

Human exposure to excess levels of radiofrequency radiation

The proposed facility is to be built using a 1-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 17-A, the proposed facility's maximum contribution to RF on the site is $0.101 \mu\text{W}/\text{cm}^2$ at a distance of 98 meters from the tower, which is less than 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.

Chadwick Bay Broadcasting 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.

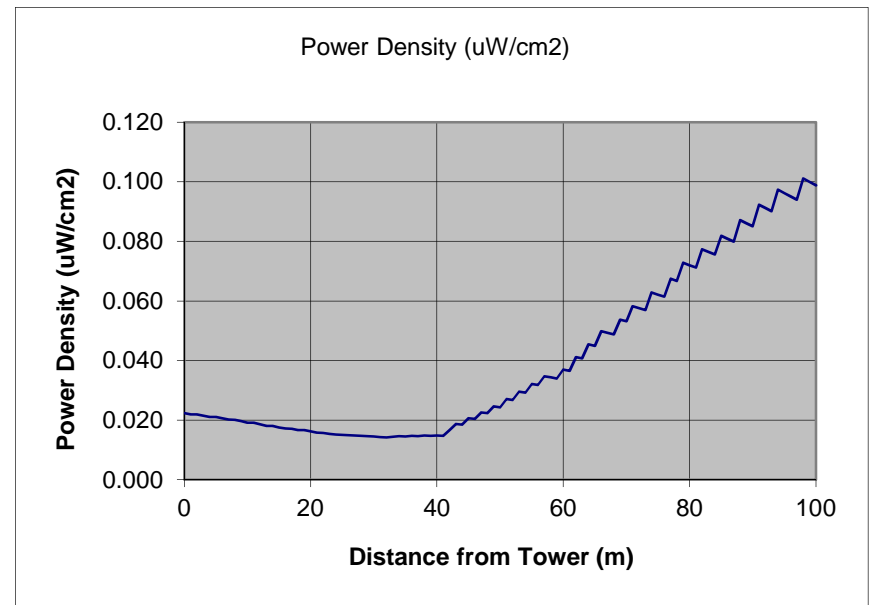
Specific Antenna RF Power Density Calculator

Based on Equation 10 of OET-65

Detailed Report

ERP 0.2 kW % of OET-65
Height above ground 88.0 meters 0.1% Uncontrolled
Height above head 86.0 meters 0.0% Controlled
Antenna Brand Scala
Antenna Model CA5-CP

Horizontal distance from tower (meters)	Angle (°)	Distance (m)	Field	Power (W)	Power Density (uW/cm ²)
0	90	86.0	0.157	31.46	0.022
1	89	86.0	0.156	31.18	0.022
2	89	86.0	0.156	31.18	0.022
3	88	86.1	0.154	30.88	0.022
4	87	86.1	0.153	30.58	0.021
5	87	86.1	0.153	30.58	0.021
6	86	86.2	0.152	30.3	0.021
7	85	86.3	0.15	30	0.020
8	85	86.4	0.15	30	0.020
9	84	86.5	0.148	29.66	0.020
10	83	86.6	0.147	29.34	0.019
11	83	86.7	0.147	29.34	0.019
12	82	86.8	0.145	29	0.019
13	81	87.0	0.143	28.66	0.018
14	81	87.1	0.143	28.66	0.018
15	80	87.3	0.142	28.34	0.018
16	79	87.5	0.14	28.06	0.017
17	79	87.7	0.14	28.06	0.017
18	78	87.9	0.139	27.8	0.017
19	78	88.1	0.139	27.8	0.017
20	77	88.3	0.138	27.54	0.016
21	76	88.5	0.136	27.26	0.016
22	76	88.8	0.136	27.26	0.016
23	75	89.0	0.135	27	0.015
24	74	89.3	0.135	26.96	0.015
25	74	89.6	0.135	26.96	0.015



26	73	89.8	0.135	26.92	0.015
27	73	90.1	0.135	26.92	0.015
28	72	90.4	0.134	26.88	0.015
29	71	90.8	0.134	26.84	0.015
30	71	91.1	0.134	26.84	0.015
31	70	91.4	0.134	26.8	0.014
32	70	91.8	0.134	26.8	0.014
33	69	92.1	0.136	27.1	0.014
34	68	92.5	0.137	27.42	0.015
35	68	92.8	0.137	27.42	0.015
36	67	93.2	0.139	27.72	0.015
37	67	93.6	0.139	27.72	0.015
38	66	94.0	0.14	28.02	0.015
39	66	94.4	0.14	28.02	0.015
40	65	94.8	0.142	28.34	0.015
41	65	95.3	0.142	28.34	0.015
42	64	95.7	0.151	30.26	0.017
43	63	96.2	0.161	32.2	0.019
44	63	96.6	0.161	32.2	0.019
45	62	97.1	0.171	34.14	0.021
46	62	97.5	0.171	34.14	0.020
47	61	98.0	0.18	36.06	0.023
48	61	98.5	0.18	36.06	0.022
49	60	99.0	0.19	38	0.025
50	60	99.5	0.19	38	0.024
51	59	100.0	0.201	40.26	0.027
52	59	100.5	0.201	40.26	0.027
53	58	101.0	0.213	42.54	0.030
54	58	101.5	0.213	42.54	0.029
55	57	102.1	0.224	44.8	0.032
56	57	102.6	0.224	44.8	0.032
57	56	103.2	0.235	47.06	0.035
58	56	103.7	0.235	47.06	0.034
59	56	104.3	0.235	47.06	0.034
60	55	104.9	0.247	49.34	0.037
61	55	105.4	0.247	49.34	0.037
62	54	106.0	0.263	52.64	0.041
63	54	106.6	0.263	52.64	0.041

64	53	107.2	0.28	55.94	0.045
65	53	107.8	0.28	55.94	0.045
66	52	108.4	0.296	59.26	0.050
67	52	109.0	0.296	59.26	0.049
68	52	109.6	0.296	59.26	0.049
69	51	110.3	0.313	62.56	0.054
70	51	110.9	0.313	62.56	0.053
71	50	111.5	0.329	65.86	0.058
72	50	112.2	0.329	65.86	0.058
73	50	112.8	0.329	65.86	0.057
74	49	113.5	0.348	69.62	0.063
75	49	114.1	0.348	69.62	0.062
76	49	114.8	0.348	69.62	0.061
77	48	115.4	0.367	73.38	0.067
78	48	116.1	0.367	73.38	0.067
79	47	116.8	0.386	77.14	0.073
80	47	117.5	0.386	77.14	0.072
81	47	118.1	0.386	77.14	0.071
82	46	118.8	0.405	80.9	0.077
83	46	119.5	0.405	80.9	0.077
84	46	120.2	0.405	80.9	0.076
85	45	120.9	0.423	84.66	0.082
86	45	121.6	0.423	84.66	0.081
87	45	122.3	0.423	84.66	0.080
88	44	123.0	0.444	88.86	0.087
89	44	123.8	0.444	88.86	0.086
90	44	124.5	0.444	88.86	0.085
91	43	125.2	0.465	93.06	0.092
92	43	125.9	0.465	93.06	0.091
93	43	126.7	0.465	93.06	0.090
94	42	127.4	0.486	97.26	0.097
95	42	128.1	0.486	97.26	0.096
96	42	128.9	0.486	97.26	0.095
97	42	129.6	0.486	97.26	0.094
98	41	130.4	0.507	101.46	0.101
99	41	131.1	0.507	101.46	0.100
100	41	131.9	0.507	101.46	0.099