Human exposure to excess levels of radiofrequency radiation

The proposed facility is to be built using a 1-bay vertically polarized antenna.

According to OET 65, “Applicants and licensees should be able to calculate, based on considerations of frequency, power and antenna characteristics the distance from their transmitter where their signal produces an RF field equal to, or greater than, the 5% threshold limit. The applicant or licensee then shares responsibility for compliance in any accessible area or areas within this 5% “contour” where the appropriate limits are found to be exceeded.”

As can be seen in Exhibit 17-A, the proposed facility’s maximum contribution to RF on the site is 3.7% of the uncontrolled (public) exposure limit.

Therefore, because the proposed facility will not cause an RF field that is equal to or greater than 5% of the 200 $\mu W/cm^2$ limit for uncontrolled exposure at any point, the proposed facility complies with the requirements of OET 65.

EMF will fully cooperate with other site users to temporarily reduce power or cease broadcasting, as necessary, to protect workers and others having access to the site from excessive levels of RF Radiation.

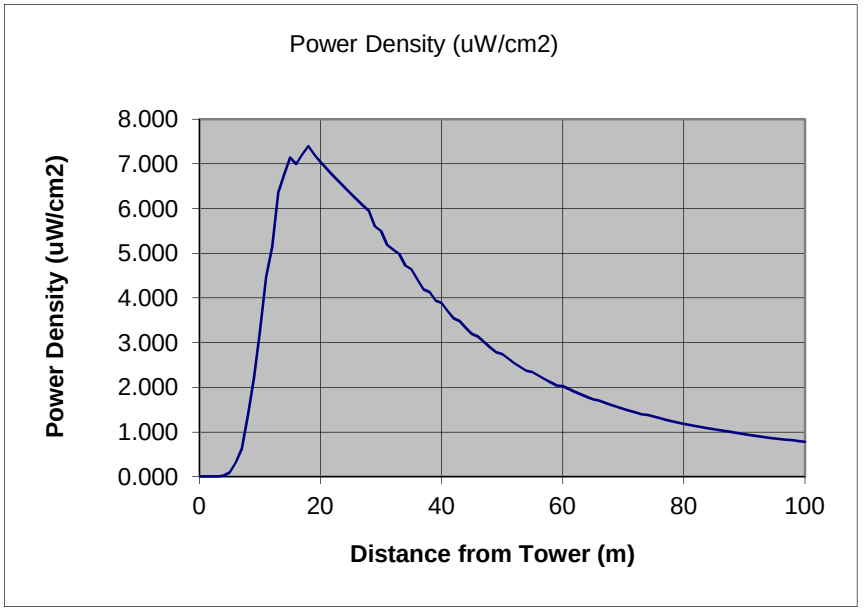
Specific Antenna RF Power Density Calculator

Based on Equation 10 of OET-65

Detailed Report

ERP	0.25 kW	% of OET-65	
Height above ground	13.0 meters	3.7%	Uncontrolled
Height above head	11.0 meters	0.7%	Controlled
Antenna Brand	**SCA**		
Antenna Model	**CLFM-V**		

Horizontal distance from tower (meters)	Angle (°)	Distance (m)	Field	Power (W)	Power Density (uW/cm2)
0	90	11.0	0.01	2.5	0.007
1	85	11.0	0.01	2.5	0.007
2	80	11.2	0.01	2.5	0.007
3	75	11.4	0.01	2.5	0.006
4	70	11.7	0.02	5	0.024
5	66	12.1	0.04	10	0.092
6	61	12.5	0.077	19.25	0.315
7	58	13.0	0.113	28.25	0.627
8	54	13.6	0.174	43.5	1.367
9	51	14.2	0.231	57.75	2.206
10	48	14.9	0.294	73.5	3.266
11	45	15.6	0.36	90	4.472
12	43	16.3	0.404	101	5.143
13	40	17.0	0.47	117.5	6.360
14	38	17.8	0.507	126.75	6.771
15	36	18.6	0.544	136	7.142
16	35	19.4	0.562	140.5	6.995
17	33	20.2	0.595	148.75	7.210
18	31	21.1	0.628	157	7.400
19	30	22.0	0.645	161.25	7.207
20	29	22.8	0.663	165.75	7.045
21	28	23.7	0.681	170.25	6.890
22	27	24.6	0.699	174.75	6.744
23	26	25.5	0.717	179.25	6.604
24	25	26.4	0.735	183.75	6.472
25	24	27.3	0.752	188	6.330



26	23	28.2	0.769	192.25	6.196
27	22	29.2	0.786	196.5	6.069
28	21	30.1	0.803	200.75	5.949
29	21	31.0	0.803	200.75	5.597
30	20	32.0	0.82	205	5.499
31	20	32.9	0.82	205	5.189
32	19	33.8	0.835	208.75	5.085
33	18	34.8	0.85	212.5	4.986
34	18	35.7	0.85	212.5	4.724
35	17	36.7	0.865	216.25	4.642
36	17	37.6	0.865	216.25	4.409
37	17	38.6	0.865	216.25	4.193
38	16	39.6	0.88	220	4.132
39	16	40.5	0.88	220	3.938
40	15	41.5	0.895	223.75	3.886
41	15	42.4	0.895	223.75	3.712
42	15	43.4	0.895	223.75	3.548
43	14	44.4	0.906	226.5	3.479
44	14	45.4	0.906	226.5	3.332
45	14	46.3	0.906	226.5	3.194
46	13	47.3	0.917	229.25	3.139
47	13	48.3	0.917	229.25	3.013
48	13	49.2	0.917	229.25	2.895
49	13	50.2	0.917	229.25	2.784
50	12	51.2	0.928	232	2.744
51	12	52.2	0.928	232	2.642
52	12	53.2	0.928	232	2.545
53	12	54.1	0.928	232	2.454
54	12	55.1	0.928	232	2.368
55	11	56.1	0.939	234.75	2.340
56	11	57.1	0.939	234.75	2.260
57	11	58.1	0.939	234.75	2.185
58	11	59.0	0.939	234.75	2.113
59	11	60.0	0.939	234.75	2.044
60	10	61.0	0.95	237.5	2.025
61	10	62.0	0.95	237.5	1.961
62	10	63.0	0.95	237.5	1.901
63	10	64.0	0.95	237.5	1.843

64	10	64.9	0.95	237.5	1.787
65	10	65.9	0.95	237.5	1.734
66	9	66.9	0.956	239	1.705
67	9	67.9	0.956	239	1.655
68	9	68.9	0.956	239	1.608
69	9	69.9	0.956	239	1.563
70	9	70.9	0.956	239	1.520
71	9	71.8	0.956	239	1.478
72	9	72.8	0.956	239	1.439
73	9	73.8	0.956	239	1.400
74	8	74.8	0.962	240.5	1.381
75	8	75.8	0.962	240.5	1.345
76	8	76.8	0.962	240.5	1.310
77	8	77.8	0.962	240.5	1.277
78	8	78.8	0.962	240.5	1.245
79	8	79.8	0.962	240.5	1.215
80	8	80.8	0.962	240.5	1.185
81	8	81.7	0.962	240.5	1.156
82	8	82.7	0.962	240.5	1.129
83	8	83.7	0.962	240.5	1.102
84	7	84.7	0.968	242	1.090
85	7	85.7	0.968	242	1.065
86	7	86.7	0.968	242	1.041
87	7	87.7	0.968	242	1.017
88	7	88.7	0.968	242	0.995
89	7	89.7	0.968	242	0.973
90	7	90.7	0.968	242	0.952
91	7	91.7	0.968	242	0.931
92	7	92.7	0.968	242	0.911
93	7	93.6	0.968	242	0.892
94	7	94.6	0.968	242	0.874
95	7	95.6	0.968	242	0.855
96	7	96.6	0.968	242	0.838
97	6	97.6	0.974	243.5	0.831
98	6	98.6	0.974	243.5	0.815
99	6	99.6	0.974	243.5	0.798
100	6	100.6	0.974	243.5	0.783