

Human exposure to excess levels of radiofrequency radiation

The proposed facility is to be built using a 2-bay circularly polarized .85 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 17-A, the proposed facility's maximum contribution to RF on the site is $0.102\mu\text{W}/\text{cm}^2$ at a distance of 53 meters from the tower, which is less than 0.1% 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.

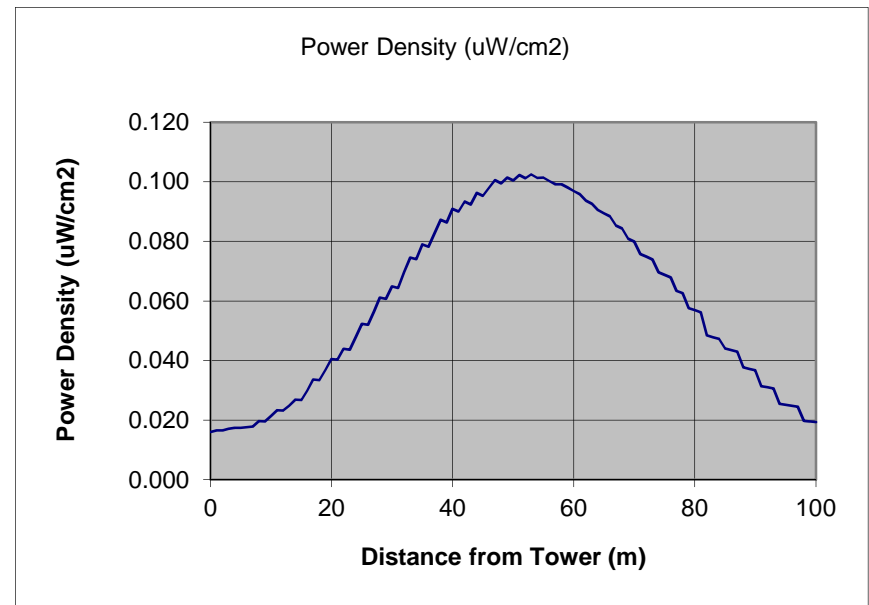
Specific Antenna RF Power Density Calculator

Based on Equation 10 of OET-65

Detailed Report

ERP 0.25 kW % of OET-65
Height above ground 85.0 meters 0.1% Uncontrolled
Height above head 83.0 meters 0.0% Controlled
Antenna Brand Nicom
Antenna Model BKG77-2 .85 spaced

Horizontal distance from tower (meters)	Angle (°)	Distance (m)	Field	Power (W)	Power Density (uW/cm ²)
0	90	83.0	0.115	28.75	0.016
1	89	83.0	0.117	29.25	0.017
2	89	83.0	0.117	29.25	0.017
3	88	83.1	0.119	29.75	0.017
4	87	83.1	0.12	30	0.017
5	87	83.2	0.12	30	0.017
6	86	83.2	0.121	30.25	0.018
7	85	83.3	0.122	30.5	0.018
8	84	83.4	0.128	32	0.020
9	84	83.5	0.128	32	0.020
10	83	83.6	0.134	33.5	0.021
11	82	83.7	0.14	35	0.023
12	82	83.9	0.14	35	0.023
13	81	84.0	0.145	36.25	0.025
14	80	84.2	0.151	37.75	0.027
15	80	84.3	0.151	37.75	0.027
16	79	84.5	0.16	40	0.030
17	78	84.7	0.17	42.5	0.034
18	78	84.9	0.17	42.5	0.033
19	77	85.1	0.179	44.75	0.037
20	76	85.4	0.188	47	0.040
21	76	85.6	0.188	47	0.040
22	75	85.9	0.197	49.25	0.044
23	75	86.1	0.197	49.25	0.044
24	74	86.4	0.207	51.75	0.048
25	73	86.7	0.217	54.25	0.052



26	73	87.0	0.217	54.25	0.052
27	72	87.3	0.227	56.75	0.056
28	71	87.6	0.237	59.25	0.061
29	71	87.9	0.237	59.25	0.061
30	70	88.3	0.246	61.5	0.065
31	70	88.6	0.246	61.5	0.064
32	69	89.0	0.257	64.25	0.070
33	68	89.3	0.267	66.75	0.075
34	68	89.7	0.267	66.75	0.074
35	67	90.1	0.277	69.25	0.079
36	67	90.5	0.277	69.25	0.078
37	66	90.9	0.286	71.5	0.083
38	65	91.3	0.295	73.75	0.087
39	65	91.7	0.295	73.75	0.086
40	64	92.1	0.304	76	0.091
41	64	92.6	0.304	76	0.090
42	63	93.0	0.311	77.75	0.093
43	63	93.5	0.311	77.75	0.092
44	62	93.9	0.319	79.75	0.096
45	62	94.4	0.319	79.75	0.095
46	61	94.9	0.325	81.25	0.098
47	60	95.4	0.331	82.75	0.101
48	60	95.9	0.331	82.75	0.100
49	59	96.4	0.336	84	0.101
50	59	96.9	0.336	84	0.100
51	58	97.4	0.341	85.25	0.102
52	58	97.9	0.341	85.25	0.101
53	57	98.5	0.345	86.25	0.102
54	57	99.0	0.345	86.25	0.101
55	56	99.6	0.347	86.75	0.101
56	56	100.1	0.347	86.75	0.100
57	56	100.7	0.347	86.75	0.099
58	55	101.3	0.349	87.25	0.099
59	55	101.8	0.349	87.25	0.098
60	54	102.4	0.349	87.25	0.097
61	54	103.0	0.349	87.25	0.096
62	53	103.6	0.347	86.75	0.094
63	53	104.2	0.347	86.75	0.093

64	52	104.8	0.345	86.25	0.090
65	52	105.4	0.345	86.25	0.089
66	52	106.0	0.345	86.25	0.088
67	51	106.7	0.341	85.25	0.085
68	51	107.3	0.341	85.25	0.084
69	50	107.9	0.336	84	0.081
70	50	108.6	0.336	84	0.080
71	49	109.2	0.329	82.25	0.076
72	49	109.9	0.329	82.25	0.075
73	49	110.5	0.329	82.25	0.074
74	48	111.2	0.321	80.25	0.070
75	48	111.9	0.321	80.25	0.069
76	48	112.5	0.321	80.25	0.068
77	47	113.2	0.312	78	0.063
78	47	113.9	0.312	78	0.063
79	46	114.6	0.301	75.25	0.058
80	46	115.3	0.301	75.25	0.057
81	46	116.0	0.301	75.25	0.056
82	45	116.7	0.281	70.25	0.048
83	45	117.4	0.281	70.25	0.048
84	45	118.1	0.281	70.25	0.047
85	44	118.8	0.273	68.25	0.044
86	44	119.5	0.273	68.25	0.044
87	44	120.2	0.273	68.25	0.043
88	43	121.0	0.257	64.25	0.038
89	43	121.7	0.257	64.25	0.037
90	43	122.4	0.257	64.25	0.037
91	42	123.2	0.239	59.75	0.031
92	42	123.9	0.239	59.75	0.031
93	42	124.7	0.239	59.75	0.031
94	41	125.4	0.219	54.75	0.025
95	41	126.2	0.219	54.75	0.025
96	41	126.9	0.219	54.75	0.025
97	41	127.7	0.219	54.75	0.025
98	40	128.4	0.198	49.5	0.020
99	40	129.2	0.198	49.5	0.020
100	40	130.0	0.198	49.5	0.019