

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 1249849) 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 on the same site as the following:

Call	Channel	Status	City, ST	FIN	Licensee
KLJV	202A	LIC	SCOTTSBLUFF, NE	121887	EDUCATIONAL MEDIA FOUNDATION
K218DL	218D	LIC	SCOTTSBLUFF, NE	106587	EDUCATIONAL MEDIA FOUNDATION

See Exhibit 22-A for antennas that were specified by each licensee/permittee.

As can be seen in Exhibit 22A, the maximum theoretical RF value overall would be $26.32\mu\text{W}/\text{cm}^2$ at a distance of 11 meters from the tower, which is 13.16% of the $200\mu\text{W}/\text{cm}^2$ permitted for public (uncontrolled) exposure, and 2.63% of the $1000\mu\text{W}/\text{cm}^2$ permitted for worker (controlled) exposure.

Therefore, 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.

RF Analysis: Scottsbluff, NE

KDAI

206

C3

KDAI

KLJV

K218DL

Site type: APP

LIC

LIC

Channel: 206

202

218

Class: C3

A

D

ERP: 1.4KW

0.39KW

0.023KW

Antenna: NIC

NIC

NIC

2 BAY

2 BAY

1 BAY

full wave

full wave

full wave

COR AGL: 46 M

46 M

38 M

Polarization: circular

circular

circular

Distance From Tower (m)	KDAI Facility	KLJV Facility	K218DL Facility	Total RF (uW/cm2)	Percent of 200uW/cm2
0	22.1050	6.1578	0.3632	22.10	11.05
1	22.4213	6.2459	0.3683	22.42	11.21
2	22.7180	6.3286	0.3732	22.72	11.36
3	22.9937	6.4054	0.3778	22.99	11.50
4	23.2466	6.4758	0.3820	23.25	11.62
5	23.9698	6.6773	0.3939	23.97	11.98
6	24.6829	6.8760	0.4058	24.68	12.34
7	25.3688	7.0670	0.4173	25.37	12.68
8	26.0227	7.2492	0.4284	26.02	13.01
9	26.1970	7.2977	0.4319	26.20	13.10
10	26.2775	7.3202	0.4339	26.28	13.14
11	26.3172	7.3312	0.4356	26.32	13.16
12	26.3138	7.3303	0.4368	26.31	13.16
13	26.2255	7.3057	0.4369	26.23	13.11
14	26.0728	7.2631	0.4364	26.07	13.04
15	25.8740	7.2078	0.4354	25.87	12.94
16	25.6286	7.1394	0.4341	25.63	12.81
17	25.3755	7.0689	0.4331	25.38	12.69
18	25.1848	7.0158	0.4337	25.18	12.59
19	24.9395	6.9474	0.4338	24.94	12.47
20	24.6401	6.8640	0.4336	24.64	12.32
21	24.2878	6.7659	0.4329	24.29	12.14
22	23.7684	6.6212	0.4298	23.77	11.88
23	23.1176	6.4399	0.4248	23.12	11.56
24	22.4364	6.2501	0.4197	22.44	11.22
25	21.7282	6.0529	0.4143	21.73	10.86
26	20.9963	5.8490	0.4089	21.00	10.50
27	20.2865	5.6512	0.4042	20.29	10.14
28	19.6064	5.4618	0.4004	19.61	9.80
29	18.9039	5.2661	0.3964	18.90	9.45
30	18.1831	5.0653	0.3923	18.18	9.09
31	17.4480	4.8605	0.3880	17.45	8.72
32	16.7026	4.6529	0.3835	16.70	8.35
33	15.8426	4.4133	0.3764	15.84	7.92
34	14.9673	4.1695	0.3687	14.97	7.48
35	14.1098	3.9306	0.3611	14.11	7.05
36	13.2728	3.6974	0.3536	13.27	6.64
37	12.4584	3.4705	0.3462	12.46	6.23
38	11.6685	3.2505	0.3389	11.67	5.83
39	10.9119	3.0397	0.3320	10.91	5.46
40	10.1917	2.8391	0.3255	10.19	5.10
41	9.4977	2.6458	0.3191	9.50	4.75
42	8.8309	2.4600	0.3128	8.83	4.42
43	8.1921	2.2821	0.3066	8.19	4.10
44	7.5817	2.1120	0.3005	7.58	3.79
45	7.0001	1.9500	0.2946	7.00	3.50

Distance From Tower (m)	KDAI Facility	KLJV Facility	K218DL Facility	Total RF (uW/cm2)	Percent of 200uW/cm2
46	6.4474	1.7960	0.2887	6.45	3.22
47	5.9021	1.6442	0.2820	5.90	2.95
48	5.3900	1.5015	0.2754	5.39	2.69
49	4.9099	1.3678	0.2691	4.91	2.45
50	4.4609	1.2427	0.2629	4.46	2.23
51	4.0419	1.1260	0.2569	4.04	2.02
52	3.6519	1.0173	0.2511	3.65	1.83
53	3.2895	0.9164	0.2454	3.29	1.64
54	2.9537	0.8228	0.2400	2.95	1.48
55	2.6520	0.7388	0.2354	2.65	1.33
56	2.4079	0.6708	0.2344	2.41	1.20
57	2.1766	0.6063	0.2334	2.18	1.09
58	1.9582	0.5455	0.2322	1.96	0.98
59	1.7528	0.4883	0.2310	1.75	0.88
60	1.5605	0.4347	0.2297	1.56	0.78
61	1.3811	0.3847	0.2283	1.38	0.69
62	1.2146	0.3383	0.2268	1.21	0.61
63	1.0606	0.2955	0.2253	1.06	0.53
64	0.9190	0.2560	0.2238	0.92	0.46
65	0.7893	0.2199	0.2222	0.79	0.39
66	0.6690	0.1864	0.2198	0.67	0.33
67	0.5563	0.1550	0.2156	0.56	0.28
68	0.4568	0.1272	0.2116	0.46	0.23
69	0.3695	0.1029	0.2076	0.37	0.18
70	0.2937	0.0818	0.2037	0.29	0.15
71	0.2284	0.0636	0.2000	0.23	0.11
72	0.1729	0.0482	0.1963	0.17	0.09
73	0.1265	0.0352	0.1927	0.13	0.06
74	0.0884	0.0246	0.1892	0.09	0.04
75	0.0580	0.0162	0.1857	0.06	0.03
76	0.0347	0.0097	0.1824	0.03	0.02
77	0.0178	0.0050	0.1791	0.02	0.01
78	0.0067	0.0019	0.1759	0.01	0.00
79	0.0011	0.0003	0.1728	0.00	0.00
80	0.0002	0.0001	0.1698	0.00	0.00
81	0.0038	0.0011	0.1670	0.00	0.00
82	0.0114	0.0032	0.1644	0.01	0.01
83	0.0226	0.0063	0.1617	0.02	0.01
84	0.0370	0.0103	0.1592	0.04	0.02
85	0.0543	0.0151	0.1567	0.05	0.03
86	0.0742	0.0207	0.1542	0.07	0.04
87	0.0964	0.0269	0.1518	0.10	0.05
88	0.1207	0.0336	0.1494	0.12	0.06
89	0.1467	0.0409	0.1471	0.15	0.07
90	0.1742	0.0485	0.1449	0.17	0.09
91	0.2030	0.0566	0.1426	0.20	0.10
92	0.2330	0.0649	0.1405	0.23	0.12
93	0.2639	0.0735	0.1383	0.26	0.13
94	0.2955	0.0823	0.1363	0.30	0.15
95	0.3278	0.0913	0.1342	0.33	0.16
96	0.3605	0.1004	0.1322	0.36	0.18
97	0.3935	0.1096	0.1303	0.39	0.20
98	0.4268	0.1189	0.1283	0.43	0.21
99	0.4596	0.1280	0.1263	0.46	0.23
100	0.4914	0.1369	0.1241	0.49	0.25