

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 1026518) in an established "antenna farm". The site proposed herein has both registered and unregistered towers on the site. According to 47 C.F.R. Section 1.1306 Note 3, such facilities "will be categorically excluded" from environmental processing except for the RF requirements of Section 1.1307(b).

2) Human exposure to excess levels of radiofrequency radiation.

The proposed facility is to be built using a 6-bay vertically polarized full-wave spaced antenna on the same site as the following:

Status	Call	Licensee/Permittee	Channel	City	FIN
LIC	KMLV	EDUCATIONAL MEDIA FOUNDATION	201C1	RALSTON, NE	85846
LIC	KIWR	IOWA WESTERN COMMUNITY COLLEGE	209C	COUNCIL BLUFFS, IA	29126
APP	KGBI-FM	PENNSYLVANIA MEDIA ASSOCIATES, INC.	264C0	OMAHA, NE	24713
LIC	WOWT-TV	GRAY TELEVISION LICENSEE, INC.	6	OMAHA, NE	65528
CP	KOHA-LP	CORNHUSKER TELEVISION, LLC	48	OMAHA, NE	33144
APP	K61GA	THREE ANGELS BROADCASTING NETWORK, INC	19	OMAHA, NE	74377

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

The facility below was excluded from this study:

Status	Call	Licensee/Permittee	Channel	City	FIN
USE	KEZO-FM	-	222C	Omaha, NE	74105

As can be seen in Exhibit 22A, the maximum theoretical RF value would be 183.6 $\mu\text{W}/\text{cm}^2$ at a distance of 78 meters from the tower, which is 91.8% of the 200 $\mu\text{W}/\text{cm}^2$ permitted for public (uncontrolled) exposure, and 18.36% 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: Ralston, NE

KMLV

201

C1

KMLV

Site type: Application

KIWR

KGBI

WOWTV

K61GA

KOHA-LP

Channel: 201

Lic

APP

Lic

APP

CP

Class: C1

209

264

6

19

48

ERP: 45.5 kw

100 kw

100 kw

100 kw

5 kw

150 kw

Antenna: ERI

*Worst Case

*Worst Case

TDM-7A6

SCA

*Worst Case

Dipole

6-bay

full wave

6-bay

SL-8

1-bay

COR AGL: 346 m

309 m

287 m

398 m

175 m

136 m

Polorization: vertical

circular

circular

horizontal

horizontal

horizontal

Distance From Tower (m)	KMLV Facility	KIWR Facility	KGBI Facility	WOWTV Facility	K61GA Facility	KOHA-LP Facility	Total RF (uW/cm2)	Percent of 200uW/cm2
0	10.2853	34.9914	40.5615	4.0076	1.036434	51.4827	142.36	71.18
1	10.3019	35.0678	40.6568	4.0194	1.043386	51.9267	143.02	71.51
2	10.3183	35.1435	40.7513	4.0312	1.050293	52.3668	143.66	71.83
3	10.3346	35.2186	40.8449	4.0430	1.057152	52.8029	144.30	72.15
4	10.3507	35.2931	40.9376	4.0547	1.063961	53.2349	144.93	72.47
5	10.3666	35.3669	41.0294	4.0664	1.070719	53.6624	145.56	72.78
6	10.3823	35.4400	41.1203	4.0781	1.077423	54.0853	146.18	73.09
7	10.3979	35.5125	41.2103	4.0897	1.084073	54.5035	146.80	73.40
8	10.4133	35.5842	41.2994	4.1013	1.090666	54.9168	147.41	73.70
9	10.4285	35.6553	41.3875	4.1129	1.097201	55.3249	148.01	74.00
10	10.4436	35.7257	41.4747	4.1244	1.103676	55.7278	148.60	74.30
11	10.4584	35.7954	41.5610	4.1358	1.110089	56.1252	149.19	74.59
12	10.4730	35.8644	41.6463	4.1472	1.116439	56.5363	149.78	74.89
13	10.4875	35.9326	41.7306	4.1586	1.122723	57.1126	150.54	75.27
14	10.5017	36.0002	41.8140	4.1699	1.128942	57.6840	151.30	75.65
15	10.5157	36.0670	41.8964	4.1812	1.135092	58.2503	152.05	76.02
16	10.5294	36.1331	41.9779	4.1924	1.143222	58.8112	152.79	76.39
17	10.5429	36.1985	42.0583	4.2035	1.152214	59.3665	153.52	76.76
18	10.5562	36.2632	42.1377	4.2146	1.161146	59.9159	154.25	77.12
19	10.5692	36.3271	42.2162	4.2256	1.170016	60.4593	154.97	77.48
20	10.5820	36.3902	42.2936	4.2366	1.178821	60.9963	155.68	77.84
21	10.5944	36.4526	42.3700	4.2475	1.187559	61.5269	156.38	78.19
22	10.6066	36.5143	42.4454	4.2583	1.196227	62.0507	157.07	78.54
23	10.6185	36.5752	42.5197	4.2690	1.204825	62.5676	157.75	78.88
24	10.6300	36.6353	42.5931	4.2797	1.213349	63.0765	158.43	79.21
25	10.6413	36.6947	42.6653	4.2903	1.221797	63.5389	159.05	79.53
26	10.6521	36.7533	42.8689	4.3008	1.230168	63.9937	159.80	79.90
27	10.6627	36.8111	43.0879	4.3112	1.238459	64.4407	160.55	80.28
28	10.6728	36.8831	43.3062	4.3215	1.246668	64.8798	161.41	80.71
29	10.6826	37.1587	43.5237	4.3317	1.254793	65.3108	162.26	81.13
30	10.6920	37.3336	43.7403	4.3418	1.262832	65.7336	163.10	81.55
31	10.7265	37.5080	43.9561	4.3519	1.270695	66.1481	163.96	81.98
32	10.7701	37.6817	44.1711	4.3618	1.277932	66.5541	164.82	82.41
33	10.8132	37.8548	44.3852	4.3715	1.285076	66.9514	165.66	82.83
34	10.8560	38.0273	44.5983	4.3812	1.292127	67.3401	166.50	83.25
35	10.8983	38.1992	44.8106	4.3917	1.299082	67.7200	167.32	83.66
36	10.9401	38.3704	45.0219	4.4061	1.305941	68.0909	168.14	84.07
37	10.9814	38.5409	45.2323	4.4205	1.312701	68.4344	168.92	84.46
38	11.0222	38.7107	45.4416	4.4347	1.319362	68.7542	169.68	84.84
39	11.0624	38.8798	45.6500	4.4487	1.325922	69.0650	170.43	85.22
40	11.1020	39.0482	45.8573	4.4627	1.332381	69.3667	171.17	85.58
41	11.1411	39.2159	46.0636	4.4764	1.338736	69.6592	171.89	85.95
42	11.1795	39.3828	46.2689	4.4901	1.344986	69.9424	172.61	86.30
43	11.2172	39.5490	46.4730	4.5035	1.351132	70.2164	173.31	86.66
44	11.2543	39.7143	46.6761	4.5168	1.357171	70.4811	174.00	87.00
45	11.2906	39.8789	46.8781	4.5299	1.363102	70.7365	174.68	87.34

Distance From Tower (m)	KMLV Facility	KIWR Facility	KGBI Facility	WOWTV Facility	K61GA Facility	KOHA-LP Facility	Total RF (uW/cm2)	Percent of 200uW/cm2
46	11.3263	40.0427	47.0789	4.5429	1.368925	70.9826	175.34	87.67
47	11.3611	40.2057	47.2786	4.5556	1.374582	71.2193	175.99	88.00
48	11.3951	40.3679	47.4770	4.5682	1.379669	71.4467	176.63	88.32
49	11.4283	40.5292	47.6744	4.5805	1.384647	71.6647	177.26	88.63
50	11.4606	40.6897	47.8705	4.5926	1.389514	71.8608	177.86	88.93
51	11.4921	40.8493	48.0074	4.6046	1.39427	72.0350	178.38	89.19
52	11.5226	41.0080	48.0541	4.6163	1.398914	72.2001	178.80	89.40
53	11.5521	41.1659	48.0995	4.6277	1.403447	72.3562	179.20	89.60
54	11.5807	41.3228	48.1438	4.6389	1.407867	72.5032	179.60	89.80
55	11.6082	41.4182	48.1868	4.6499	1.412175	72.6412	179.92	89.96
56	11.6347	41.4555	48.2285	4.6606	1.41637	72.7703	180.17	90.08
57	11.6601	41.4920	48.2691	4.6711	1.420452	72.8904	180.40	90.20
58	11.6843	41.5275	48.3084	4.6813	1.424421	73.0018	180.63	90.31
59	11.7074	41.5621	48.3465	4.6912	1.428276	73.1044	180.84	90.42
60	11.7293	41.5958	48.3834	4.7008	1.432018	73.1983	181.04	90.52
61	11.7500	41.6286	48.4191	4.7101	1.435646	73.2836	181.23	90.61
62	11.7334	41.6605	48.4535	4.7191	1.43916	73.3603	181.37	90.68
63	11.7152	41.6915	48.4867	4.7278	1.442561	73.4285	181.49	90.75
64	11.6959	41.7216	48.5187	4.7362	1.445727	73.5603	181.68	90.84
65	11.6754	41.7507	48.5495	4.7442	1.448507	73.7345	181.90	90.95
66	11.6537	41.7790	48.5790	4.7519	1.451175	73.8992	182.11	91.06
67	11.6307	41.8063	48.6073	4.7593	1.453733	74.0546	182.31	91.16
68	11.6065	41.8327	48.6344	4.7663	1.45618	74.2006	182.50	91.25
69	11.5809	41.8582	48.6603	4.7729	1.458517	74.3374	182.67	91.33
70	11.5541	41.8828	48.6849	4.7792	1.460745	74.4651	182.83	91.41
71	11.5259	41.9065	48.7084	4.7842	1.462864	74.5837	182.97	91.49
72	11.4964	41.9293	48.7306	4.7886	1.464874	74.6933	183.10	91.55
73	11.4655	41.9511	48.7516	4.7927	1.466776	74.7940	183.22	91.61
74	11.4332	41.9721	48.7714	4.7963	1.468571	74.8859	183.33	91.66
75	11.3995	41.9921	48.7900	4.7995	1.470258	74.9691	183.42	91.71
76	11.3643	42.0113	48.8074	4.8023	1.471839	75.0437	183.50	91.75
77	11.3277	42.0295	48.8218	4.8047	1.473315	75.1098	183.57	91.78
78	11.2897	42.0469	48.8191	4.8066	1.474686	75.1675	183.60	91.80
79	11.2502	42.0633	48.8153	4.8081	1.475952	75.0852	183.50	91.75
80	11.2092	42.0788	48.8103	4.8091	1.477115	74.8553	183.24	91.62
81	11.1666	42.0935	48.8042	4.8096	1.478175	74.6211	182.97	91.49
82	11.1226	42.1072	48.7970	4.8097	1.4799	74.3828	182.70	91.35
83	11.0770	42.1172	48.7887	4.8093	1.482682	74.1405	182.42	91.21
84	11.0299	42.1149	48.7792	4.8083	1.485348	73.8945	182.11	91.06
85	10.9812	42.1119	48.7687	4.8069	1.487901	73.6447	181.80	90.90
86	10.9310	42.1080	48.7571	4.8050	1.490339	73.3913	181.48	90.74
87	10.8791	42.1032	48.7443	4.8025	1.492664	73.1345	181.16	90.58
88	10.8257	42.0977	48.7305	4.7996	1.494877	72.8744	180.82	90.41
89	10.7707	42.0913	48.7156	4.7961	1.496977	72.6110	180.48	90.24
90	10.7141	42.0840	48.6996	4.7920	1.498967	72.3446	180.13	90.07
91	10.6559	42.0760	48.6825	4.7874	1.500846	72.0751	179.78	89.89
92	10.5961	42.0671	48.6644	4.7823	1.502615	71.8028	179.42	89.71
93	10.5337	42.0574	48.6452	4.7765	1.504276	71.5278	179.04	89.52
94	10.4672	42.0469	48.6250	4.7703	1.505829	71.2502	178.67	89.33
95	10.3991	42.0356	48.6037	4.7634	1.507275	70.9700	178.28	89.14
96	10.3295	42.0235	48.5813	4.7559	1.508615	70.7603	177.96	88.98
97	10.2584	42.0105	48.5580	4.7479	1.50985	70.5683	177.65	88.83
98	10.1857	41.9968	48.5336	4.7393	1.510981	70.3726	177.34	88.67
99	10.1114	41.9823	48.5081	4.7301	1.512009	70.1732	177.02	88.51
100	10.0357	41.9670	48.4817	4.7202	1.512934	69.9702	176.69	88.34

* 1bay, ring stub