00	0.04	0.04	0.0
38	0.00	0.04	0.04	0.0
39	0.00	0.04	0.04	0.0
40	0.00	0.04	0.04	0.0
41	0.00	0.04	0.04	0.0
42	0.00	0.04	0.04	0.0
43	0.00	0.04	0.04	0.0
44	0.00	0.04	0.04	0.0
45	0.00	0.04	0.04	0.0
46	0.00	0.04	0.04	0.0
47	0.00	0.04	0.04	0.0

48	0.00	0.04	0.04	0.0
49	0.00	0.04	0.04	0.0
50	0.00	0.04	0.04	0.0
51	0.00	0.04	0.04	0.0
52	0.00	0.04	0.04	0.0
53	0.00	0.04	0.04	0.0
54	0.00	0.04	0.04	0.0
55	0.00	0.04	0.04	0.0
56	0.00	0.04	0.04	0.0
57	0.00	0.04	0.04	0.0
58	0.00	0.03	0.03	0.0
59	0.00	0.03	0.03	0.0
60	0.00	0.03	0.03	0.0
61	0.00	0.03	0.03	0.0
62	0.00	0.03	0.03	0.0
63	0.00	0.03	0.03	0.0
64	0.00	0.03	0.03	0.0
65	0.00	0.03	0.03	0.0
66	0.00	0.03	0.03	0.0
67	0.00	0.03	0.03	0.0
68	0.00	0.03	0.03	0.0
69	0.00	0.03	0.03	0.0
70	0.00	0.03	0.03	0.0
71	0.00	0.03	0.03	0.0
72	0.00	0.03	0.03	0.0
73	0.00	0.03	0.03	0.0
74	0.00	0.03	0.03	0.0
75	0.00	0.03	0.03	0.0
76	0.00	0.03	0.03	0.0
77	0.00	0.03	0.03	0.0
78	0.00	0.03	0.03	0.0
79	0.00	0.03	0.03	0.0
80	0.00	0.03	0.03	0.0
81	0.00	0.03	0.03	0.0
82	0.00	0.03	0.03	0.0
83	0.00	0.03	0.03	0.0
84	0.00	0.03	0.03	0.0
85	0.00	0.03	0.03	0.0
86	0.00	0.02	0.02	0.0
87	0.00	0.02	0.02	0.0
88	0.00	0.02	0.02	0.0
89	0.00	0.02	0.02	0.0
90	0.00	0.02	0.02	0.0
91	0.00	0.02	0.02	0.0
92	0.00	0.02	0.02	0.0
93	0.00	0.02	0.02	0.0
94	0.00	0.02	0.02	0.0
95	0.00	0.02	0.02	0.0
96	0.00	0.02	0.02	0.0
97	0.00	0.02	0.02	0.0
98	0.00	0.02	0.02	0.0
99	0.00	0.02	0.02	0.0
100	0.00	0.02	0.02	0.0