Environmental Protection

There are two main factors that need to be addressed in order to make sure that the environment around a proposed facility is protected.

1) Significant affects to the environment.

EMF's proposed facility will be constructed on an existing tower (tower ID 1234157), therefore it should have no adverse effect on the surrounding environment.

2) Human exposure to excess levels of radiofrequency radiation.

The proposed facility is to be built using a 2-bay circularly polarized full-wave spaced antenna.

As can be seen in Exhibit 24-A, the maximum theoretical RF value would be 8.484 $\mu W/cm^2$ at a distance of 25 meters from the tower, which is 4.2% of the 200 $\mu W/cm^2$ permitted for public (uncontrolled) exposure, and 0.8% of the 1000 $\mu W/cm^2$ permitted for worker (controlled) exposure.

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 future 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.

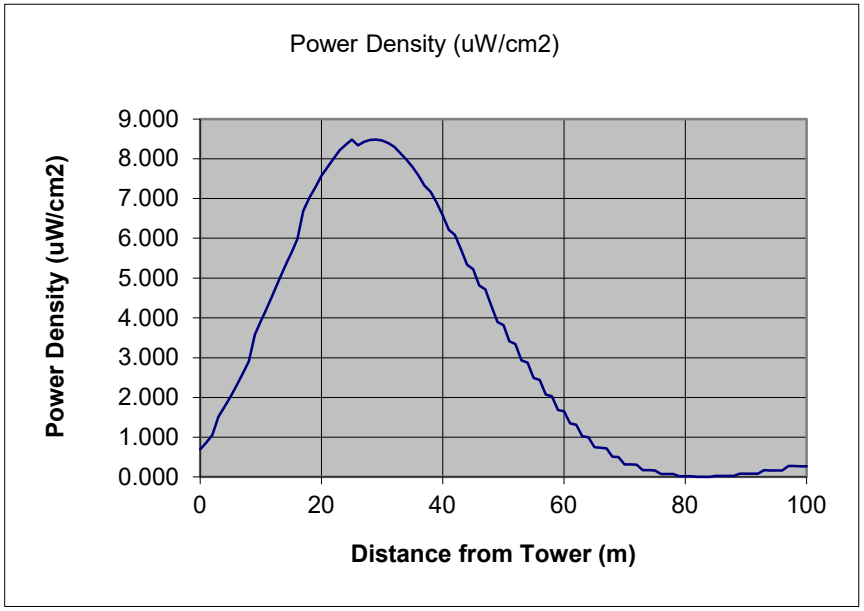
Specific Antenna RF Power Density Calculator

Based on Equation 10 of OET-65

Detailed Report

ERP	3 kW	% of OET-65	
Height above ground	50.0 meters	4.2%	Uncontrolled
Height above head	48.0 meters	0.8%	Controlled
Antenna Brand	ERI		
Antenna Model	LPX-2C		

Horizontal distance from tower (meters)	Angle (°)	Distance (m)	Field	Power (W)	Power Density (uW/cm2)
0	90	48.0	0.126	378	0.690
1	89	48.0	0.141	423	0.864
2	88	48.0	0.156	468	1.057
3	86	48.1	0.187	561	1.515
4	85	48.2	0.202	606	1.762
5	84	48.3	0.217	651	2.026
6	83	48.4	0.232	696	2.305
7	82	48.5	0.247	741	2.598
8	81	48.7	0.262	786	2.905
9	79	48.8	0.292	876	3.582
10	78	49.0	0.307	921	3.928
11	77	49.2	0.321	963	4.258
12	76	49.5	0.336	1008	4.621
13	75	49.7	0.35	1050	4.963
14	74	50.0	0.364	1092	5.310
15	73	50.3	0.377	1131	5.631
16	72	50.6	0.391	1173	5.984
17	70	50.9	0.416	1248	6.687
18	69	51.3	0.429	1287	7.017
19	68	51.6	0.44	1320	7.279
20	67	52.0	0.452	1356	7.571
21	66	52.4	0.462	1386	7.791
22	65	52.8	0.472	1416	8.007
23	64	53.2	0.482	1446	8.217
24	63	53.7	0.49	1470	8.353
25	62	54.1	0.498	1494	8.484



26	62	54.6	0.498	1494	8.339
27	61	55.1	0.505	1515	8.425
28	60	55.6	0.511	1533	8.473
29	59	56.1	0.516	1548	8.483
30	58	56.6	0.52	1560	8.456
31	57	57.1	0.523	1569	8.394
32	56	57.7	0.525	1575	8.299
33	55	58.2	0.525	1575	8.140
34	55	58.8	0.525	1575	7.982
35	54	59.4	0.524	1572	7.796
36	53	60.0	0.522	1566	7.584
37	52	60.6	0.518	1554	7.320
38	52	61.2	0.518	1554	7.173
39	51	61.8	0.513	1539	6.894
40	50	62.5	0.506	1518	6.571
41	49	63.1	0.497	1491	6.211
42	49	63.8	0.497	1491	6.084
43	48	64.4	0.487	1461	5.722
44	47	65.1	0.475	1425	5.332
45	47	65.8	0.475	1425	5.222
46	46	66.5	0.461	1383	4.818
47	46	67.2	0.461	1383	4.719
48	45	67.9	0.445	1335	4.306
49	44	68.6	0.428	1284	3.901
50	44	69.3	0.428	1284	3.821
51	43	70.0	0.409	1227	3.417
52	43	70.8	0.409	1227	3.347
53	42	71.5	0.387	1161	2.935
54	42	72.2	0.387	1161	2.875
55	41	73.0	0.364	1092	2.491
56	41	73.8	0.364	1092	2.440
57	40	74.5	0.339	1017	2.074
58	40	75.3	0.339	1017	2.032
59	39	76.1	0.312	936	1.686
60	39	76.8	0.312	936	1.652
61	38	77.6	0.284	852	1.341
62	38	78.4	0.284	852	1.315
63	37	79.2	0.253	759	1.022

64	37	80.0	0.253	759	1.002
65	36	80.8	0.221	663	0.750
66	36	81.6	0.221	663	0.735
67	36	82.4	0.221	663	0.720
68	35	83.2	0.187	561	0.506
69	35	84.1	0.187	561	0.496
70	34	84.9	0.151	453	0.317
71	34	85.7	0.151	453	0.311
72	34	86.5	0.151	453	0.305
73	33	87.4	0.114	342	0.171
74	33	88.2	0.114	342	0.167
75	33	89.0	0.114	342	0.164
76	32	89.9	0.076	228	0.072
77	32	90.7	0.076	228	0.070
78	32	91.6	0.076	228	0.069
79	31	92.4	0.036	108	0.015
80	31	93.3	0.036	108	0.015
81	31	94.2	0.036	108	0.015
82	30	95.0	0.006	18	0.000
83	30	95.9	0.006	18	0.000
84	30	96.7	0.006	18	0.000
85	29	97.6	0.048	144	0.024
86	29	98.5	0.048	144	0.024
87	29	99.4	0.048	144	0.023
88	29	100.2	0.048	144	0.023
89	28	101.1	0.091	273	0.081
90	28	102.0	0.091	273	0.080
91	28	102.9	0.091	273	0.078
92	28	103.8	0.091	273	0.077
93	27	104.7	0.135	405	0.167
94	27	105.5	0.135	405	0.164
95	27	106.4	0.135	405	0.161
96	27	107.3	0.135	405	0.159
97	26	108.2	0.18	540	0.277
98	26	109.1	0.18	540	0.273
99	26	110.0	0.18	540	0.268
100	26	110.9	0.18	540	0.264