KVEA-DT Application for Expanded Coverage
Calculated Depression Angle, Relative Field and Effective Radiated Power at the radio horizon

EXHIBIT 42
October 7 2008

Bearing (true)	HAAT (meters)	Depression angle to radio horizon	Mechanical tilt at this bearing	Combined depression angle	Azimuth pattern relative field	Elevation pattern relative field	Elevation relative field per Sec. 73.625(b)	Radio horizon relative field per Sec. 73.625(b)	Radio Horizon ERP (kW)	Radio Horizon ERP (dBk)
0	426	0.572	-0.167	0.738	0.241	0.790	0.790	0.190	36.3	15.6
5	459	0.593	-0.200	0.793	0.266	0.811	0.811	0.216	46.5	16.7
10	372	0.534	-0.233	0.768	0.283	0.801	0.801	0.227	51.4	17.1
13	347	0.516	-0.253	0.769	0.288	0.802	0.802	0.231	53.3	17.3
15	287	0.469	-0.267	0.736	0.289	0.789	0.789	0.228	52.0	17.2
20	250	0.438	-0.300	0.738	0.283	0.790	0.790	0.224	50.0	17.0
25	235	0.425	-0.333	0.758	0.266	0.797	0.797	0.212	45.0	16.5
30	309	0.487	-0.367	0.854	0.241	0.830	0.830	0.200	40.0	16.0
35	358	0.524	-0.400	0.924	0.212	0.853	0.853	0.181	32.7	15.1
40	420	0.568	-0.433	1.001	0.190	0.877	0.877	0.167	27.8	14.4
42	367	0.531	-0.447	0.977	0.188	0.870	0.870	0.164	26.7	14.3
45	378	0.539	-0.467	1.005	0.195	0.878	0.878	0.171	29.3	14.7
50	447	0.586	-0.500	1.086	0.237	0.899	0.899	0.213	45.4	16.6
55	522	0.633	-0.533	1.166	0.310	0.920	1.000	0.285	81.4	19.1
60	667	0.715	-0.567	1.282	0.399	0.945	1.000	0.377	142.0	21.5
65	779	0.773	-0.600	1.373	0.495	0.962	1.000	0.476	226.7	23.6
70	841	0.803	-0.567	1.370	0.590	0.961	1.000	0.567	321.7	25.1
75	874	0.819	-0.533	1.352	0.678	0.958	1.000	0.649	421.8	26.3
80	710	0.738	-0.500	1.238	0.756	0.936	1.000	0.708	501.0	27.0
85	504	0.622	-0.467	1.089	0.822	0.900	1.000	0.740	547.3	27.4
90	588	0.672	-0.433	1.105	0.874	0.904	1.000	0.790	624.7	28.0
95	744	0.756	-0.400	1.156	0.914	0.917	1.000	0.839	703.2	28.5
99	859	0.812	-0.373	1.185	0.938	0.925	1.000	0.868	753.1	28.8
100	862	0.813	-0.367	1.180	0.943	0.924	1.000	0.871	758.9	28.8
101	835	0.800	-0.360	1.160	0.947	0.919	1.000	0.870	756.9	28.8
105	893	0.828	-0.333	1.161	0.962	0.919	1.000	0.884	781.4	28.9
110	1009	0.880	-0.300	1.180	0.975	0.924	1.000	0.975	950.6	29.8
115	1102	0.920	-0.267	1.186	0.983	0.925	1.000	0.983	966.3	29.9
120	1194	0.957	-0.233	1.190	0.988	0.927	1.000	0.988	976.1	29.9
125	1278	0.990	-0.200	1.190	0.994	0.926	1.000	0.994	988.0	29.9
130	1377	1.028	-0.167	1.195	0.998	0.928	1.000	0.998	996.0	30.0
135	1402	1.037	-0.133	1.171	1.000	0.921	1.000	1.000	1000.0	30.0
140	1434	1.049	-0.100	1.149	0.997	0.916	1.000	0.997	994.0	30.0
145	1456	1.057	-0.067	1.124	0.987	0.909	1.000	0.897	805.2	29.1
150	1468	1.061	-0.033	1.095	0.970	0.902	1.000	0.875	764.9	28.8
155	1482	1.066	0.000	1.066	0.946	0.894	0.894	0.846	715.7	28.5
160	1482	1.066	0.033	1.033	0.922	0.886	0.886	0.817	666.7	28.2
161	1482	1.066	0.040	1.026	0.918	0.884	0.884	0.811	658.3	28.2
165	1502	1.074	0.067	1.007	0.904	0.879	0.879	0.794	631.1	28.0
170	1512	1.077	0.100	0.977	0.898	0.870	0.870	0.781	609.9	27.9
174	1509	1.076	0.127	0.949	0.902	0.861	0.861	0.776	602.9	27.8
175	1508	1.076	0.133	0.942	0.905	0.859	0.859	0.777	603.7	27.8
180	1505	1.075	0.167	0.908	0.922	0.848	0.848	0.781	610.6	27.9
185	1502	1.074	0.200	0.874	0.944	0.837	0.837	0.790	623.6	27.9
189	1497	1.072	0.227	0.845	0.958	0.827	0.827	0.793	628.3	28.0
190	1496	1.071	0.233	0.838	0.960	0.825	0.825	0.792	627.5	28.0
195	1486	1.068	0.267	0.801	0.966	0.813	0.813	0.786	617.3	27.9
200	1476	1.064	0.300	0.764	0.960	0.800	0.800	0.768	589.5	27.7
205	1473	1.063	0.333	0.730	0.944	0.787	0.787	0.743	552.0	27.4
210	1448	1.054	0.367	0.687	0.922	0.771	0.771	0.711	505.8	27.0
215	1436	1.050	0.400	0.650	0.905	0.757	0.757	0.685	469.8	26.7
220	1412	1.041	0.433	0.608	0.898	0.742	0.742	0.666	443.7	26.5
225	1392	1.033	0.467	0.567	0.904	0.725	0.725	0.656	430.0	26.3
228	1382	1.030	0.487	0.543	0.914	0.716	0.716	0.654	427.9	26.3
230	1384	1.030	0.500	0.530	0.922	0.711	0.711	0.655	429.1	26.3
233	1394	1.034	0.520	0.514	0.937	0.704	0.704	0.659	434.9	26.4
235	1384	1.030	0.533	0.497	0.946	0.697	0.697	0.659	434.6	26.4
236	1384	1.030	0.540	0.490	0.951	0.694	0.694	0.660	435.7	26.4
240	1353	1.019	0.567	0.452	0.970	0.678	0.678	0.658	433.0	26.4
245	1316	1.005	0.600	0.405	0.987	0.659	0.659	0.650	423.1	26.3
250	1285	0.993	0.567	0.426	0.997	0.668	0.668	0.666	443.3	26.5
255	1234	0.973	0.533	0.440	1.000	0.673	0.673	0.673	453.3	26.6
260	1209	0.963	0.500	0.463	0.998	0.683	0.683	0.682	464.5	26.7

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265	1183	0.953	0.467	0.486	0.994	0.692	0.692	0.688	473.5	26.8
268	1174	0.949	0.447	0.502	0.991	0.699	0.699	0.693	479.8	26.8
270	1035	0.891	0.433	0.458	0.989	0.681	0.681	0.673	453.2	26.6
273	1035	0.891	0.413	0.478	0.985	0.689	0.689	0.679	460.5	26.6
275	995	0.874	0.400	0.474	0.983	0.687	0.687	0.676	456.4	26.6
280	881	0.822	0.367	0.456	0.975	0.680	0.680	0.663	439.3	26.4
285	681	0.723	0.333	0.390	0.962	0.652	0.652	0.628	393.8	26.0
288	592	0.674	0.313	0.361	0.952	0.639	0.639	0.609	370.6	25.7
290	622	0.691	0.300	0.391	0.943	0.653	0.653	0.616	379.1	25.8
295	731	0.749	0.267	0.482	0.914	0.691	0.691	0.631	398.6	26.0
300	626	0.693	0.233	0.460	0.874	0.681	0.681	0.596	354.8	25.5
305	545	0.647	0.200	0.447	0.822	0.676	0.676	0.556	308.9	24.9
310	470	0.601	0.167	0.434	0.756	0.671	0.671	0.507	257.2	24.1
315	404	0.557	0.133	0.423	0.678	0.667	0.667	0.452	204.3	23.1
320	445	0.584	0.100	0.484	0.590	0.692	0.692	0.408	166.5	22.2
325	394	0.550	0.067	0.483	0.495	0.691	0.691	0.342	117.0	20.7
330	421	0.568	0.033	0.535	0.399	0.712	0.712	0.284	80.8	19.1
335	485	0.610	0.000	0.610	0.310	0.743	0.743	0.230	53.0	17.2
340	519	0.631	-0.033	0.664	0.237	0.763	0.763	0.181	32.7	15.1
345	496	0.617	-0.067	0.684	0.195	0.770	0.770	0.150	22.5	13.5
348	482	0.608	-0.087	0.695	0.188	0.774	0.774	0.146	21.2	13.3
350	468	0.599	-0.100	0.699	0.190	0.776	0.776	0.147	21.7	13.4
355	364	0.528	-0.133	0.662	0.211	0.762	0.762	0.161	25.8	14.1