

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 1022898) 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 1-bay vertically polarized antenna on the same site* as the following:

Status	Call	Licensee/Permittee	Channel	City	FIN
LIC	KGBM	Educational Media Foundation	209B	Randsburg, CA	24706
LIC	K213CH	Family Stations, Inc.	213D	Ridgecrest, CA	86707
LIC	KFRJ	Family Stations, Inc.	216B	China Lake, CA	89174
LIC	K217DA	Paulino Bernal Evangelism	217D	Ridgecrest, CA	88908
LIC	KWTD	Living Proof	220B	Ridgecrest, CA	86917
CP	K259BH	Tom and Penny Johnson	259D	Ridgecrest, CA	141251
LIC	KRAJ	Adelman Broadcasting, Inc.	265B1	Johannesburg, CA	84860
LIC	KEDD	Adelman Broadcasting, Inc.	280B1	Johannesburg, CA	457
LIC	KLOA-FM	Adelman Broadcasting, Inc.	285B1	Ridgecrest, CA	458
LIC	K19CL	Victor A. Garcia	19	Inyokern, CA	72506

*NOTE: for the purpose of this study, all facilities were studied as if they were on a single tower.

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

As can be seen in Exhibit 22-A, the maximum theoretical RF value would be 177.29 $\mu\text{W}/\text{cm}^2$ at a distance of 8 meters from the tower, which is 88.65% of the 200 $\mu\text{W}/\text{cm}^2$ permitted for public (uncontrolled) exposure, and 17.73% 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.

Exhibit 22-A
RF Analysis: KZLU.P 203B1 Inyokern, CA

KZLU.P	KGBM	K213CH	KFRJ	K217DA	KWTD	K259BH	KRAJ	KEDD	KLOA-FM	K19CL
Site type: proposed	FM Station	FM Translator	FM Station	FM Translator	FM Station	FM Translator	FM Station	FM Station	FM Station	TV Translator
Channel: 203	209	213	216	217	220	259	265	280	285	19
Class: A	B	D	B	D	B	D	B1	B1	B1	
ERP: 1 kw	1.8 kw	0.01 kw	3 kw	0.01 kw	7 kw	0.01 kw	1.5 kw	1.5 kw	1.5 kw	2.8 kw
Antenna: SCA	JAM		SHI	SWR	ERI	SCA	ERI	ERI	ERI	
"	double-v	dipole	6813	double-v	rototiller	dipole	rototiller	rototiller	rototiller	
1-bay	2-bay	1-bay	3-bay	1 bay	4-bay	1-bay	2 bay	2 bay	2 bay	
full wave	half-wave	full wave	full-wave	full wave	half wave	full-wave	full wave	full wave	full wave	
COR AGL: 27m	26 m	15 m	15 m	9 m	23 m	24m	27 m	27 m	27m	12 m
Polarization: Vertical	Circular	Vertical	Circular	Circular	Circular	Vertical	Circular	Circular	Circular	Horizontal
	* worst case type 1 used									

Distance From Tower (m)	KZLU.P Facility	KGBM Facility	K213CH Facility	KFRJ Facility	K217DA Facility	KWTD Facility	K259BH Facility	KRAJ Facility	KEDD Facility	KLOA-FM Facility	K19CL Facility	Total RF (uW/cm2)	Percent of 200uW/cm2
0	45.8300	0.0000	1.2028	4.4546	0.5775	0.0000	0.4698	4.1244	4.1244	4.1244	0.0004	64.91	32.45
1	46.9234	0.0000	1.2425	7.0121	0.6629	0.0001	0.4800	4.1188	4.1188	4.1188	0.0004	68.68	34.34
2	47.8957	0.0003	1.3368	13.1553	0.9181	0.0009	0.4886	4.1016	4.1016	4.1016	0.0004	76.10	38.05
3	49.8816	0.0016	1.4140	25.2026	1.2245	0.0059	0.5164	4.7327	4.7327	4.7327	0.0005	92.45	46.22
4	52.3985	0.0054	1.4134	44.1495	1.5596	0.0228	0.5449	5.7996	5.7996	5.7996	0.0006	117.49	58.75
5	54.3547	0.0145	1.3907	57.7918	1.8159	0.0676	0.5526	6.9747	6.9747	6.9747	0.0007	136.91	68.46
6	54.8129	0.0328	1.3760	70.9530	2.0233	0.1641	0.5526	8.3690	8.3690	8.3690	0.0008	155.02	77.51
7	55.1151	0.0655	1.3657	81.1575	2.1157	0.3406	0.5493	9.8066	9.8066	9.8066	0.0010	170.13	85.06
8	55.1028	0.1196	1.2948	83.9165	2.1856	0.6311	0.5432	11.1657	11.1657	11.1657	0.0011	177.29	88.65
9	54.9001	0.2026	1.2353	79.3553	2.2686	1.0761	0.5379	12.4575	12.4575	12.4575	0.0012	176.95	88.47
10	54.6623	0.3238	1.1968	68.5292	2.2586	1.7068	0.5369	13.6917	13.6917	13.6917	0.0014	170.29	85.15
11	54.7483	0.4940	1.1322	53.8827	2.2077	2.5479	0.5343	14.9170	14.9170	14.9170	0.0015	160.30	80.15
12	54.6873	0.7216	1.0485	38.1411	2.1104	3.6314	0.5197	15.9942	15.9942	15.9942	0.0016	148.84	74.42
13	54.1546	1.0004	0.9705	23.6365	2.0055	4.9156	0.5023	16.9881	16.9881	16.9881	0.0017	138.15	69.08
14	53.0589	1.3395	0.8982	12.1629	1.8939	6.4220	0.4860	17.9115	17.9115	17.9115	0.0018	130.00	65.00
15	51.9110	1.7423	0.8315	4.6061	1.7846	8.0713	0.4771	18.6055	18.6055	18.6055	0.0019	125.24	62.62
16	50.8888	2.2219	0.7519	0.7894	1.6779	9.7592	0.4675	19.1554	19.1554	19.1554	0.0019	124.02	62.01
17	50.0461	2.7700	0.6812	0.0620	1.5750	11.1813	0.4551	19.5838	19.5838	19.5838	0.0020	125.52	62.76
18	49.1432	3.3833	0.6255	1.5451	1.4786	12.4077	0.4339	19.7443	19.7443	19.7443	0.0020	128.25	64.13
19	48.1233	4.0107	0.6213	4.3203	1.3886	13.3966	0.4135	19.6113	19.6113	19.6113	0.0020	131.11	65.56
20	46.4570	4.6661	0.6143	7.5950	1.3015	14.0824	0.3941	18.9333	18.9333	18.9333	0.0019	131.91	65.96
21	44.8285	5.3522	0.6053	10.7690	1.2200	14.4479	0.3755	18.0946	18.0946	18.0946	0.0018	131.88	65.94
22	43.2418	6.0834	0.5797	13.4322	1.1451	14.4934	0.3577	17.1238	17.1238	17.1238	0.0017	130.71	65.35
23	41.7397	6.9424	0.5451	15.3682	1.0762	14.2293	0.3408	16.0417	16.0417	16.0417	0.0016	128.37	64.18
24	40.3541	7.8288	0.5131	16.5151	1.0128	13.6321	0.3248	14.8736	14.8736	14.8736	0.0015	124.80	62.40
25	39.0074	8.7332	0.4835	16.9042	0.9518	12.7995	0.3050	13.6651	13.6651	13.6651	0.0014	120.18	60.09
26	37.7009	9.6462	0.4561	16.6282	0.8895	11.7786	0.2865	12.4409	12.4409	12.4409	0.0012	114.71	57.35
27	36.4356	10.4849	0.4288	15.7136	0.8330	10.6199	0.2694	11.2230	11.2230	11.2230	0.0011	108.46	54.23
28	34.9993	11.3098	0.4037	14.4247	0.7814	9.4014	0.2535	9.9994	9.9994	9.9994	0.0010	101.57	50.79
29	33.6344	12.1148	0.3805	12.8960	0.7344	8.1518	0.2442	8.8270	8.8270	8.8270	0.0009	94.64	47.32
30	32.3372	12.8943	0.3591	11.2447	0.6913	6.8953	0.2432	7.7171	7.7171	7.7171	0.0008	87.82	43.91
31	31.1042	13.6425	0.3394	9.5671	0.6518	5.6730	0.2418	6.6786	6.6786	6.6786	0.0007	81.26	40.63
32	29.9321	14.2656	0.3211	7.9383	0.6155	4.5201	0.2400	5.7176	5.7176	5.7176	0.0006	74.99	37.49
33	29.5582	14.8481	0.3028	6.4380	0.5821	3.4609	0.2379	4.8542	4.8542	4.8542	0.0005	69.99	35.00
34	29.3178	15.3889	0.2856	5.0718	0.5503	2.5073	0.2354	4.0705	4.0705	4.0705	0.0004	65.57	32.78
35	29.0472	15.8873	0.2698	3.8600	0.5197	1.7044	0.2282	3.3637	3.3637	3.3637	0.0003	61.61	30.80
36	28.7503	16.3434	0.2551	2.8174	0.4916	1.0578	0.2195	2.7339	2.7339	2.7339	0.0003	58.14	29.07
37	28.4308	16.7574	0.2416	1.9493	0.4656	0.5684	0.2113	2.1797	2.1797	2.1797	0.0002	55.16	27.58
38	28.0920	17.1145	0.2291	1.2538	0.4417	0.2335	0.2035	1.6986	1.6986	1.6986	0.0002	52.66	26.33
39	27.4986	17.4291	0.2174	0.7239	0.4195	0.0474	0.1960	1.2834	1.2834	1.2834	0.0001	50.38	25.19
40	26.6234	17.7053	0.2066	0.3488	0.3989	0.0017	0.1889	0.9329	0.9329	0.9329	0.0001	48.27	24.14
41	25.7826	17.9445	0.1966	0.1155	0.3797	0.0874	0.1821	0.6483	0.6483	0.6483	0.0001	46.63	23.32
42	24.9747	18.1484	0.1869	0.0099	0.3619	0.2952	0.1754	0.4235	0.4235	0.4235	0.0000	45.42	22.71
43	24.1987	18.3190	0.1779	0.0170	0.3453	0.6154	0.1688	0.2526	0.2526	0.2526	0.0000	44.60	22.30
44	23.4532	18.4579	0.1695	0.1215	0.3298	1.0373	0.1625	0.1301	0.1301	0.1301	0.0000	44.12	22.06
45	22.7370	18.5671	0.1616	0.3086	0.3154	1.5497	0.1565	0.0506	0.0506	0.0506	0.0000	43.95	21.97

Distance From Tower (m)	KZLU.P Facility	KGBM Facility	K213CH Facility	KFRJ Facility	K217DA Facility	KWTD Facility	K259BH Facility	KRAJ Facility	KEDD Facility	KLOA-FM Facility	K19CL Facility	Total RF (uW/cm2)	Percent of 200uW/cm2
46	22.0490	18.6361	0.1542	0.5647	0.3018	2.1414	0.1508	0.0091	0.0091	0.0091	0.0000	44.03	22.01
47	21.4006	18.6793	0.1473	0.8771	0.2891	2.8016	0.1454	0.0008	0.0008	0.0008	0.0000	44.34	22.17
48	20.8172	18.6991	0.1409	1.2343	0.2771	3.5195	0.1403	0.0216	0.0216	0.0216	0.0000	44.89	22.45
49	20.2546	18.6971	0.1348	1.6263	0.2659	4.2849	0.1354	0.0679	0.0679	0.0679	0.0000	45.60	22.80
50	19.7120	18.6751	0.1292	2.0439	0.2554	5.0650	0.1307	0.1362	0.1362	0.1362	0.0000	46.42	23.21
51	19.1886	18.6346	0.1238	2.4793	0.2454	5.8551	0.1263	0.2235	0.2235	0.2235	0.0000	47.32	23.66
52	18.6838	18.5771	0.1188	2.9257	0.2368	6.6570	0.1218	0.3269	0.3269	0.3269	0.0000	48.30	24.15
53	18.1967	18.5042	0.1141	3.3771	0.2286	7.4635	0.1174	0.4437	0.4437	0.4437	0.0000	49.33	24.67
54	17.7266	18.4171	0.1096	3.8286	0.2209	8.2685	0.1132	0.5716	0.5716	0.5716	0.0001	50.40	25.20
55	17.2729	18.3172	0.1054	4.2760	0.2135	9.0665	0.1092	0.7084	0.7084	0.7084	0.0001	51.49	25.74
56	16.6349	18.1999	0.1014	4.7157	0.2065	9.8529	0.1054	0.8521	0.8521	0.8521	0.0001	52.57	26.29
57	16.4119	18.0547	0.0980	5.1382	0.1998	10.6237	0.1018	1.0009	1.0009	1.0009	0.0001	53.63	26.82
58	15.9952	17.9015	0.0948	5.5471	0.1935	11.3755	0.0983	1.1527	1.1527	1.1527	0.0001	54.66	27.33
59	15.5202	17.7413	0.0917	5.9408	0.1874	12.1055	0.0950	1.2998	1.2998	1.2998	0.0001	55.58	27.79
60	15.0649	17.5748	0.0888	6.3178	0.1817	12.8116	0.0919	1.4465	1.4465	1.4465	0.0001	56.47	28.24
61	14.6283	17.4030	0.0860	6.6773	0.1761	13.4918	0.0889	1.5918	1.5918	1.5918	0.0002	57.33	28.66
62	14.2094	17.2265	0.0833	7.0186	0.1709	14.1448	0.0860	1.7348	1.7348	1.7348	0.0002	58.14	29.07
63	13.8073	17.0460	0.0807	7.3414	0.1658	14.7696	0.0833	1.8748	1.8748	1.8748	0.0002	58.92	29.46
64	13.4212	16.8621	0.0783	7.6455	0.1610	15.3751	0.0807	2.0114	2.0114	2.0114	0.0002	59.66	29.83
65	13.0504	16.6755	0.0760	7.9309	0.1564	15.9540	0.0782	2.1441	2.1441	2.1441	0.0002	60.35	30.18
66	12.6940	16.4866	0.0738	8.1978	0.1520	16.5037	0.0758	2.2723	2.2723	2.2723	0.0002	61.00	30.50
67	12.3513	16.2960	0.0716	8.4465	0.1477	17.0241	0.0735	2.3960	2.3960	2.3960	0.0002	61.60	30.80
68	12.0217	16.1040	0.0696	8.6773	0.1436	17.5153	0.0712	2.5148	2.5148	2.5148	0.0003	62.15	31.07
69	11.7046	15.9111	0.0676	8.8908	0.1397	17.9776	0.0691	2.6287	2.6287	2.6287	0.0003	62.65	31.32
70	11.3993	15.7176	0.0657	9.0875	0.1360	18.4115	0.0670	2.7374	2.7374	2.7374	0.0003	63.10	31.55
71	11.1054	15.5239	0.0639	9.2680	0.1324	18.8175	0.0650	2.8410	2.8410	2.8410	0.0003	63.50	31.75
72	10.8222	15.3001	0.0622	9.4328	0.1289	19.1961	0.0631	2.9393	2.9393	2.9393	0.0003	63.82	31.91
73	10.5493	15.0557	0.0605	9.5826	0.1256	19.5481	0.0613	3.0326	3.0326	3.0326	0.0003	64.08	32.04
74	10.2862	14.8146	0.0589	9.7180	0.1224	19.8742	0.0596	3.1207	3.1207	3.1207	0.0003	64.30	32.15
75	10.0336	14.5770	0.0574	9.8397	0.1193	20.1752	0.0579	3.2055	3.2055	3.2055	0.0003	64.48	32.24
76	9.7901	14.3429	0.0559	9.9483	0.1164	20.4519	0.0563	3.2857	3.2857	3.2857	0.0003	64.62	32.31
77	9.5552	14.1123	0.0545	10.0446	0.1135	20.7053	0.0547	3.3612	3.3612	3.3612	0.0003	64.72	32.36
78	9.3283	13.8854	0.0531	10.1290	0.1108	20.9362	0.0533	3.4319	3.4319	3.4319	0.0003	64.79	32.40
79	9.1092	13.6621	0.0518	10.2022	0.1081	21.1454	0.0518	3.4980	3.4980	3.4980	0.0003	64.82	32.41
80	8.8975	13.4425	0.0506	10.2649	0.1056	21.3338	0.0505	3.5596	3.5596	3.5596	0.0004	64.82	32.41
81	8.6928	13.2267	0.0493	10.3176	0.1031	21.5024	0.0491	3.6169	3.6169	3.6169	0.0004	64.79	32.40
82	8.4950	13.0145	0.0481	10.3608	0.1007	21.6520	0.0479	3.6699	3.6699	3.6699	0.0004	64.73	32.36
83	8.3037	12.8061	0.0470	10.3952	0.0984	21.7834	0.0466	3.7189	3.7189	3.7189	0.0004	64.64	32.32
84	8.1186	12.6013	0.0459	10.4212	0.0962	21.8976	0.0455	3.7640	3.7640	3.7640	0.0004	64.52	32.26
85	7.9395	12.4002	0.0448	10.4394	0.0940	21.9952	0.0443	3.8053	3.8053	3.8053	0.0004	64.37	32.19
86	7.7661	12.2028	0.0438	10.4469	0.0919	22.0725	0.0432	3.8430	3.8430	3.8430	0.0004	64.20	32.10
87	7.5982	12.0091	0.0429	10.4473	0.0899	22.1109	0.0422	3.8772	3.8772	3.8772	0.0004	63.97	31.99
88	7.4356	11.8189	0.0419	10.4413	0.0880	22.1358	0.0412	3.9081	3.9081	3.9081	0.0004	63.73	31.86
89	7.2780	11.6322	0.0410	10.4293	0.0861	22.1479	0.0402	3.9358	3.9358	3.9358	0.0004	63.46	31.73
90	7.1252	11.4491	0.0401	10.4119	0.0843	22.1480	0.0393	3.9604	3.9604	3.9604	0.0004	63.18	31.59
91	6.9771	11.2695	0.0393	10.3892	0.0825	22.1367	0.0384	3.9821	3.9821	3.9821	0.0004	62.88	31.44
92	6.8335	11.0932	0.0385	10.3618	0.0808	22.1147	0.0376	4.0011	4.0011	4.0011	0.0004	62.56	31.28
93	6.6942	10.9204	0.0376	10.3299	0.0791	22.0828	0.0369	4.0173	4.0173	4.0173	0.0004	62.23	31.12
94	6.5590	10.7508	0.0369	10.2939	0.0775	22.0415	0.0361	4.0311	4.0311	4.0311	0.0004	61.89	30.94
95	6.4277	10.5846	0.0361	10.2541	0.0760	21.9913	0.0354	4.0425	4.0425	4.0425	0.0004	61.53	30.77
96	6.3003	10.4215	0.0354	10.2107	0.0745	21.9329	0.0347	4.0516	4.0516	4.0516	0.0004	61.17	30.58
97	6.1766	10.2616	0.0347	10.1641	0.0730	21.8669	0.0340	4.0585	4.0585	4.0585	0.0004	60.79	30.39
98	6.0564	10.0904	0.0340	10.1145	0.0716	21.7936	0.0333	4.0634	4.0634	4.0634	0.0004	60.38	30.19
99	5.9397	9.9225	0.0333	10.0621	0.0702	21.7137	0.0327	4.0663	4.0663	4.0663	0.0004	59.97	29.99
100	5.8262	9.7582	0.0327	10.0072	0.0688	21.6275	0.0320	4.0674	4.0674	4.0674	0.0004	59.56	29.78