

## **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 1239990) 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 4-bay circularly polarized full wave spaced antenna on the same site as the following:

<b>Call</b>	<b>Channel</b>	<b>Status</b>	<b>City</b>	<b>FIN</b>	<b>Licensee / Permittee</b>
KVNF	215A	LIC	PAONIA, CO	49221	NORTH FORK VALLEY PUBLIC RADIO, INC.
K257AU	257D	LIC	PAONIA, CO	73623	CCR-MONTROSE IV, LLC

See Exhibit 34-A for antennas that were specified by each licensee/permittee.

As can be seen in Exhibit 35A, the overall maximum theoretical RF value would be  $154.74\mu\text{W}/\text{cm}^2$  at a distance of 13 meters from the tower, which is 77.37% of the  $200\mu\text{W}/\text{cm}^2$  permitted for public (uncontrolled) exposure, and 15.47% 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.

## RF Analysis: HOTCHKISS, CO

NEW

258

C3

NEW

KVNF

K257AU

Site type: Application

LICENSE

LICENSE

Channel: 258

215

257

Class: C3

A

D

ERP: 25KW

2.6KW

0.250KW

EPA TYPE: 6

6

1

4BAY

4BAY

2BAY

FULL WAVE

FULL WAVE

FULL WAVE

COR AGL: 31M

31M

14M

Polarization: CIR

CIR

CIR

Distance From Tower (m)	NEW Facility	KVNF Facility	K257AU Facility	Total RF (uW/cm2)	Percent of 200uW/cm2
0	8.6914	0.9039	42.6149	52.21	26.11
1	10.9253	1.1362	44.4722	56.53	28.27
2	13.4970	1.4037	48.3474	63.25	31.62
3	17.3019	1.7994	50.6415	69.74	34.87
4	24.5427	2.5524	50.5219	77.62	38.81
5	33.2157	3.4544	49.1772	85.85	42.92
6	45.6229	4.7448	47.6777	98.05	49.02
7	61.8718	6.4347	44.5670	112.87	56.44
8	79.2003	8.2368	40.0670	127.50	63.75
9	92.5986	9.6303	35.6536	137.88	68.94
10	102.9468	10.7065	30.7857	144.44	72.22
11	111.2717	11.5723	25.3608	148.20	74.10
12	119.5748	12.4358	20.4353	152.45	76.22
13	125.5454	13.0567	16.1394	154.74	77.37
14	127.6274	13.2733	12.4295	153.33	76.67
15	125.3253	13.0338	9.2121	147.57	73.79
16	118.8638	12.3618	6.6346	137.86	68.93
17	108.9183	11.3275	4.7078	124.95	62.48
18	96.1569	10.0003	3.3246	109.48	54.74
19	81.3094	8.4562	2.2113	91.98	45.99
20	65.6947	6.8322	1.3567	73.88	36.94
21	50.3143	5.2327	0.7124	56.26	28.13
22	36.0536	3.7496	0.3061	40.11	20.05
23	23.6614	2.4608	0.0846	26.21	13.10
24	13.7261	1.4275	0.0030	15.16	7.58
25	6.5083	0.6769	0.0247	7.21	3.60
26	2.0339	0.2115	0.1206	2.37	1.18
27	0.1221	0.0127	0.2681	0.40	0.20
28	0.4268	0.0444	0.4492	0.92	0.46
29	2.4616	0.2560	0.6498	3.37	1.68
30	5.7004	0.5928	0.8595	7.15	3.58
31	9.6254	1.0010	1.0599	11.69	5.84
32	13.7627	1.4313	1.2521	16.45	8.22
33	17.7114	1.8420	1.4326	20.99	10.49
34	21.1575	2.2004	1.5994	24.96	12.48
35	23.8805	2.4836	1.7511	28.12	14.06
36	25.7510	2.6781	1.8874	30.32	15.16
37	26.7180	2.7787	2.0084	31.51	15.75
38	26.7538	2.7824	2.1145	31.65	15.83
39	25.9929	2.7033	2.2067	30.90	15.45
40	24.5533	2.5535	2.2858	29.39	14.70
41	22.5756	2.3479	2.3525	27.28	13.64
42	20.2101	2.1018	2.4079	24.72	12.36
43	17.6057	1.8310	2.4527	21.89	10.94
44	14.9022	1.5498	2.4881	18.94	9.47
45	12.2166	1.2705	2.5148	16.00	8.00

Distance From Tower (m)	NEW Facility	KVNF Facility	K257AU Facility	Total RF (uW/cm2)	Percent of 200uW/cm2
46	9.6624	1.0049	2.5337	13.20	6.60
47	7.3265	0.7620	2.5457	10.63	5.32
48	5.2710	0.5482	2.5514	8.37	4.19
49	3.5380	0.3680	2.5517	6.46	3.23
50	2.1508	0.2237	2.5470	4.92	2.46
51	1.1165	0.1161	2.5380	3.77	1.89
52	0.4286	0.0446	2.5252	3.00	1.50
53	0.0695	0.0072	2.5153	2.59	1.30
54	0.0130	0.0014	2.5042	2.52	1.26
55	0.2263	0.0235	2.4901	2.74	1.37
56	0.6712	0.0698	2.4735	3.21	1.61
57	1.3081	0.1360	2.4547	3.90	1.95
58	2.0976	0.2182	2.4339	4.75	2.37
59	3.0017	0.3122	2.4114	5.73	2.86
60	3.9846	0.4144	2.3875	6.79	3.39
61	5.0135	0.5214	2.3623	7.90	3.95
62	6.0588	0.6301	2.3361	9.03	4.51
63	7.0948	0.7379	2.3089	10.14	5.07
64	8.0991	0.8423	2.2811	11.22	5.61
65	9.0533	0.9415	2.2526	12.25	6.12
66	9.9422	1.0340	2.2237	13.20	6.60
67	10.7665	1.1197	2.1944	14.08	7.04
68	11.5185	1.1979	2.1649	14.88	7.44
69	12.1804	1.2668	2.1352	15.58	7.79
70	12.7481	1.3258	2.1054	16.18	8.09
71	13.2194	1.3748	2.0756	16.67	8.33
72	13.5940	1.4138	2.0458	17.05	8.53
73	13.8732	1.4428	2.0161	17.33	8.67
74	14.0597	1.4622	1.9866	17.51	8.75
75	14.1575	1.4724	1.9572	17.59	8.79
76	14.1710	1.4738	1.9281	17.57	8.79
77	14.1057	1.4670	1.8992	17.47	8.74
78	13.9675	1.4526	1.8706	17.29	8.65
79	13.7625	1.4313	1.8423	17.04	8.52
80	13.4971	1.4037	1.8136	16.71	8.36
81	13.1777	1.3705	1.7848	16.33	8.17
82	12.8108	1.3323	1.7565	15.90	7.95
83	12.4027	1.2899	1.7285	15.42	7.71
84	11.9595	1.2438	1.7010	14.90	7.45
85	11.4871	1.1947	1.6740	14.36	7.18
86	10.9783	1.1417	1.6474	13.77	6.88
87	10.4503	1.0868	1.6212	13.16	6.58
88	9.9107	1.0307	1.5955	12.54	6.27
89	9.3643	0.9739	1.5702	11.91	5.95
90	8.8152	0.9168	1.5454	11.28	5.64
91	8.2672	0.8598	1.5211	10.65	5.32
92	7.7239	0.8033	1.4971	10.02	5.01
93	7.1882	0.7476	1.4737	9.41	4.70
94	6.6631	0.6930	1.4506	8.81	4.40
95	6.1509	0.6397	1.4280	8.22	4.11
96	5.6536	0.5880	1.4058	7.65	3.82
97	5.1733	0.5380	1.3840	7.10	3.55
98	4.7114	0.4900	1.3627	6.56	3.28
99	4.2691	0.4440	1.3417	6.05	3.03
100	3.8476	0.4002	1.3212	5.57	2.78