

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.

The proposed facility will be built at an existing communications facility. This site is not an "Historic Place" as described in section 1.1307(a) (4). Therefore, this application is excluded from the preparation of an "Environmental Assessment" pursuant to Section 1.1306 Note 1.

2) Human exposure to excess levels of radiofrequency radiation.

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

Status	Call	Licensee/Permittee	Channel	City	FIN
Lic	K201DP	Calvary Chapel of Twin Falls, Inc.	201D	St. George, UT	82787
Lic	K207DE	Educational Media Foundation	207D	St. George, UT	94139
Lic	KSNN	Bonneville Holding Company	228C2	St. George, UT	60457
Lic	KZHK	Marvin Kent Frandsen	240C	St. George, UT	40519
Lic	KONY	FM Radio 99.9, Inc.	259C	St. George, UT	18140

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 would be 159.72 $\mu\text{W}/\text{cm}^2$ at a distance of 16 meters from the tower, which is 79.86% of the 200 $\mu\text{W}/\text{cm}^2$ permitted for public (uncontrolled) exposure, and 15.97% 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 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: KAER.P 208C1 St. George, UT

KAER.P	K201DP	K207DE	KSNN	KZHK	KONY
Site type: Proposed	FM translator	FM translator	Station	Station	Station
Channel: 208	201	207	228	240	259
Class: C1	D	D	C2	C	C
ERP: 7kw	.01 kw	.01 kw	2.4 kw	100 kw	89 kw
Antenna: ERI*		SWR	ERI		Shively
rototiller	Double-v	Double-v	rototiller	Double-v	6810
6-bay	1-bay	1-bay	2-bay	10-bay	8-bay
half-wave	full-wave	full-wave	full-wave	full-wave	full-wave
COR AGL: 30.5 m	46 m	52 m	43 m	67 m	95 m
Polorization: Circular	circular	circular	circular	circular	circular

Distance From Tower (m)	KAER.P Facility	K201DP Facility	K207DE Facility	KSNN Facility	KZHK Facility	KONY Facility	Total RF (uW/cm2)	Percent of 200uW/cm2
0	0.0000	0.0221	0.0173	2.6020	104.1963	3.2947	110.13	55.07
1	0.0000	0.0224	0.0175	2.6005	105.2506	3.4355	111.33	55.66
2	0.0002	0.0228	0.0178	2.5963	106.3308	3.5803	112.55	56.27
3	0.0009	0.0231	0.0180	2.5892	107.4190	3.7289	113.78	56.89
4	0.0034	0.0235	0.0183	2.6745	108.4861	3.8809	115.09	57.54
5	0.0098	0.0252	0.0189	3.0769	109.4916	4.0359	116.66	58.33
6	0.0235	0.0269	0.0201	3.4984	110.9785	4.1935	118.74	59.37
7	0.0496	0.0287	0.0213	3.9358	115.9979	4.3530	124.39	62.19
8	0.0941	0.0304	0.0225	4.4200	120.7438	4.5137	129.82	64.91
9	0.1629	0.0325	0.0238	4.9683	125.0875	5.2352	135.51	67.76
10	0.2627	0.0347	0.0252	5.5305	128.8818	6.2878	141.02	70.51
11	0.3987	0.0368	0.0267	6.1010	131.9651	7.4272	145.96	72.98
12	0.5782	0.0391	0.0282	6.6534	134.3538	8.6465	150.30	75.15
13	0.7996	0.0414	0.0297	7.1782	136.5383	9.9371	154.52	77.26
14	1.0582	0.0437	0.0312	7.6907	137.5225	11.2894	157.64	78.82
15	1.3571	0.0461	0.0329	8.1854	137.1166	12.6916	159.43	79.71
16	1.6783	0.0484	0.0345	8.6742	135.1576	14.1307	159.72	79.86
17	2.0004	0.0508	0.0361	9.1671	131.5243	15.5858	158.36	79.18
18	2.3122	0.0534	0.0378	9.6259	126.1652	17.0377	155.23	77.62
19	2.5993	0.0560	0.0394	10.0455	119.3183	18.4916	150.55	75.27
20	2.8243	0.0586	0.0412	10.4212	110.8102	19.9266	144.08	72.04
21	2.9682	0.0611	0.0430	10.8350	100.8058	21.3208	136.03	68.02
22	2.9860	0.0633	0.0447	11.2006	89.5644	22.6509	126.51	63.25
23	2.8910	0.0652	0.0465	11.5100	77.4343	23.8929	115.84	57.92
24	2.7065	0.0669	0.0483	11.7605	64.8387	25.0224	104.44	52.22
25	2.4444	0.0686	0.0497	11.9672	52.3451	26.0155	92.89	46.45
26	2.1213	0.0702	0.0510	12.1889	40.3729	26.5587	81.36	40.68
27	1.7589	0.0718	0.0522	12.3437	29.3361	26.6895	70.25	35.13
28	1.3830	0.0735	0.0534	12.4317	19.6749	26.6425	60.26	30.13
29	1.0172	0.0750	0.0545	12.4540	11.7507	26.4103	51.76	25.88
30	0.6839	0.0765	0.0556	12.4127	5.8120	25.9890	45.03	22.51
31	0.4018	0.0779	0.0567	12.1848	1.9692	25.3778	40.07	20.03
32	0.1874	0.0792	0.0579	11.8972	0.1797	24.5798	36.98	18.49
33	0.0518	0.0799	0.0589	11.5703	0.2513	23.6019	35.61	17.81
34	0.0004	0.0804	0.0600	11.2084	1.8305	22.4551	35.63	17.82
35	0.0342	0.0807	0.0609	10.8163	4.4691	21.3192	36.78	18.39
36	0.1500	0.0811	0.0618	10.3984	7.6708	20.2259	38.59	19.29
37	0.3418	0.0813	0.0624	9.9506	10.9398	18.9518	40.33	20.16
38	0.6013	0.0815	0.0627	9.4869	13.8284	17.5216	41.58	20.79
39	0.9172	0.0819	0.0630	9.0122	15.9900	15.9648	42.03	21.01
40	1.2773	0.0829	0.0633	8.5305	17.2038	14.3147	41.47	20.74
41	1.6682	0.0838	0.0635	8.0456	17.3396	12.6075	39.81	19.90
42	2.0769	0.0845	0.0636	7.5610	16.4252	10.8817	37.09	18.55
43	2.4907	0.0852	0.0638	7.0798	14.6111	9.1762	33.51	16.75
44	2.8897	0.0858	0.0641	6.5919	12.1442	7.5299	29.31	14.65
45	3.2583	0.0864	0.0647	6.1155	9.3308	5.9584	24.81	12.41

Distance From Tower (m)	KAER.P Facility	K201DP Facility	K207DE Facility	KSNN Facility	KZHK Facility	KONY Facility	Total RF (uW/cm2)	Percent of 200uW/cm2
46	3.5974	0.0868	0.0653	5.6526	6.4959	4.5210	20.42	10.21
47	3.9004	0.0869	0.0659	5.2050	3.9409	3.2558	16.45	8.23
48	4.1624	0.0868	0.0664	4.7742	1.9069	2.1840	13.18	6.59
49	4.3799	0.0868	0.0669	4.3614	0.5817	1.3204	10.80	5.40
50	4.5512	0.0867	0.0673	3.9676	0.0225	0.6737	9.37	4.68
51	4.6754	0.0865	0.0676	3.5936	0.1922	0.2456	8.86	4.43
52	4.7533	0.0863	0.0680	3.2461	0.9725	0.0310	9.16	4.58
53	4.7904	0.0860	0.0680	2.9195	2.1857	0.0183	10.07	5.03
54	4.8044	0.0857	0.0680	2.6119	3.6211	0.1898	11.38	5.69
55	4.7774	0.0853	0.0679	2.3234	5.0635	0.5227	12.84	6.42
56	4.7124	0.0847	0.0679	2.0541	6.3187	0.9912	14.23	7.11
57	4.6126	0.0840	0.0678	1.8039	7.2780	1.5650	15.41	7.71
58	4.4818	0.0833	0.0676	1.5726	7.8178	2.2115	16.23	8.12
59	4.3239	0.0825	0.0675	1.3599	7.8799	2.8975	16.61	8.31
60	4.1427	0.0818	0.0673	1.1654	7.4769	3.5896	16.52	8.26
61	3.9422	0.0810	0.0671	0.9886	6.6747	4.2563	16.01	8.00
62	3.7262	0.0803	0.0669	0.8267	5.5803	4.8683	15.15	7.57
63	3.4984	0.0795	0.0664	0.6809	4.3262	5.4005	14.05	7.03
64	3.2624	0.0787	0.0659	0.5521	3.0527	5.8319	12.84	6.42
65	3.0215	0.0779	0.0654	0.4394	1.8919	6.1467	11.64	5.82
66	2.7702	0.0771	0.0649	0.3419	0.9540	6.3346	10.54	5.27
67	2.5162	0.0763	0.0644	0.2586	0.3170	6.3816	9.61	4.81
68	2.2685	0.0755	0.0639	0.1886	0.0213	6.2888	8.91	4.45
69	2.0288	0.0746	0.0634	0.1310	0.0687	6.0736	8.44	4.22
70	1.7991	0.0738	0.0629	0.0851	0.4234	5.7479	8.19	4.10
71	1.5806	0.0730	0.0623	0.0498	1.0220	5.3275	8.12	4.06
72	1.3746	0.0721	0.0618	0.0246	1.7820	4.8308	8.15	4.07
73	1.1820	0.0713	0.0613	0.0085	2.6122	4.2788	8.21	4.11
74	1.0034	0.0705	0.0607	0.0009	3.4224	3.6933	8.25	4.13
75	0.8395	0.0697	0.0601	0.0010	4.1316	3.0965	8.20	4.10
76	0.6905	0.0689	0.0596	0.0083	4.6751	2.5097	8.01	4.01
77	0.5566	0.0680	0.0590	0.0221	5.0089	1.9529	7.67	3.83
78	0.4378	0.0672	0.0584	0.0420	5.1115	1.4439	7.16	3.58
79	0.3341	0.0665	0.0578	0.0673	4.9840	0.9977	6.51	3.25
80	0.2451	0.0657	0.0572	0.0977	4.6459	0.6261	5.74	2.87
81	0.1707	0.0649	0.0567	0.1327	4.1281	0.3375	4.89	2.45
82	0.1103	0.0641	0.0561	0.1717	3.4919	0.1371	4.03	2.02
83	0.0637	0.0633	0.0555	0.2144	2.7934	0.0260	3.22	1.61
84	0.0302	0.0625	0.0550	0.2603	2.0894	0.0020	2.50	1.25
85	0.0093	0.0617	0.0544	0.3092	1.4325	0.0598	1.93	0.96
86	0.0004	0.0610	0.0538	0.3606	0.8676	0.1914	1.53	0.77
87	0.0030	0.0602	0.0533	0.4142	0.4293	0.3868	1.35	0.67
88	0.0164	0.0595	0.0527	0.4697	0.1397	0.6340	1.37	0.69
89	0.0401	0.0587	0.0522	0.5268	0.0086	0.9201	1.61	0.80
90	0.0734	0.0580	0.0516	0.5852	0.0335	1.2315	2.03	1.02
91	0.1156	0.0573	0.0511	0.6447	0.2011	1.5545	2.62	1.31
92	0.1663	0.0566	0.0505	0.7051	0.4896	1.8760	3.34	1.67
93	0.2247	0.0559	0.0500	0.7639	0.8704	2.1836	4.15	2.07
94	0.2902	0.0552	0.0494	0.8221	1.3113	2.4660	4.99	2.50
95	0.3624	0.0546	0.0489	0.8803	1.7785	2.7139	5.84	2.92
96	0.4406	0.0539	0.0483	0.9382	2.2390	2.9162	6.64	3.32
97	0.5242	0.0532	0.0478	0.9957	2.6625	3.0700	7.35	3.68
98	0.6128	0.0526	0.0473	1.0526	3.0241	3.1715	7.96	3.98
99	0.7058	0.0519	0.0468	1.1089	3.3045	3.2189	8.44	4.22
100	0.8028	0.0513	0.0463	1.1644	3.4903	3.2126	8.77	4.38