

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 1013826) and will cause no adverse effects to the surrounding environment at the site.

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.

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 24A, the proposed facility's maximum contribution to RF on the site is $9.9\mu\text{W}/\text{cm}^2$ at a distance of 75 meters from the tower, which is 4.95% 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 $200\ \mu\text{W}/\text{cm}^2$ 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.

**RF Analysis: WKTH
84363
203
A**

Site type: Application
Channel: 203
Class: A
ERP: 1.9
Antenna: Shively
6813
2 bay
1.0 spaced
COR AGL: 41
Polorization: Circular Pol

Distance From Tower (m)	WKL Facility	Total RF (uW/cm2)	Percent of 200uW/cm2
0	0.3776	0.38	0.189
1	0.4496	0.45	0.225
2	0.5302	0.53	0.265
3	0.6189	0.62	0.309
4	0.7593	0.76	0.380
5	0.9937	0.99	0.497
6	1.2671	1.27	0.634
7	1.5761	1.58	0.788
8	2.0425	2.04	1.021
9	2.6007	2.60	1.300
10	3.2089	3.21	1.604
11	3.8554	3.86	1.928
12	4.3297	4.33	2.165
13	4.8046	4.80	2.402
14	5.2739	5.27	2.637
15	5.7424	5.74	2.871
16	6.3265	6.33	3.163
17	6.8916	6.89	3.446
18	7.4298	7.43	3.715
19	7.9338	7.93	3.967
20	8.3750	8.38	4.188
21	8.7670	8.77	4.383
22	9.1081	9.11	4.554
23	9.3948	9.39	4.697
24	9.6174	9.62	4.809
25	9.7676	9.77	4.884
26	9.8602	9.86	4.930
27	9.8959	9.90	4.948
28	9.8762	9.88	4.938
29	9.7983	9.80	4.899
30	9.6587	9.66	4.829
31	9.4740	9.47	4.737
32	9.2482	9.25	4.624
33	8.9853	8.99	4.493
34	8.6898	8.69	4.345
35	8.3391	8.34	4.170
36	7.9518	7.95	3.976
37	7.5517	7.55	3.776
38	7.1427	7.14	3.571
39	6.7287	6.73	3.364
40	6.3131	6.31	3.157
41	5.8992	5.90	2.950
42	5.4898	5.49	2.745
43	5.0877	5.09	2.544
44	4.6952	4.70	2.348
45	4.3143	4.31	2.157

Distance From Tower (m)	0.0000 Facility	Total RF (uW/cm2)	Percent of 200uW/cm2
46	3.9467	3.95	1.973
47	3.5938	3.59	1.797
48	3.2568	3.26	1.628
49	2.9360	2.94	1.468
50	2.6292	2.63	1.315
51	2.3414	2.34	1.171
52	2.0727	2.07	1.036
53	1.8231	1.82	0.912
54	1.5922	1.59	0.796
55	1.3799	1.38	0.690
56	1.1857	1.19	0.593
57	1.0091	1.01	0.505
58	0.8496	0.85	0.425
59	0.7062	0.71	0.353
60	0.5784	0.58	0.289
61	0.4657	0.47	0.233
62	0.3674	0.37	0.184
63	0.2826	0.28	0.141
64	0.2106	0.21	0.105
65	0.1505	0.15	0.075
66	0.1017	0.10	0.051
67	0.0633	0.06	0.032
68	0.0347	0.03	0.017
69	0.0150	0.02	0.008
70	0.0037	0.00	0.002
71	0.0000	0.00	0.000
72	0.0033	0.00	0.002
73	0.0129	0.01	0.006
74	0.0283	0.03	0.014
75	0.0488	0.05	0.024
76	0.0738	0.07	0.037
77	0.1030	0.10	0.052
78	0.1358	0.14	0.068
79	0.1717	0.17	0.086
80	0.2104	0.21	0.105
81	0.2514	0.25	0.126
82	0.2945	0.29	0.147
83	0.3392	0.34	0.170
84	0.3853	0.39	0.193
85	0.4326	0.43	0.216
86	0.4807	0.48	0.240
87	0.5294	0.53	0.265
88	0.5786	0.58	0.289
89	0.6291	0.63	0.315
90	0.6797	0.68	0.340
91	0.7304	0.73	0.365
92	0.7809	0.78	0.390
93	0.8313	0.83	0.416
94	0.8812	0.88	0.441
95	0.9307	0.93	0.465
96	0.9796	0.98	0.490
97	1.0279	1.03	0.514
98	1.0754	1.08	0.538
99	1.1221	1.12	0.561
100	1.1679	1.17	0.584