

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 1031769) 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 14-bay circularly polarized full-wave spaced antenna on the same site as the following:

Status	Call	Licensee/Permittee	Channel	City	FIN
LIC	KHUI	Salem Media Of Hawaii, Inc.	258C	Honolulu, HI	641
LIC	KCCN-FM	Cox Radio, Inc.	262C	Honolulu, HI	34552
LIC	KUCD	Capstar Tx Limited Partnership	270C	Pearl City, HI	48778
LIC	KINE-FM	Cox Radio, Inc.	286C	Honolulu, HI	34553
LIC	KPOI-FM	Visionary Related Entertainment, LLC	290C	Honolulu, HI	33450
LIC	KGMZ-FM	Salem Media Of Hawaii, Inc.	300C	Aiea, HI	70384
CP	K246AY	Radio Assist Ministry, Inc.	246D	Honolulu, HI	146666
LIC	KIKU-TV	KHLS, Inc.	19	Honolulu, HI	34527
LIC	KIKU-DTV	KHLS, Inc.	20	Honolulu, HI	34527

See Exhibit 31-A for antennas that were specified by each licensee/permittee.

As can be seen in Exhibit 31-A, the maximum theoretical RF value would be 640.92 $\mu\text{W}/\text{cm}^2$ at a distance of 10 meters from the tower, which is 320.46% of the 200 $\mu\text{W}/\text{cm}^2$ permitted for public (uncontrolled) exposure, and 64.09% of the 1000 $\mu\text{W}/\text{cm}^2$ permitted for worker (controlled) exposure. The facility is located behind a locked gate (and has appropriate signage) limiting the public's access to the site.

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 31-A
RF Analysis: KHALP 278C Wahiawa, HI

	KHALP	KHUI	KCCN-FM	KUCD	KINE-FM	KPOI-FM	KGMZ-FM	K246AY	KIKU-TV	KIKU-DTV
Site type:	proposed	FM station	FM station	FM station	FM station	FM station	FM station	FM translator	TV station	DTV station
Channel:	278	258	262	270	286	290	300	246	20	19
Class:	C	C	C	C	C	C	C	D		
ERP:	53kw	100kw	100kw	100kw	100kw	100kw	100kw	0.01kw	468 kw	60.7 kw
Antenna:	Shively	Shively	Shively	Shively	Shively	Shively	Shively	SWR ring stub	AND	AND ALP12L2
	14-bay full wave	14-bay full wave	14-bay full wave	14-bay full wave	14-bay full wave	14-bay full wave	14-bay full wave	1bay full wave		
COR AGL:	41 m	41 m	41 m	41 m	41 m	41 m	41 m	39 m	68 m	68 m
Polarization:	Circular	Circular	Circular	Circular	Circular	Circular	Circular	Circular	Horizontal	Horizontal

Distance From Tower (m)	KHALP Facility	KHUI Facility	KCCN-FM Facility	KUCD Facility	KINE-FM Facility	KPOI-FM Facility	KGMZ-FM Facility	K246AY Facility	KIKU-TV Facility	KIKU-DTV Facility	Total RF (uW/cm2)	Percent of 200uW/cm2
0	10.5337	19.8750	19.8750	19.8750	19.8750	19.8750	19.8750	0.3068	20.9649	4.3858	129.78	64.89
1	12.5410	23.6623	23.6623	23.6623	23.6623	23.6623	23.6623	0.3128	20.9604	4.3848	154.51	77.26
2	14.7764	27.8800	27.8800	27.8800	27.8800	27.8800	27.8800	0.3184	20.9468	4.3820	182.06	91.03
3	17.1860	32.4264	32.4264	32.4264	32.4264	32.4264	32.4264	0.3244	20.9242	4.3772	211.74	105.87
4	20.8822	39.4005	39.4005	39.4005	39.4005	39.4005	39.4005	0.3386	20.8926	4.3706	257.29	128.64
5	26.7845	50.5368	50.5368	50.5368	50.5368	50.5368	50.5368	0.3523	20.8522	4.3622	330.01	165.00
6	32.9326	62.1370	62.1370	62.1370	62.1370	62.1370	62.1370	0.3635	20.8030	4.3519	405.75	202.88
7	38.5947	72.8202	72.8202	72.8202	72.8202	72.8202	72.8202	0.3662	20.7451	4.3398	475.52	237.76
8	45.6558	86.1431	86.1431	86.1431	86.1431	86.1431	86.1431	0.3682	20.6787	4.3259	562.51	281.26
9	50.8859	96.0112	96.0112	96.0112	96.0112	96.0112	96.0112	0.3692	20.6040	4.3103	626.95	313.48
10	52.0192	98.1495	98.1495	98.1495	98.1495	98.1495	98.1495	0.3687	20.5211	4.2929	640.92	320.46
11	48.1636	90.8746	90.8746	90.8746	90.8746	90.8746	90.8746	0.3675	20.4303	4.2739	593.41	296.71
12	37.7931	71.3078	71.3078	71.3078	71.3078	71.3078	71.3078	0.3657	20.3318	4.2533	465.64	232.82
13	25.4829	48.0809	48.0809	48.0809	48.0809	48.0809	48.0809	0.3664	20.2257	4.2311	313.97	156.98
14	13.6280	25.7132	25.7132	25.7132	25.7132	25.7132	25.7132	0.3664	20.1124	4.2074	167.91	83.95
15	4.7014	8.8705	8.8705	8.8705	8.8705	8.8705	8.8705	0.3658	19.9921	4.1823	57.92	28.96
16	0.3604	0.6800	0.6800	0.6800	0.6800	0.6800	0.6800	0.3619	19.8651	4.1557	4.44	2.22
17	0.8203	1.5477	1.5477	1.5477	1.5477	1.5477	1.5477	0.3559	19.7317	4.1278	10.11	5.05
18	4.7976	9.0521	9.0521	9.0521	9.0521	9.0521	9.0521	0.3496	19.5921	4.0986	59.11	29.56
19	9.6666	18.2388	18.2388	18.2388	18.2388	18.2388	18.2388	0.3432	19.4467	4.0682	119.10	59.55
20	12.6184	23.8083	23.8083	23.8083	23.8083	23.8083	23.8083	0.3387	19.2958	4.0366	155.47	77.73
21	12.1043	22.8382	22.8382	22.8382	22.8382	22.8382	22.8382	0.3339	19.1396	4.0039	149.13	74.57
22	8.5181	16.0719	16.0719	16.0719	16.0719	16.0719	16.0719	0.3290	18.9784	3.9702	104.95	52.47
23	3.8792	7.3192	7.3192	7.3192	7.3192	7.3192	7.3192	0.3238	18.8127	3.9355	47.79	23.90
24	0.6210	1.1718	1.1718	1.1718	1.1718	1.1718	1.1718	0.3150	18.6427	3.9000	7.65	3.83
25	0.1893	0.3572	0.3572	0.3572	0.3572	0.3572	0.3572	0.3060	18.4686	3.8635	2.33	1.17
26	2.2739	4.2904	4.2904	4.2904	4.2904	4.2904	4.2904	0.2972	18.2909	3.8264	28.02	14.01
27	5.1548	9.7260	9.7260	9.7260	9.7260	9.7260	9.7260	0.2885	18.1098	3.7885	63.51	31.76
28	6.8586	12.9407	12.9407	12.9407	12.9407	12.9407	12.9407	0.2803	17.9256	3.7500	84.50	42.25
29	6.3551	11.9908	11.9908	11.9908	11.9908	11.9908	11.9908	0.2726	17.7387	3.7108	78.30	39.15
30	4.0741	7.6869	7.6869	7.6869	7.6869	7.6869	7.6869	0.2652	17.5492	3.6712	50.20	25.10
31	1.4860	2.8038	2.8038	2.8038	2.8038	2.8038	2.8038	0.2579	17.3575	3.6311	18.31	9.15
32	0.0728	0.1373	0.1373	0.1373	0.1373	0.1373	0.1373	0.2508	17.1639	3.5906	0.90	0.45
33	0.4464	0.8424	0.8424	0.8424	0.8424	0.8424	0.8424	0.2439	16.9686	3.5498	5.50	2.75
34	2.0939	3.9507	3.9507	3.9507	3.9507	3.9507	3.9507	0.2360	16.7720	3.5086	25.80	12.90
35	3.8108	7.1901	7.1901	7.1901	7.1901	7.1901	7.1901	0.2284	16.5741	3.4672	46.95	23.48
36	4.5090	8.5076	8.5076	8.5076	8.5076	8.5076	8.5076	0.2212	16.3753	3.4256	55.55	27.78
37	3.8443	7.2534	7.2534	7.2534	7.2534	7.2534	7.2534	0.2142	16.1759	3.3839	47.36	23.68
38	2.2876	4.3162	4.3162	4.3162	4.3162	4.3162	4.3162	0.2075	15.9759	3.3421	28.18	14.09
39	0.7491	1.4135	1.4135	1.4135	1.4135	1.4135	1.4135	0.2011	15.7757	3.3002	9.23	4.61
40	0.0163	0.0307	0.0307	0.0307	0.0307	0.0307	0.0307	0.1983	15.5755	3.2583	0.20	0.10
41	0.3485	0.6576	0.6576	0.6576	0.6576	0.6576	0.6576	0.1970	15.3754	3.2165	4.29	2.15
42	1.4176	2.6747	2.6747	2.6747	2.6747	2.6747	2.6747	0.1956	15.1756	3.1747	17.47	8.73
43	2.5624	4.8347	4.8347	4.8347	4.8347	4.8347	4.8347	0.1941	14.9763	3.1330	31.57	15.79
44	3.1702	5.9816	5.9816	5.9816	5.9816	5.9816	5.9816	0.1925	14.7777	3.0914	39.06	19.53
45	2.9706	5.6049	5.6049	5.6049	5.6049	5.6049	5.6049	0.1907	14.5799	3.0500	36.60	18.30

Distance From Tower (m)	KHALP Facility	KHUI Facility	KCCN-FM Facility	KUCD Facility	KINE-FM Facility	KPOI-FM Facility	KGMZ-FM Facility	K246AY Facility	KIKU-TV Facility	KIKU-DTV Facility	Total RF (uW/cm2)	Percent of 200uW/cm2
46	2.1143	3.9893	3.9893	3.9893	3.9893	3.9893	3.9893	0.1889	14.3831	3.0089	26.05	13.02
47	1.0407	1.9637	1.9637	1.9637	1.9637	1.9637	1.9637	0.1870	14.1873	2.9679	12.82	6.41
48	0.2352	0.4437	0.4437	0.4437	0.4437	0.4437	0.4437	0.1825	13.9928	2.9272	2.90	1.45
49	0.0069	0.0130	0.0130	0.0130	0.0130	0.0130	0.0130	0.1777	13.7996	2.8868	0.08	0.04
50	0.3810	0.7189	0.7189	0.7189	0.7189	0.7189	0.7189	0.1731	13.6078	2.8467	4.69	2.35
51	1.1288	2.1299	2.1299	2.1299	2.1299	2.1299	2.1299	0.1686	13.4176	2.8069	13.91	6.95
52	1.8997	3.5844	3.5844	3.5844	3.5844	3.5844	3.5844	0.1643	13.2290	2.7674	23.41	11.70
53	2.3776	4.4860	4.4860	4.4860	4.4860	4.4860	4.4860	0.1602	13.0421	2.7283	29.29	14.65
54	2.3966	4.5220	4.5220	4.5220	4.5220	4.5220	4.5220	0.1561	12.8570	2.6896	29.53	14.76
55	1.9806	3.7370	3.7370	3.7370	3.7370	3.7370	3.7370	0.1522	12.6738	2.6513	24.40	12.20
56	1.3062	2.4646	2.4646	2.4646	2.4646	2.4646	2.4646	0.1484	12.4925	2.6134	16.09	8.05
57	0.6194	1.1687	1.1687	1.1687	1.1687	1.1687	1.1687	0.1448	12.3132	2.5759	7.63	3.82
58	0.1419	0.2677	0.2677	0.2677	0.2677	0.2677	0.2677	0.1415	12.1359	2.5388	1.75	0.87
59	0.0025	0.0047	0.0047	0.0047	0.0047	0.0047	0.0047	0.1383	11.9608	2.5021	0.03	0.02
60	0.2094	0.3951	0.3951	0.3951	0.3951	0.3951	0.3951	0.1353	11.7877	2.4659	2.58	1.29
61	0.6647	1.2542	1.2542	1.2542	1.2542	1.2542	1.2542	0.1323	11.6168	2.4302	8.19	4.10
62	1.2093	2.2816	2.2816	2.2816	2.2816	2.2816	2.2816	0.1294	11.4480	2.3949	14.90	7.45
63	1.6767	3.1636	3.1636	3.1636	3.1636	3.1636	3.1636	0.1266	11.2815	2.3600	20.66	10.33
64	1.9409	3.6620	3.6620	3.6620	3.6620	3.6620	3.6620	0.1239	11.1172	2.3257	23.91	11.96
65	1.9440	3.6678	3.6678	3.6678	3.6678	3.6678	3.6678	0.1212	10.9551	2.2918	23.95	11.98
66	1.7017	3.2107	3.2107	3.2107	3.2107	3.2107	3.2107	0.1187	10.7953	2.2583	20.97	10.48
67	1.2893	2.4327	2.4327	2.4327	2.4327	2.4327	2.4327	0.1162	10.6378	2.2254	15.89	7.94
68	0.8149	1.5376	1.5376	1.5376	1.5376	1.5376	1.5376	0.1138	10.4825	2.1929	10.04	5.02
69	0.3895	0.7349	0.7349	0.7349	0.7349	0.7349	0.7349	0.1114	10.3294	2.1609	4.80	2.40
70	0.1014	0.1913	0.1913	0.1913	0.1913	0.1913	0.1913	0.1091	10.1787	2.1293	1.25	0.62
71	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1068	10.0302	2.0983	0.00	0.00
72	0.0902	0.1702	0.1702	0.1702	0.1702	0.1702	0.1702	0.1042	9.8840	2.0677	1.11	0.56
73	0.3369	0.6356	0.6356	0.6356	0.6356	0.6356	0.6356	0.1017	9.7400	2.0376	4.15	2.08
74	0.6778	1.2789	1.2789	1.2789	1.2789	1.2789	1.2789	0.0992	9.5982	2.0079	8.35	4.18
75	1.0399	1.9621	1.9621	1.9621	1.9621	1.9621	1.9621	0.0969	9.4587	1.9787	12.81	6.41
76	1.3539	2.5545	2.5545	2.5545	2.5545	2.5545	2.5545	0.0946	9.3213	1.9500	16.68	8.34
77	1.5664	2.9554	2.9554	2.9554	2.9554	2.9554	2.9554	0.0924	9.1862	1.9217	19.30	9.65
78	1.6469	3.1073	3.1073	3.1073	3.1073	3.1073	3.1073	0.0903	9.0532	1.8939	20.29	10.15
79	1.5901	3.0002	3.0002	3.0002	3.0002	3.0002	3.0002	0.0883	8.9224	1.8665	19.59	9.80
80	1.4132	2.6665	2.6665	2.6665	2.6665	2.6665	2.6665	0.0863	8.7937	1.8396	17.41	8.71
81	1.1503	2.1705	2.1705	2.1705	2.1705	2.1705	2.1705	0.0843	8.6671	1.8131	14.17	7.09
82	0.8451	1.5945	1.5945	1.5945	1.5945	1.5945	1.5945	0.0825	8.5426	1.7871	10.41	5.21
83	0.5429	1.0244	1.0244	1.0244	1.0244	1.0244	1.0244	0.0807	8.4202	1.7615	6.69	3.34
84	0.2845	0.5368	0.5368	0.5368	0.5368	0.5368	0.5368	0.0789	8.2998	1.7363	3.51	1.75
85	0.1006	0.1897	0.1897	0.1897	0.1897	0.1897	0.1897	0.0772	8.1814	1.7115	1.24	0.62
86	0.0092	0.0174	0.0174	0.0174	0.0174	0.0174	0.0174	0.0756	8.0650	1.6872	0.11	0.06
87	0.0151	0.0284	0.0284	0.0284	0.0284	0.0284	0.0284	0.0740	7.9506	1.6632	0.19	0.09
88	0.1104	0.2082	0.2082	0.2082	0.2082	0.2082	0.2082	0.0724	7.8381	1.6397	1.36	0.68
89	0.2780	0.5245	0.5245	0.5245	0.5245	0.5245	0.5245	0.0709	7.7275	1.6166	3.43	1.71
90	0.4940	0.9320	0.9320	0.9320	0.9320	0.9320	0.9320	0.0695	7.6188	1.5938	6.09	3.04
91	0.7311	1.3795	1.3795	1.3795	1.3795	1.3795	1.3795	0.0681	7.5120	1.5715	9.01	4.50
92	0.9624	1.8158	1.8158	1.8158	1.8158	1.8158	1.8158	0.0667	7.4069	1.5495	11.86	5.93
93	1.1637	2.1957	2.1957	2.1957	2.1957	2.1957	2.1957	0.0654	7.3037	1.5279	14.34	7.17
94	1.3163	2.4836	2.4836	2.4836	2.4836	2.4836	2.4836	0.0641	7.2022	1.5067	16.22	8.11
95	1.4077	2.6560	2.6560	2.6560	2.6560	2.6560	2.6560	0.0629	7.1025	1.4858	17.34	8.67
96	1.4324	2.7027	2.7027	2.7027	2.7027	2.7027	2.7027	0.0616	7.0045	1.4653	17.65	8.82
97	1.3916	2.6256	2.6256	2.6256	2.6256	2.6256	2.6256	0.0605	6.9081	1.4451	17.15	8.57
98	1.2921	2.4380	2.4380	2.4380	2.4380	2.4380	2.4380	0.0593	6.8135	1.4253	15.92	7.96
99	1.1455	2.1613	2.1613	2.1613	2.1613	2.1613	2.1613	0.0582	6.7204	1.4059	14.11	7.06
100	0.9661	1.8229	1.8229	1.8229	1.8229	1.8229	1.8229	0.0571	6.6290	1.3867	11.90	5.95