

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 effects to the environment.

EMF's proposed facility will be constructed on an existing tower (tower ID 1234657), 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 3-bay circularly polarized antenna.

As can be seen in Exhibit 24-A, the maximum theoretical RF value would be 96.36 $\mu\text{W}/\text{cm}^2$ at a distance of 12 meters from the tower, which is 48.18% of the 200 $\mu\text{W}/\text{cm}^2$ permitted for public (uncontrolled) exposure, and 9.64% of the 1000 $\mu\text{W}/\text{cm}^2$ permitted for worker (controlled) exposure.

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.

Exhibit 24-A
RF Analysis: KFAA.P Horace, ND

KFAA.P

Site type: Proposed

Channel: 208

Class: C3

ERP: 7.3kw

Antenna: ERI

EPA Type 3

3 bay

full wave

COR AGL: 23m

Polarization: circular

Distance From Tower (m)	KFAA.P Facility	Total RF (uW/cm2)	Percent of 200uW/cm2
0	27.6609	27.66	13.83
1	27.6081	27.61	13.80
2	27.4431	27.44	13.72
3	35.3744	35.37	17.69
4	43.9544	43.95	21.98
5	54.4168	54.42	27.21
6	65.0536	65.05	32.53
7	74.4464	74.45	37.22
8	82.4604	82.46	41.23
9	89.2079	89.21	44.60
10	93.8790	93.88	46.94
11	96.1435	96.14	48.07
12	96.3644	96.36	48.18
13	93.3526	93.35	46.68
14	88.2784	88.28	44.14
15	80.7618	80.76	40.38
16	71.0850	71.09	35.54
17	58.9403	58.94	29.47
18	46.7367	46.74	23.37
19	35.2982	35.30	17.65
20	25.1080	25.11	12.55
21	16.5620	16.56	8.28
22	9.8471	9.85	4.92
23	4.9820	4.98	2.49
24	1.8571	1.86	0.93
25	0.2988	0.30	0.15
26	0.0437	0.04	0.02
27	0.8077	0.81	0.40
28	2.3158	2.32	1.16
29	4.3186	4.32	2.16
30	6.5866	6.59	3.29
31	8.9264	8.93	4.46
32	11.1820	11.18	5.59
33	13.2182	13.22	6.61
34	14.8619	14.86	7.43
35	16.1562	16.16	8.08
36	17.0862	17.09	8.54
37	17.6575	17.66	8.83
38	17.8904	17.89	8.95
39	17.8159	17.82	8.91
40	17.4903	17.49	8.75
41	17.0260	17.03	8.51
42	16.3585	16.36	8.18
43	15.5269	15.53	7.76
44	14.5685	14.57	7.28
45	13.5188	13.52	6.76

Distance From Tower (m)	KFAA.P Facility	Total RF (uW/cm2)	Percent of 200uW/cm2
46	12.4099	12.41	6.20
47	11.2707	11.27	5.64
48	10.1262	10.13	5.06
49	8.9981	9.00	4.50
50	7.8679	7.87	3.93
51	6.7830	6.78	3.39
52	5.7727	5.77	2.89
53	4.8433	4.84	2.42
54	3.9990	4.00	2.00
55	3.2415	3.24	1.62
56	2.5711	2.57	1.29
57	1.9867	1.99	0.99
58	1.4860	1.49	0.74
59	1.0658	1.07	0.53
60	0.7224	0.72	0.36
61	0.4516	0.45	0.23
62	0.2488	0.25	0.12
63	0.1091	0.11	0.05
64	0.0279	0.03	0.01
65	0.0001	0.00	0.00
66	0.0211	0.02	0.01
67	0.0863	0.09	0.04
68	0.1914	0.19	0.10
69	0.3320	0.33	0.17
70	0.5042	0.50	0.25
71	0.7041	0.70	0.35
72	0.9282	0.93	0.46
73	1.1731	1.17	0.59
74	1.4356	1.44	0.72
75	1.7130	1.71	0.86
76	2.0025	2.00	1.00
77	2.3016	2.30	1.15
78	2.6083	2.61	1.30
79	2.9203	2.92	1.46
80	3.2360	3.24	1.62
81	3.5536	3.55	1.78
82	3.8716	3.87	1.94
83	4.1888	4.19	2.09
84	4.5038	4.50	2.25
85	4.8158	4.82	2.41
86	5.1226	5.12	2.56
87	5.4186	5.42	2.71
88	5.7084	5.71	2.85
89	5.9915	5.99	3.00
90	6.2674	6.27	3.13
91	6.5357	6.54	3.27
92	6.7962	6.80	3.40
93	7.0485	7.05	3.52
94	7.2925	7.29	3.65
95	7.5280	7.53	3.76
96	7.7549	7.75	3.88
97	7.9732	7.97	3.99
98	8.1829	8.18	4.09
99	8.3841	8.38	4.19
100	8.5766	8.58	4.29