

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 1058408) 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 vertically polarized full-wave spaced antenna on the same site or within 0.2km as the following:

Call	Channel/CLS	Status	City, ST	FIN	Licensee
K207CQ	207 D	LIC	GALLUP, NM	90091	CALVARY CHAPEL OF ALBUQUERQUE, INC.
NEW	210 A	APP	GALLUP, NM	174368	AVAILABLE MEDIA, INC.
K50KQ	50 +	CP	GALLUP, NM	126838	PUTUN, LLC
KLLU	205	APP	GALLUP, NM	94212	EDUCATIONAL MEDIA FOUNDATION

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

The facilities below were excluded from this study for the following reasons:

1. Original applications that were filed during FCC Translator Auction No. 83 and are mutually exclusive.
2. Status listed as USE

Call	Channel/CLS	Status	City, ST	FIN	Licensee
NEW	248 D	APP	GALLUP, NM	145585	FAMILY LIFE BROADCASTING SYSTEM
NEW	295 D	APP	GALLUP, NM	143601	SPIRIT MEDIA
KGLX	256 C1	USE	GALLUP, NM	60596	-

As can be seen in Exhibit 22A, the maximum theoretical RF value overall would be 207.68 $\mu\text{W}/\text{cm}^2$ at a distance of 8 meters from the tower, which is 103.84% of the 200 $\mu\text{W}/\text{cm}^2$ permitted for public (uncontrolled) exposure, and 20.77% of the 1000 $\mu\text{W}/\text{cm}^2$ permitted for worker (controlled) exposure. The site is not accessible to the general public. The tower is enclosed with a fence and locked.

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: Gallup, NM
KGGA
201
A

	KGGA	K207CQ*	K50KQ	KLLU**	NEW
Site type:	APP	LIC	CP	APP	APP
Channel:	201	207	50	205	210
Class:	A	D		A	A
ERP:	2.3 kw	0.1kw	5kw	2.85 kw	0.2kw
Antenna:	ERI		PSI	ERI	SHI
	dipole			dipole	
	2 bay	1 bay	8bay	2 bay	3 bay
	full wave	full wave		full wave	half wave
COR AGL:	15 m	23 m	23 m	15 m	18 m
Polorization:	vertical	vertical	horizontal	vertical	circular

Distance From Tower (m)	KGGA Facility	K207CQ* Facility	K50KQ Facility	KLLU Facility	NEW Facility	Total RF (uW/cm2)	Percent of 200uW/cm2
0	7.2165	5.1157	1.9579	8.9422	0.0229	23.26	11.63
1	15.8019	5.2311	1.9542	19.5806	0.0336	42.60	21.30
2	30.4811	5.3270	1.9432	37.7701	0.0537	75.58	37.79
3	44.4697	5.6639	1.9251	55.1038	0.0922	107.25	53.63
4	59.0181	5.9849	1.9004	73.1311	0.1609	140.20	70.10
5	72.8764	6.0186	1.8695	90.3034	0.2419	171.31	85.65
6	83.4842	6.0139	1.8331	103.4478	0.3025	195.08	97.54
7	87.3930	5.9628	1.7919	108.2913	0.3644	203.80	101.90
8	89.1508	5.8880	1.7466	110.4694	0.4239	207.68	103.84
9	84.6941	5.8548	1.6979	104.9470	0.4622	197.66	98.83
10	76.6270	5.8361	1.6466	94.9508	0.4758	179.54	89.77
11	67.8231	5.7568	1.5934	84.0416	0.4630	159.68	79.84
12	55.3754	5.5600	1.5389	68.6174	0.4263	131.52	65.76
13	45.0067	5.3609	1.4838	55.7692	0.3706	107.99	54.00
14	35.2069	5.2341	1.4286	43.6260	0.3019	85.80	42.90
15	25.8334	5.1275	1.3736	32.0109	0.2285	64.57	32.29
16	17.5952	5.0132	1.3194	21.8028	0.1555	45.89	22.94
17	10.7362	4.7835	1.2661	13.3035	0.0923	30.18	15.09
18	7.6105	4.5501	1.2142	9.4304	0.0436	22.85	11.42
19	3.3049	4.3270	1.1637	4.0951	0.0123	12.90	6.45
20	1.7546	4.1140	1.1149	2.1741	0.0002	9.16	4.58
21	0.7274	3.9113	1.0677	0.9013	0.0074	6.62	3.31
22	0.1525	3.7190	1.0224	0.1889	0.0334	5.12	2.56
23	0.2536	3.5368	0.9789	0.3142	0.0764	5.16	2.58
24	0.8539	3.3114	0.9373	1.0581	0.1343	6.29	3.15
25	1.7633	3.1028	0.8975	2.1849	0.2048	8.15	4.08
26	1.6569	2.9099	0.8595	2.0531	0.2851	7.76	3.88
27	2.7717	2.7313	0.8233	3.4345	0.3727	10.13	5.07
28	4.1172	2.6571	0.7888	5.1017	0.4653	13.13	6.57
29	5.6272	2.6445	0.7560	6.9728	0.5608	16.56	8.28
30	7.2213	2.6271	0.7248	8.9481	0.6574	20.18	10.09
31	6.8315	2.6053	0.6951	8.4651	0.7536	19.35	9.68
32	8.4849	2.5799	0.6669	10.5139	0.8440	23.09	11.54
33	8.0465	2.5400	0.6401	9.9707	0.9300	22.13	11.06
34	9.6985	2.4390	0.6147	12.0177	1.0117	25.78	12.89
35	11.4087	2.3431	0.5905	14.1368	1.0885	29.57	14.78
36	10.8557	2.2519	0.5675	13.4517	1.1602	28.29	14.14
37	12.4371	2.1653	0.5457	15.4112	1.2265	31.79	15.89
38	11.8588	2.0830	0.5249	14.6946	1.2873	30.45	15.22
39	13.4520	2.0048	0.5052	16.6687	1.3447	33.98	16.99
40	12.8512	1.9294	0.4865	15.9243	1.3999	32.59	16.30
41	12.2885	1.8531	0.4686	15.2271	1.4499	31.29	15.64
42	13.6936	1.7809	0.4517	16.9682	1.4949	34.39	17.19
43	13.1168	1.7124	0.4355	16.2535	1.5351	33.05	16.53
44	14.4385	1.6475	0.4202	17.8912	1.5706	35.97	17.98
45	13.8528	1.5859	0.4055	17.1655	1.6016	34.61	17.31

Distance From Tower (m)	KGGA Facility	K207CQ* Facility	K50KQ Facility	KLLU Facility	NEW Facility	Total RF (uW/cm2)	Percent of 200uW/cm2
46	13.3012	1.5275	0.3916	16.4819	1.6284	33.33	16.67
47	14.4582	1.4720	0.3783	17.9156	1.6513	35.88	17.94
48	13.9028	1.4193	0.3656	17.2274	1.6705	34.59	17.29
49	13.3781	1.3692	0.3535	16.5772	1.6862	33.36	16.68
50	12.8818	1.3182	0.3419	15.9623	1.6964	32.20	16.10
51	13.9015	1.2682	0.3309	17.2257	1.7018	34.43	17.21
52	13.4031	1.2209	0.3204	16.6082	1.7047	33.26	16.63
53	12.9305	1.1760	0.3103	16.0226	1.7051	32.14	16.07
54	12.4820	1.1335	0.3006	15.4669	1.7034	31.09	15.54
55	13.3491	1.0930	0.2914	16.5413	1.6997	32.97	16.49
56	12.9008	1.0546	0.2826	15.9857	1.6942	31.92	15.96
57	12.4743	1.0181	0.2741	15.4572	1.6870	30.91	15.46
58	12.0682	0.9833	0.2660	14.9541	1.6784	29.95	14.98
59	12.8376	0.9502	0.2583	15.9074	1.6685	31.62	15.81
60	12.4323	0.9187	0.2508	15.4052	1.6575	30.66	15.33
61	12.0456	0.8886	0.2437	14.9260	1.6454	29.75	14.87
62	11.6764	0.8599	0.2368	14.4685	1.6323	28.87	14.44
63	11.3236	0.8326	0.2303	14.0315	1.6185	28.04	14.02
64	11.9345	0.8056	0.2239	14.7884	1.6039	29.36	14.68
65	11.5841	0.7797	0.2179	14.3542	1.5888	28.52	14.26
66	11.2488	0.7550	0.2120	13.9387	1.5730	27.73	13.86
67	10.9276	0.7314	0.2064	13.5407	1.5569	26.96	13.48
68	10.6198	0.7089	0.2010	13.1593	1.5389	26.23	13.11
69	10.3247	0.6873	0.1958	12.7936	1.5204	25.52	12.76
70	10.0416	0.6666	0.1908	12.4428	1.5017	24.84	12.42
71	10.5281	0.6469	0.1859	13.0457	1.4829	25.89	12.94
72	10.2469	0.6280	0.1813	12.6972	1.4640	25.22	12.61
73	9.9766	0.6098	0.1768	12.3623	1.4450	24.57	12.29
74	9.7168	0.5924	0.1725	12.0404	1.4260	23.95	11.97
75	9.4669	0.5757	0.1683	11.7308	1.4071	23.35	11.67
76	9.2265	0.5597	0.1643	11.4328	1.3882	22.77	11.39
77	8.9950	0.5443	0.1604	11.1460	1.3694	22.22	11.11
78	9.3630	0.5296	0.1566	11.6020	1.3507	23.00	11.50
79	9.1337	0.5154	0.1530	11.3178	1.3321	22.45	11.23
80	8.9126	0.5017	0.1495	11.0439	1.3136	21.92	10.96
81	8.6994	0.4886	0.1461	10.7797	1.2954	21.41	10.70
82	8.4937	0.4759	0.1428	10.5247	1.2772	20.91	10.46
83	8.2951	0.4637	0.1396	10.2787	1.2593	20.44	10.22
84	8.1034	0.4520	0.1366	10.0411	1.2416	19.97	9.99
85	7.9181	0.4407	0.1336	9.8116	1.2240	19.53	9.76
86	7.7392	0.4300	0.1307	9.5898	1.2067	19.10	9.55
87	8.0235	0.4205	0.1279	9.9422	1.1896	19.70	9.85
88	7.8461	0.4114	0.1252	9.7223	1.1727	19.28	9.64
89	7.6744	0.4025	0.1226	9.5096	1.1560	18.87	9.43
90	7.5083	0.3939	0.1200	9.3037	1.1396	18.47	9.23
91	7.3475	0.3856	0.1176	9.1045	1.1234	18.08	9.04
92	7.1917	0.3775	0.1152	8.9115	1.1074	17.70	8.85
93	7.0408	0.3697	0.1129	8.7245	1.0917	17.34	8.67
94	6.8946	0.3621	0.1106	8.5433	1.0762	16.99	8.49
95	6.7529	0.3548	0.1084	8.3677	1.0609	16.64	8.32
96	6.6155	0.3476	0.1063	8.1974	1.0459	16.31	8.16
97	6.4821	0.3407	0.1042	8.0322	1.0311	15.99	8.00
98	6.3528	0.3340	0.1022	7.8720	1.0166	15.68	7.84
99	6.5500	0.3274	0.1003	8.1163	1.0023	16.10	8.05
100	6.4218	0.3211	0.0984	7.9575	0.9882	15.79	7.89

* worst cast = 1 bay, ring stub

**anticipated facility to consider (to be combined with KGGA)