AAM Study 3:
Current FM Spectrum,
Current CVO Localizer

Airspace Analysis Model, Version 5.0

Airspace Case:
Site:
Date: 11/29/06

Facility Identifier: CVO
Facility Frequency: 111.900 MHz

Facility Latitude: 44° 29' 02"
Facility Longitude: 123° 17' 40"

Runway Heading: 187.0 deg (true)
Runway Elevation: 243 ft MSL
Runway Length: 5900 ft

Prop ID	Call	Freq MHz	Latitude	Longitude	ERP kW	Height ft MSL	Range nmi	Radial true	Lic
1	KWVA	88.100	44 02 40	123 04 39	0.5000	561	27.97	340.53	LIC
2	KGRI	88.100	44 28 59	122 34 55	0.0043	3993	30.50	270.09	LIC
3	NEWx	88.300	44 45 22	124 02 57	0.0100	1066	36.13	116.87	APP
4	9908	88.300	44 45 25	124 02 50	0.0003	1111	36.08	117.00	APP
5	K203	88.500	44 00 04	123 06 23	0.0005	1111	30.07	344.41	LIC
6	KPIJ	88.500	44 16 48	123 34 57	0.6300	3461	17.38	45.28	CP
7	9807	88.500	44 53 08	124 00 51	0.1000	364	39.03	128.13	CP
8	KBVR	88.700	44 33 50	123 16 30	0.3400	381	4.87	189.83	LIC
9	K204	88.700	44 38 40	124 00 52	0.0015	1111	32.25	107.38	LIC
10	KQFE	88.900	44 00 11	123 06 48	1.2500	1604	29.88	344.90	LIC
11	KYOR	88.900	44 45 23	124 02 59	0.0400	1148	36.16	116.88	LIC
12	K207	89.300	44 45 23	124 02 40	0.0005	1111	35.96	117.04	LIC
13	KOGL	89.300	44 53 08	124 00 51	0.2100	371	39.03	128.13	CP
14	KLCC	89.700	44 00 05	123 06 48	81.0000	1791	29.98	344.95	LIC
15	K210	89.900	44 40 34	124 02 31	0.0500	755	33.96	109.85	LIC
16	KAJC	90.100	44 45 33	123 13 34	0.5600	492	16.77	190.02	LIC
17	KAJC	90.100	44 45 33	123 13 34	1.0000	492	16.77	190.02	APP
18	K212	90.300	44 00 08	123 06 50	0.0005	1111	29.92	344.97	LIC
19	K212	90.300	44 38 46	123 16 11	0.0003	1111	9.79	186.20	LIC
20	KWBX	90.300	44 52 57	122 57 34	0.0035	1111	27.86	210.86	LIC
21	KSLC	90.300	45 12 06	123 11 52	0.3200	240	43.26	185.45	LIC
22	KLCO	90.500	44 45 24	124 02 50	3.0000	1109	36.08	116.98	LIC
23	K214	90.700	44 11 46	122 59 10	0.0100	3330	21.75	322.54	CP
24	K214	90.700	44 11 47	122 59 12	0.0003	1111	21.73	322.56	LIC
25	KWAX	91.100	44 00 04	123 06 45	21.5000	1844	30.00	344.89	LIC
26	K217	91.300	44 41 00	122 46 54	0.0008	1111	24.97	241.36	CP
27	K217	91.300	44 41 00	122 46 54	111.1111	1263	24.97	241.36	LIC
28	K219	91.700	44 53 08	124 00 51	0.2100	364	39.03	128.13	LIC
29	KRVM	91.900	44 00 08	123 06 50	1.1000	1398	29.92	344.97	LIC
30	K220	91.900	44 38 40	124 00 52	0.0900	699	32.25	107.38	LIC
31	KHRB	92.300	44 16 21	123 10 15	111.1111	348	13.75	337.32	LIC
32	NEWx	92.500	44 33 32	123 07 31	0.1600	335	8.52	238.13	APP
33	K224	92.700	44 03 34	122 59 16	0.1700	810	28.67	332.65	CP
34	NEWx	92.700	44 38 45	123 16 13	0.0100	1519	9.77	186.07	APP
35	DKCL	92.700	44 45 22	124 02 54	111.1111	1111	36.10	116.90	USE
36	KNCU	92.700	44 45 22	124 02 57	3.8000	1109	36.13	116.87	LIC
37	KKNU	93.300	44 00 04	123 06 45	100.0000	1926	30.00	344.89	LIC
38	NEWx	93.500	44 00 07	123 06 53	0.0200	1621	29.93	345.04	APP
39	NEWx	93.500	44 11 53	122 59 07	0.0003	1111	21.68	322.28	APP
40	K228	93.500	44 51 18	123 07 15	0.0200	1280	23.47	198.40	LIC
41	KSHY	94.300	44 38 44	124 01 33	111.1111	420	32.74	107.24	LIC
42	KPIE	94.300	44 52 54	123 24 06	111.1111	771	24.30	169.15	LIC
43	KMGE	94.500	44 00 04	123 06 45	49.0000	1929	30.00	344.89	LIC
44	NEWx	94.500	44 58 57	123 00 17	0.0063	1111	32.36	202.43	APP

45	K235	94.900	44	00	08	123	06	50	0.0200	1440	29.92	344.97	LIC
46	K235	94.900	44	00	08	123	06	50	0.1000	1447	29.92	344.97	CP
47	KRAD	94.900	44	39	03	123	00	59	111.1111	525	15.54	229.88	LIC
48	KSND	95.100	44	45	24	124	02	53	0.0075	1111	36.11	116.95	CP
49	KSND	95.100	44	53	19	123	36	26	0.9000	3350	27.71	151.21	CP
50	KSND	95.100	44	53	19	123	36	26	1.0000	3304	27.71	151.21	LIC
51	NEWx	95.100	44	58	59	123	08	39	0.0005	1111	30.63	192.07	APP
52	KUJZ	95.300	44	00	04	123	06	45	0.6300	1864	30.00	344.89	LIC
53	NEWx	95.700	44	00	08	123	06	50	0.0200	1457	29.92	344.97	APP
54	NEWx	95.700	44	03	10	123	06	37	0.0800	515	27.05	342.99	APP
55	NEWx	95.700	44	33	56	123	20	02	0.0800	794	5.18	161.00	APP
56	NEWx	95.700	44	38	12	124	01	36	0.0025	1111	32.62	106.32	APP
57	NEWx	95.900	44	37	52	124	02	57	0.2500	118	33.45	105.31	APP
58	KZEL	96.100	44	00	05	123	06	48	100.0000	1722	29.98	344.95	LIC
59	K242	96.300	44	56	33	123	02	01	0.2500	276	29.68	202.01	LIC
60	KPCN	96.300	45	08	29	122	51	21	111.1111	397	43.64	205.33	CP
61	NEWx	96.300	45	08	29	122	51	21	111.1111	1111	43.64	205.33	APP
62	NEWx	96.300	45	08	31	122	51	13	111.1111	318	43.72	205.42	CP
63	KKJC	96.300	45	09	39	123	09	14	111.1111	259	41.05	188.38	LIC
64	K243	96.500	44	38	25	123	16	25	0.2500	1486	9.43	185.42	LIC
65	KCRF	96.700	44	45	22	124	02	57	19.5000	1152	36.13	116.87	LIC
66	K245	96.900	44	00	11	123	06	48	0.0063	1111	29.88	344.90	LIC
67	KSHL	97.500	44	45	22	124	02	57	17.0000	1112	36.13	116.87	LIC
68	KSHL	97.500	44	45	24	124	02	53	14.0000	1106	36.11	116.95	CP
69	NEWx	97.700	44	51	18	123	07	15	0.0200	1243	23.47	198.40	APP
70	KNRQ	97.900	44	00	08	123	06	50	100.0000	1640	29.92	344.97	LIC
71	NEWx	97.900	45	00	00	122	41	37	0.2500	1427	40.18	219.59	APP
72	K252	98.300	44	04	00	123	37	42	0.0003	1111	28.85	29.81	LIC
73	NEWx	98.300	44	45	24	124	02	50	0.0300	1148	36.08	116.98	APP
74	NEWx	98.300	44	45	24	124	02	53	0.0300	1079	36.11	116.95	APP
75	K253	98.500	44	26	34	124	04	12	0.2500	312	33.30	85.75	CP
76	KWPB	98.700	44	38	57	124	03	08	111.1111	187	33.88	107.02	LIC
77	KODZ	99.100	44	06	56	122	59	56	100.0000	2421	25.49	330.13	LIC
78	K258	99.500	44	06	58	122	59	50	0.0100	2205	25.49	329.96	LIC
79	KRKT	99.900	44	38	46	123	16	11	100.0000	1581	9.79	186.20	LIC
80	K263	100.500	44	24	52	122	44	22	0.2500	863	24.13	279.94	LIC
81	K264	100.700	44	38	45	123	16	13	0.0200	1598	9.77	186.07	LIC
82	KPPT	100.700	44	45	23	124	03	01	17.5000	1076	36.18	116.86	LIC
83	K265	100.900	44	00	07	123	06	53	0.0005	1111	29.93	345.04	LIC
84	KFLY	101.500	44	17	28	123	32	18	27.5000	3406	15.59	42.12	LIC
85	K270	101.900	44	11	53	122	59	07	0.0003	1111	21.68	322.28	CP
86	KEHK	102.300	44	00	08	123	06	50	100.0000	1568	29.92	344.97	LIC
87	KYTE	102.700	44	45	22	124	02	57	65.0000	1152	36.13	116.87	LIC
88	K274	102.700	44	51	14	123	07	22	0.2500	1207	23.38	198.26	CP
89	K275	102.900	44	02	01	123	00	25	0.0010	1111	29.71	335.43	LIC
90	KPIK	102.900	44	41	00	122	46	54	111.1111	1276	24.97	241.36	LIC
91	K276	103.100	44	38	24	123	16	25	0.0200	1552	9.41	185.43	LIC
92	K276	103.100	44	45	25	124	02	50	0.0005	1111	36.08	117.00	CP
93	NEWx	103.300	44	02	48	123	07	49	0.2500	505	27.17	344.95	APP
94	KXPC	103.700	44	34	49	122	30	07	90.0000	4380	34.39	260.32	LIC
95	NEWx	104.100	44	19	20	123	19	05	0.0600	925	9.75	5.96	APP
96	NEWx	104.100	44	40	34	124	02	31	0.0400	830	33.96	109.85	APP
97	NEWx	104.300	44	00	08	123	06	50	0.0200	1457	29.92	344.97	APP
98	NEWx	104.300	44	33	49	123	14	37	0.2500	443	5.25	204.44	APP
99	NEWx	104.300	44	33	56	123	20	02	0.0800	794	5.18	161.00	APP
100	NEWx	104.300	44	38	12	124	01	36	0.0025	1111	32.62	106.32	APP
101	NEWx	104.300	44	39	17	123	00	53	0.0800	820	15.75	229.39	APP
102	NEWx	104.300	44	40	34	124	02	31	0.0400	830	33.96	109.85	APP
103	KDUK	104.700	44	17	35	123	32	15	62.0000	3406	15.48	42.31	LIC
104	KEUG	105.500	44	00	11	123	06	48	2.8000	1650	29.88	344.90	LIC
105	K288	105.500	44	52	30	123	59	00	0.0500	984	37.61	128.61	LIC
106	K288	105.500	44	58	22	123	08	18	0.0005	1111	30.08	192.78	CP
107	K290	105.900	44	29	02	122	34	55	0.0500	4029	30.50	270.00	LIC
108	KLOO	106.300	44	33	25	123	16	22	27.5000	335	4.48	191.94	LIC
109	KLOO	106.300	44	38	45	123	16	13	100.0000	1640	9.77	186.07	LIC

AAM Study 4:
Proposed FM Spectrum,
Current EUG Localizer

FM PROPOSED CHANGES:

1) Change KNRQ frequency from 97.9 to 107.9 MHz
2) Change KHPE frequency from 107.9 to 103.7 MHz
3) Delete KXPC from database as it moves 142 miles SE of current site.

Airspace Analysis Model, Version 5.0

Airspace Case:
Site:
Date: 11/29/06

Facility Identifier: EUG
Facility Frequency: 109.500 MHz

Facility Latitude: 44° 06' 34"
Facility Longitude: 123° 13' 08"

Runway Heading: 180.0 deg (true)
Runway Elevation: 364 ft MSL
Runway Length: 8009 ft

Prop ID	Call	Freq MHz	Latitude	Longitude	ERP kW	Height ft MSL	Range nmi	Radial true	Lic
1	KWVA	88.100	44 02 40	123 04 39	0.5000	561	7.24	302.62	LIC
2	KGRI	88.100	44 28 59	122 34 55	0.0043	3993	35.37	230.66	LIC
3	NEWx	88.300	43 46 38	123 02 33	0.0300	1509	21.34	339.08	APP
4	K203	88.500	44 00 04	123 06 23	0.0005	1111	8.11	323.27	LIC
5	KPIJ	88.500	44 16 48	123 34 57	0.6300	3461	18.69	123.19	CP
6	KBVR	88.700	44 33 50	123 16 30	0.3400	381	27.37	174.95	LIC
7	KQFE	88.900	44 00 11	123 06 48	1.2500	1604	7.84	324.51	LIC
8	KLCC	89.700	44 00 05	123 06 48	81.0000	1791	7.92	324.93	LIC
9	K211	90.100	44 07 28	124 00 41	0.1000	2133	34.15	91.51	LIC
10	KAJC	90.100	44 45 33	123 13 34	0.5600	492	38.98	179.55	LIC
11	KAJC	90.100	44 45 33	123 13 34	1.0000	492	38.98	179.55	APP
12	K212	90.300	44 00 08	123 06 50	0.0005	1111	7.87	324.86	LIC
13	K212	90.300	44 38 46	123 16 11	0.0003	1111	32.27	176.13	LIC
14	KWBX	90.300	44 52 57	122 57 34	0.0035	1111	47.69	193.46	LIC
15	K214	90.700	44 11 46	122 59 10	0.0100	3330	11.29	242.57	CP
16	K214	90.700	44 11 47	122 59 12	0.0003	1111	11.28	242.44	LIC
17	KWAX	91.100	44 00 04	123 06 45	21.5000	1844	7.96	324.79	LIC
18	K217	91.300	44 41 00	122 46 54	0.0008	1111	39.20	208.56	CP
19	K217	91.300	44 41 00	122 46 54	111.1111	1263	39.20	208.56	LIC
20	K218	91.500	43 46 38	123 02 33	0.0800	1480	21.34	339.08	LIC
21	KRVM	91.900	44 00 08	123 06 50	1.1000	1398	7.87	324.86	LIC
22	KHRB	92.300	44 16 21	123 10 15	111.1111	348	10.00	191.93	LIC
23	K223	92.500	43 46 38	123 02 33	0.2500	1545	21.34	339.08	LIC
24	K223	92.500	43 46 41	123 02 32	0.2300	1575	21.30	339.00	CP
25	NEWx	92.500	44 33 32	123 07 31	0.1600	335	27.26	188.47	APP
26	K224	92.700	44 03 34	122 59 16	0.1700	810	10.40	286.76	CP
27	NEWx	92.700	44 38 45	123 16 13	0.0100	1519	32.26	176.08	APP
28	KKNU	93.300	44 00 04	123 06 45	100.0000	1926	7.96	324.79	LIC
29	NEWx	93.500	44 00 07	123 06 53	0.0200	1621	7.86	325.15	APP
30	NEWx	93.500	44 11 53	122 59 07	0.0003	1111	11.38	242.14	APP
31	K228	93.500	44 51 18	123 07 15	0.0200	1280	44.93	185.36	LIC
32	K230	93.900	43 46 38	123 02 33	0.2500	1575	21.34	339.08	LIC
33	KPIE	94.300	44 52 54	123 24 06	111.1111	771	46.99	170.42	LIC
34	KMGE	94.500	44 00 04	123 06 45	49.0000	1929	7.96	324.79	LIC
35	K235	94.900	44 00 08	123 06 50	0.0200	1440	7.87	324.86	LIC
36	K235	94.900	44 00 08	123 06 50	0.1000	1447	7.87	324.86	CP

	37	KRAD	94.900	44	39	03	123	00	59	111.1111	525	33.62	194.97	LIC
	38	KUJZ	95.300	44	00	04	123	06	45	0.6300	1864	7.96	324.79	LIC
	39	NEWx	95.700	44	00	08	123	06	50	0.0200	1457	7.87	324.86	APP
	40	NEWx	95.700	44	03	10	123	06	37	0.0800	515	5.79	305.99	APP
	41	NEWx	95.700	44	33	56	123	20	02	0.0800	794	27.81	169.78	APP
	42	KZEL	96.100	44	00	05	123	06	48	100.0000	1722	7.92	324.93	LIC
	43	K243	96.500	44	38	25	123	16	25	0.2500	1486	31.94	175.79	LIC
	44	K244	96.700	43	46	38	123	02	33	0.2500	1509	21.34	339.08	LIC
	45	K245	96.900	44	00	11	123	06	48	0.0063	1111	7.84	324.51	LIC
	46	K248	97.500	43	46	41	123	02	33	0.2500	1568	21.29	339.03	LIC
	47	NEWx	97.700	44	51	18	123	07	15	0.0200	1243	44.93	185.36	APP
	48	K252	98.300	44	04	00	123	37	42	0.0003	1111	17.83	81.72	LIC
	49	KODZ	99.100	44	06	56	122	59	56	100.0000	2421	9.48	267.78	LIC
	50	K258	99.500	44	06	58	122	59	50	0.0100	2205	9.56	267.60	LIC
	51	KRKT	99.900	44	38	46	123	16	11	100.0000	1581	32.27	176.13	LIC
	52	KDPM	100.500	43	44	41	123	05	29	6.0000	1211	22.57	345.87	LIC
	53	KDPM	100.500	43	45	40	123	02	07	10.5000	1742	22.35	339.21	CP
	54	K263	100.500	44	24	52	122	44	22	0.2500	863	27.56	228.39	LIC
	55	K264	100.700	44	38	45	123	16	13	0.0200	1598	32.26	176.08	LIC
	56	K265	100.900	44	00	07	123	06	53	0.0005	1111	7.86	325.15	LIC
	57	KFLY	101.500	44	17	28	123	32	18	27.5000	3406	17.54	128.42	LIC
	58	K270	101.900	44	11	53	122	59	07	0.0003	1111	11.38	242.14	CP
	59	KEHK	102.300	44	00	08	123	06	50	100.0000	1568	7.87	324.86	LIC
	60	K274	102.700	44	51	14	123	07	22	0.2500	1207	44.86	185.26	CP
	61	K275	102.900	44	02	01	123	00	25	0.0010	1111	10.21	296.47	LIC
	62	KPIK	102.900	44	41	00	122	46	54	111.1111	1276	39.20	208.56	LIC
	63	K276	103.100	44	38	24	123	16	25	0.0200	1552	31.92	175.78	LIC
	64	NEWx	103.300	43	46	41	123	02	33	0.1000	1516	21.29	339.03	APP
	65	NEWx	103.300	44	02	48	123	07	49	0.2500	505	5.36	314.60	APP
*	66	KHPE	103.700	44	38	46	123	16	11	100.0000	1660	32.27	176.13	LIC
	67	NEWx	104.100	44	19	20	123	19	05	0.0600	925	13.46	161.53	APP
	68	NEWx	104.300	44	00	08	123	06	50	0.0200	1457	7.87	324.86	APP
	69	NEWx	104.300	44	33	49	123	14	37	0.2500	443	27.27	177.77	APP
	70	NEWx	104.300	44	33	56	123	20	02	0.0800	794	27.81	169.78	APP
	71	NEWx	104.300	44	39	17	123	00	53	0.0800	820	33.87	194.98	APP
	72	KDUK	104.700	44	17	35	123	32	15	62.0000	3406	17.58	128.79	LIC
	73	KEUG	105.500	44	00	11	123	06	48	2.8000	1650	7.84	324.51	LIC
	74	K290	105.900	44	29	02	122	34	55	0.0500	4029	35.40	230.60	LIC
	75	KLOO	106.300	44	33	25	123	16	22	27.5000	335	26.95	175.08	LIC
	76	KLOO	106.300	44	38	45	123	16	13	100.0000	1640	32.26	176.08	LIC
	77	KSOW	106.700	43	45	06	123	04	29	0.1000	804	22.35	343.82	LIC
	78	KLVU	107.100	44	28	59	122	34	55	9.6000	4085	35.37	230.66	LIC
	79	K297	107.300	44	11	46	122	59	10	0.1000	3317	11.29	242.57	CP
*	80	KNRQ	107.900	44	00	08	123	06	50	100.0000	1640	7.87	324.86	LIC
	81	VEUG	112.900	44	07	15	123	13	22	0.1500	380	0.70	166.22	VOR
	82	VCVO	115.400	44	29	58	123	17	37	0.1500	265	23.62	172.19	VOR

Interference thresholds are computed using the following:

Facility antenna type: ILS Default (no array type specified)
Service volume type: ILS, U.S. Standard

Evaluation of adjacent channel (A2) and overload (B2) interference

Freq MHz	ID	Call	Type	Offset MHz	#Pts
107.900	80	KNRQ	A2/B2	1.600	26

Evaluation of 2-signal intermodulation interference

Freq1 MHz	ID	Call	Freq2 MHz	ID	Call	IMod MHz	Offset kHz	#Pts	
107.90	80	KNRQ	106.30	76	KLOO	109.500	0	3357	
107.90	80	KNRQ	106.30	75	KLOO	109.500	0	2994	(see Note 1)

Evaluation of 3-signal intermodulation interference

Freq1 MHz	ID	Call	Freq2 MHz	ID	Call	Freq3 MHz	ID	Call	IMod MHz	Offset kHz	#Pts	
107.90	80	KNRQ	107.10	78	KLVU	105.50	73	KEUG	109.500	0	27	
107.90	80	KNRQ	106.30	76	KLOO	104.70	72	KDUK	109.500	0	2551	
107.90	80	KNRQ	106.30	75	KLOO	104.70	72	KDUK	109.500	0	2012	(see Note 2)

Note: Some 3-signal points masked by adjacent-channel / overload interference.

Note 1: Entry 75 KLOO represents that stations' Auxiliary (backup) facilities. This emitter will only operate when the main emitter (Entry 76 KLOO) is not operational. Therefore, only one occurence of 2-signal intermodulation interference is expected to occur at any one time.

Note 2: Entry 75 KLOO represents that stations' Auxiliary (backup) facilities. This emitter will only operate when the main emitter (Entry 76 KLOO) is not operational. Therefore, only one occurence of 3-signal intermodulation interference involving KLOO is expected to occur at any one time.

AAM Study 5:
Proposed FM Spectrum,
Current ADE Localizer

FM PROPOSED CHANGES:

1) Change KNRQ frequency from 97.9 to 107.9 MHz
2) Change KHPE frequency from 107.9 to 103.7 MHz
3) Delete KXPC from database as it moves 142 miles SE of current site.

Airspace Analysis Model, Version 5.0

Airspace Case:
Site:
Date: 11/29/06

Facility Identifier: ADE
Facility Frequency: 110.350 MHz

Facility Latitude: 44° 06' 43"
Facility Longitude: 123° 12' 11"

Runway Heading: 181.0 deg (true)
Runway Elevation: 361 ft MSL
Runway Length: 6000 ft

Prop ID	Call	Freq MHz	Latitude	Longitude	ERP kW	Height ft MSL	Range nmi	Radial true	Lic
1	KWVA	88.100	44 02 40	123 04 39	0.5000	561	6.76	306.81	LIC
2	KGRI	88.100	44 28 59	122 34 55	0.0043	3993	34.75	230.14	LIC
3	NEWx	88.300	43 46 38	123 02 33	0.0300	1509	21.25	340.95	APP
4	K203	88.500	44 00 04	123 06 23	0.0005	1111	7.85	327.92	LIC
5	KPIJ	88.500	44 16 48	123 34 57	0.6300	3461	19.19	121.71	CP
6	KBVR	88.700	44 33 50	123 16 30	0.3400	381	27.29	173.50	LIC
7	KQFE	88.900	44 00 11	123 06 48	1.2500	1604	7.59	329.37	LIC
8	KLCC	89.700	44 00 05	123 06 48	81.0000	1791	7.68	329.75	LIC
9	K211	90.100	44 07 28	124 00 41	0.1000	2133	34.83	91.23	LIC
10	KAJC	90.100	44 45 33	123 13 34	0.5600	492	38.85	178.54	LIC
11	KAJC	90.100	44 45 33	123 13 34	1.0000	492	38.85	178.54	APP
12	K212	90.300	44 00 08	123 06 50	0.0005	1111	7.62	329.71	LIC
13	K212	90.300	44 38 46	123 16 11	0.0003	1111	32.18	174.90	LIC
14	KWBX	90.300	44 52 57	122 57 34	0.0035	1111	47.39	192.71	LIC
15	K214	90.700	44 11 46	122 59 10	0.0100	3330	10.62	241.60	CP
16	K214	90.700	44 11 47	122 59 12	0.0003	1111	10.60	241.46	LIC
17	KWAX	91.100	44 00 04	123 06 45	21.5000	1844	7.71	329.58	LIC
18	K217	91.300	44 41 00	122 46 54	0.0008	1111	38.75	207.79	CP
19	K217	91.300	44 41 00	122 46 54	111.1111	1263	38.75	207.79	LIC
20	K218	91.500	43 46 38	123 02 33	0.0800	1480	21.25	340.95	LIC
21	KRVM	91.900	44 00 08	123 06 50	1.1000	1398	7.62	329.71	LIC
22	KHRB	92.300	44 16 21	123 10 15	111.1111	348	9.73	188.19	LIC
23	K223	92.500	43 46 38	123 02 33	0.2500	1545	21.25	340.95	LIC
24	K223	92.500	43 46 41	123 02 32	0.2300	1575	21.20	340.87	CP
25	NEWx	92.500	44 33 32	123 07 31	0.1600	335	27.02	187.10	APP
26	K224	92.700	44 03 34	122 59 16	0.1700	810	9.80	288.75	CP
27	NEWx	92.700	44 38 45	123 16 13	0.0100	1519	32.16	174.86	APP
28	KKNU	93.300	44 00 04	123 06 45	100.0000	1926	7.71	329.58	LIC
29	NEWx	93.500	44 00 07	123 06 53	0.0200	1621	7.62	330.01	APP
30	NEWx	93.500	44 11 53	122 59 07	0.0003	1111	10.70	241.14	APP
31	K228	93.500	44 51 18	123 07 15	0.0200	1280	44.72	184.51	LIC
32	K230	93.900	43 46 38	123 02 33	0.2500	1575	21.25	340.95	LIC
33	KPIE	94.300	44 52 54	123 24 06	111.1111	771	46.96	169.57	LIC
34	KMGE	94.500	44 00 04	123 06 45	49.0000	1929	7.71	329.58	LIC
35	K235	94.900	44 00 08	123 06 50	0.0200	1440	7.62	329.71	LIC
36	K235	94.900	44 00 08	123 06 50	0.1000	1447	7.62	329.71	CP
37	KRAD	94.900	44 39 03	123 00 59	111.1111	525	33.31	193.91	LIC

	38	KUJZ	95.300	44	00	04	123	06	45	0.6300	1864	7.71	329.58	LIC
	39	NEWx	95.700	44	00	08	123	06	50	0.0200	1457	7.62	329.71	APP
	40	NEWx	95.700	44	03	10	123	06	37	0.0800	515	5.35	311.60	APP
	41	NEWx	95.700	44	33	56	123	20	02	0.0800	794	27.79	168.34	APP
	42	KZEL	96.100	44	00	05	123	06	48	100.0000	1722	7.68	329.75	LIC
	43	K243	96.500	44	38	25	123	16	25	0.2500	1486	31.84	174.55	LIC
	44	K244	96.700	43	46	38	123	02	33	0.2500	1509	21.25	340.95	LIC
	45	K245	96.900	44	00	11	123	06	48	0.0063	1111	7.59	329.37	LIC
	46	K248	97.500	43	46	41	123	02	33	0.2500	1568	21.20	340.90	LIC
	47	NEWx	97.700	44	51	18	123	07	15	0.0200	1243	44.72	184.51	APP
	48	K252	98.300	44	04	00	123	37	42	0.0003	1111	18.53	81.57	LIC
	49	KODZ	99.100	44	06	56	122	59	56	100.0000	2421	8.80	268.59	LIC
	50	K258	99.500	44	06	58	122	59	50	0.0100	2205	8.87	268.39	LIC
	51	KRKT	99.900	44	38	46	123	16	11	100.0000	1581	32.18	174.90	LIC
	52	KDPM	100.500	43	44	41	123	05	29	6.0000	1211	22.56	347.65	LIC
	53	KDPM	100.500	43	45	40	123	02	07	10.5000	1742	22.26	341.00	CP
	54	K263	100.500	44	24	52	122	44	22	0.2500	863	26.95	227.66	LIC
	55	K264	100.700	44	38	45	123	16	13	0.0200	1598	32.16	174.86	LIC
	56	K265	100.900	44	00	07	123	06	53	0.0005	1111	7.62	330.01	LIC
	57	KFLY	101.500	44	17	28	123	32	18	27.5000	3406	17.99	126.70	LIC
	58	K270	101.900	44	11	53	122	59	07	0.0003	1111	10.70	241.14	CP
	59	KEHK	102.300	44	00	08	123	06	50	100.0000	1568	7.62	329.71	LIC
	60	K274	102.700	44	51	14	123	07	22	0.2500	1207	44.65	184.41	CP
	61	K275	102.900	44	02	01	123	00	25	0.0010	1111	9.67	299.07	LIC
	62	KPIK	102.900	44	41	00	122	46	54	111.1111	1276	38.75	207.79	LIC
	63	K276	103.100	44	38	24	123	16	25	0.0200	1552	31.83	174.54	LIC
	64	NEWx	103.300	43	46	41	123	02	33	0.1000	1516	21.20	340.90	APP
	65	NEWx	103.300	44	02	48	123	07	49	0.2500	505	5.02	321.31	APP
*	66	KHPE	103.700	44	38	46	123	16	11	100.0000	1660	32.18	174.90	LIC
	67	NEWx	104.100	44	19	20	123	19	05	0.0600	925	13.55	158.60	APP
	68	NEWx	104.300	44	00	08	123	06	50	0.0200	1457	7.62	329.71	APP
	69	NEWx	104.300	44	33	49	123	14	37	0.2500	443	27.16	176.33	APP
	70	NEWx	104.300	44	33	56	123	20	02	0.0800	794	27.79	168.34	APP
	71	NEWx	104.300	44	39	17	123	00	53	0.0800	820	33.55	193.93	APP
	72	KDUK	104.700	44	17	35	123	32	15	62.0000	3406	18.03	127.07	LIC
	73	KEUG	105.500	44	00	11	123	06	48	2.8000	1650	7.59	329.37	LIC
	74	K290	105.900	44	29	02	122	34	55	0.0500	4029	34.78	230.08	LIC
	75	KLOO	106.300	44	33	25	123	16	22	27.5000	335	26.87	173.61	LIC
	76	KLOO	106.300	44	38	45	123	16	13	100.0000	1640	32.16	174.86	LIC
	77	KSOW	106.700	43	45	06	123	04	29	0.1000	804	22.32	345.61	LIC
	78	KLVU	107.100	44	28	59	122	34	55	9.6000	4085	34.75	230.14	LIC
	79	K297	107.300	44	11	46	122	59	10	0.1000	3317	10.62	241.60	CP
*	80	KNRQ	107.900	44	00	08	123	06	50	100.0000	1640	7.62	329.71	LIC
	81	VEUG	112.900	44	07	15	123	13	22	0.1500	380	1.00	122.12	VOR
	82	VCVO	115.400	44	29	58	123	17	37	0.1500	265	23.57	170.51	VOR

Interference thresholds are computed using the following:

Facility antenna type: ILS Default (no array type specified)
Service volume type: ILS, U.S. Standard

Evaluation of adjacent channel (A2) and overload (B2) interference

No A2/B2 interference found.

Evaluation of 2-signal intermodulation interference

Freq1 MHz	ID	Call	Freq2 MHz	ID	Call	IMod MHz	Offset kHz	#Pts
107.90	80	KNRQ	105.50	73	KEUG	110.300	50	28

Evaluation of 3-signal intermodulation interference

Freq1 MHz	ID	Call	Freq2 MHz	ID	Call	Freq3 MHz	ID	Call	IMod MHz	Offset kHz	#Pts
107.90	80	KNRQ	104.70	72	KDUK	102.30	59	KEHK	110.300	50	10

AAM Study 6:
Proposed FM Spectrum,
Current ONP Localizer

FM PROPOSED CHANGES:

1) Change KNRQ frequency from 97.9 to 107.9 MHz
2) Change KHPE frequency from 107.9 to 103.7 MHz
3) Delete KXPC from database as it moves 142 miles SE of current site.

Airspace Analysis Model, Version 5.0

Airspace Case:
Site:
Date: 11/29/06

Facility Identifier: ONP
Facility Frequency: 111.500 MHz

Facility Latitude: 44° 34' 16"
Facility Longitude: 124° 03' 30"

Runway Heading: 179.0 deg (true)
Runway Elevation: 151 ft MSL
Runway Length: 5398 ft

Prop ID	Call	Freq MHz	Latitude	Longitude	ERP kW	Height ft MSL	Range nmi	Radial true	Lic
1	NEWx	88.300	44 45 22	124 02 57	0.0100	1066	11.11	182.02	APP
2	9908	88.300	44 45 25	124 02 50	0.0003	1111	11.16	182.43	APP
3	KPIJ	88.500	44 16 48	123 34 57	0.6300	3461	26.85	310.59	CP
4	9807	88.500	44 53 08	124 00 51	0.1000	364	18.96	185.70	CP
5	KBVR	88.700	44 33 50	123 16 30	0.3400	381	33.49	270.74	LIC
6	KYOR	88.900	44 45 23	124 02 59	0.0400	1148	11.12	181.89	LIC
7	K207	89.300	44 45 23	124 02 40	0.0005	1111	11.13	183.05	LIC
8	KOGL	89.300	44 53 08	124 00 51	0.2100	371	18.96	185.70	CP
9	K210	89.900	44 40 34	124 02 31	0.0500	755	6.34	186.34	LIC
10	K211	90.100	44 07 28	124 00 41	0.1000	2133	26.88	355.70	LIC
11	KAJC	90.100	44 45 33	123 13 34	0.5600	492	37.26	252.37	LIC
12	KAJC	90.100	44 45 33	123 13 34	1.0000	492	37.26	252.37	APP
13	K212	90.300	44 38 46	123 16 11	0.0003	1111	33.99	262.39	LIC
14	KLCO	90.500	44 45 24	124 02 50	3.0000	1109	11.14	182.44	LIC
15	K219	91.700	44 53 08	124 00 51	0.2100	364	18.96	185.70	LIC
16	K220	91.900	44 38 40	124 00 52	0.0900	699	4.78	203.08	LIC
17	NEWx	92.700	44 38 45	123 16 13	0.0100	1519	33.96	262.41	APP
18	DKCL	92.700	44 45 22	124 02 54	111.1111	1111	11.11	182.20	USE
19	KNCU	92.700	44 45 22	124 02 57	3.8000	1109	11.11	182.02	LIC
20	K228	93.500	45 12 48	123 45 14	0.0100	3179	40.65	198.56	LIC
21	K230	93.900	44 18 53	124 05 43	0.0010	1111	15.46	5.87	CP
22	KSHY	94.300	44 38 44	124 01 33	111.1111	420	4.68	197.27	LIC
23	KPIE	94.300	44 52 54	123 24 06	111.1111	771	33.63	236.35	LIC
24	KSND	95.100	44 45 24	124 02 53	0.0075	1111	11.14	182.26	CP
25	KSND	95.100	44 53 19	123 36 26	0.9000	3350	27.07	225.27	CP
26	KSND	95.100	44 53 19	123 36 26	1.0000	3304	27.07	225.27	LIC
27	NEWx	95.700	44 33 56	123 20 02	0.0800	794	30.97	270.62	APP
28	NEWx	95.700	44 38 12	124 01 36	0.0025	1111	4.16	198.98	APP
29	NEWx	95.900	44 37 52	124 02 57	0.2500	118	3.62	186.21	APP
30	K243	96.500	44 38 25	123 16 25	0.2500	1486	33.78	262.94	LIC
31	KCRF	96.700	44 45 22	124 02 57	19.5000	1152	11.11	182.02	LIC
32	KSHL	97.500	44 45 22	124 02 57	17.0000	1112	11.11	182.02	LIC
33	KSHL	97.500	44 45 24	124 02 53	14.0000	1106	11.14	182.26	CP
34	NEWx	98.300	44 45 24	124 02 50	0.0300	1148	11.14	182.44	APP
35	NEWx	98.300	44 45 24	124 02 53	0.0300	1079	11.14	182.26	APP
36	K253	98.500	44 26 34	124 04 12	0.2500	312	7.72	3.71	CP

	37	KWPB	98.700	44	38	57	124	03	08	111.1111	187	4.69	183.19	LIC
	38	KRKT	99.900	44	38	46	123	16	11	100.0000	1581	33.99	262.39	LIC
	39	K264	100.700	44	38	45	123	16	13	0.0200	1598	33.96	262.41	LIC
	40	KPPT	100.700	44	45	23	124	03	01	17.5000	1076	11.12	181.77	LIC
	41	KFLY	101.500	44	17	28	123	32	18	27.5000	3406	27.90	307.02	LIC
	42	K270	101.900	44	59	48	124	00	27	0.2500	157	25.62	184.85	CP
	43	KYTE	102.700	44	45	22	124	02	57	65.0000	1152	11.11	182.02	LIC
	44	K276	103.100	44	38	24	123	16	25	0.0200	1552	33.78	262.97	LIC
*	45	KHPE	103.700	44	38	46	123	16	11	100.0000	1660	33.99	262.39	LIC
	46	NEWX	104.100	44	40	34	124	02	31	0.0400	830	6.34	186.34	APP
	47	NEWX	104.300	44	33	56	123	20	02	0.0800	794	30.97	270.62	APP
	48	NEWX	104.300	44	38	12	124	01	36	0.0025	1111	4.16	198.98	APP
	49	NEWX	104.300	44	40	34	124	02	31	0.0400	830	6.34	186.34	APP
	50	KDUK	104.700	44	17	35	123	32	15	62.0000	3406	27.86	306.78	LIC
	51	K288	105.500	44	52	30	123	59	00	0.0500	984	18.51	189.95	LIC
	52	KLOO	106.300	44	33	25	123	16	22	27.5000	335	33.59	271.45	LIC
	53	KLOO	106.300	44	38	45	123	16	13	100.0000	1640	33.96	262.41	LIC
	54	K296	107.100	44	39	10	124	03	09	0.2500	220	4.91	182.91	CP
	55	VCVO	115.400	44	29	58	123	17	37	0.1500	265	32.99	277.49	VOR
	56	VONP	117.100	44	34	31	124	03	38	0.1500	167	0.27	159.23	VOR

Interference thresholds are computed using the following:

Facility antenna type: ILS Default (no array type specified)
Service volume type: ILS, U.S. Standard

Evaluation of adjacent channel (A2) and overload (B2) interference

No A2/B2 interference found.

Evaluation of 2-signal intermodulation interference

No 2-signal intermodulation interference found.

Evaluation of 3-signal intermodulation interference

No 3-signal intermodulation interference found.

AAM Study 7:
Proposed FM Spectrum,
Current CVO Localizer

FM PROPOSED CHANGES:

1) Change KNRQ frequency from 97.9 to 107.9 MHz
2) Change KHPE frequency from 107.9 to 103.7 MHz
3) Delete KXPC from database as it moves 142 miles SE of current site.

Airspace Analysis Model, Version 5.0

Airspace Case:
Site:
Date: 11/29/06

Facility Identifier: CVO
Facility Frequency: 111.900 MHz

Facility Latitude: 44° 29' 02"
Facility Longitude: 123° 17' 40"

Runway Heading: 187.0 deg (true)
Runway Elevation: 243 ft MSL
Runway Length: 5900 ft

Prop ID	Call	Freq MHz	Latitude	Longitude	ERP kW	Height ft MSL	Range nmi	Radial true	Lic
1	KWVA	88.100	44 02 40	123 04 39	0.5000	561	27.97	340.53	LIC
2	KGRI	88.100	44 28 59	122 34 55	0.0043	3993	30.50	270.09	LIC
3	NEWx	88.300	44 45 22	124 02 57	0.0100	1066	36.13	116.87	APP
4	9908	88.300	44 45 25	124 02 50	0.0003	1111	36.08	117.00	APP
5	K203	88.500	44 00 04	123 06 23	0.0005	1111	30.07	344.41	LIC
6	KPIJ	88.500	44 16 48	123 34 57	0.6300	3461	17.38	45.28	CP
7	9807	88.500	44 53 08	124 00 51	0.1000	364	39.03	128.13	CP
8	KBVR	88.700	44 33 50	123 16 30	0.3400	381	4.87	189.83	LIC
9	K204	88.700	44 38 40	124 00 52	0.0015	1111	32.25	107.38	LIC
10	KQFE	88.900	44 00 11	123 06 48	1.2500	1604	29.88	344.90	LIC
11	KYOR	88.900	44 45 23	124 02 59	0.0400	1148	36.16	116.88	LIC
12	K207	89.300	44 45 23	124 02 40	0.0005	1111	35.96	117.04	LIC
13	KOGL	89.300	44 53 08	124 00 51	0.2100	371	39.03	128.13	CP
14	KLCC	89.700	44 00 05	123 06 48	81.0000	1791	29.98	344.95	LIC
15	K210	89.900	44 40 34	124 02 31	0.0500	755	33.96	109.85	LIC
16	KAJC	90.100	44 45 33	123 13 34	0.5600	492	16.77	190.02	LIC
17	KAJC	90.100	44 45 33	123 13 34	1.0000	492	16.77	190.02	APP
18	K212	90.300	44 00 08	123 06 50	0.0005	1111	29.92	344.97	LIC
19	K212	90.300	44 38 46	123 16 11	0.0003	1111	9.79	186.20	LIC
20	KWBX	90.300	44 52 57	122 57 34	0.0035	1111	27.86	210.86	LIC
21	KSLC	90.300	45 12 06	123 11 52	0.3200	240	43.26	185.45	LIC
22	KLCO	90.500	44 45 24	124 02 50	3.0000	1109	36.08	116.98	LIC
23	K214	90.700	44 11 46	122 59 10	0.0100	3330	21.75	322.54	CP
24	K214	90.700	44 11 47	122 59 12	0.0003	1111	21.73	322.56	LIC
25	KWAX	91.100	44 00 04	123 06 45	21.5000	1844	30.00	344.89	LIC
26	K217	91.300	44 41 00	122 46 54	0.0008	1111	24.97	241.36	CP
27	K217	91.300	44 41 00	122 46 54	111.1111	1263	24.97	241.36	LIC
28	K219	91.700	44 53 08	124 00 51	0.2100	364	39.03	128.13	LIC
29	KRVM	91.900	44 00 08	123 06 50	1.1000	1398	29.92	344.97	LIC
30	K220	91.900	44 38 40	124 00 52	0.0900	699	32.25	107.38	LIC
31	KHRB	92.300	44 16 21	123 10 15	111.1111	348	13.75	337.32	LIC
32	NEWx	92.500	44 33 32	123 07 31	0.1600	335	8.52	238.13	APP
33	K224	92.700	44 03 34	122 59 16	0.1700	810	28.67	332.65	CP
34	NEWx	92.700	44 38 45	123 16 13	0.0100	1519	9.77	186.07	APP
35	DKCL	92.700	44 45 22	124 02 54	111.1111	1111	36.10	116.90	USE
36	KNCU	92.700	44 45 22	124 02 57	3.8000	1109	36.13	116.87	LIC
37	KKNU	93.300	44 00 04	123 06 45	100.0000	1926	30.00	344.89	LIC

	38	NEWx	93.500	44	00	07	123	06	53	0.0200	1621	29.93	345.04	APP
	39	NEWx	93.500	44	11	53	122	59	07	0.0003	1111	21.68	322.28	APP
	40	K228	93.500	44	51	18	123	07	15	0.0200	1280	23.47	198.40	LIC
	41	KSHY	94.300	44	38	44	124	01	33	111.1111	420	32.74	107.24	LIC
	42	KPIE	94.300	44	52	54	123	24	06	111.1111	771	24.30	169.15	LIC
	43	KMGE	94.500	44	00	04	123	06	45	49.0000	1929	30.00	344.89	LIC
	44	NEWx	94.500	44	58	57	123	00	17	0.0063	1111	32.36	202.43	APP
	45	K235	94.900	44	00	08	123	06	50	0.0200	1440	29.92	344.97	LIC
	46	K235	94.900	44	00	08	123	06	50	0.1000	1447	29.92	344.97	CP
	47	KRAD	94.900	44	39	03	123	00	59	111.1111	525	15.54	229.88	LIC
	48	KSND	95.100	44	45	24	124	02	53	0.0075	1111	36.11	116.95	CP
	49	KSND	95.100	44	53	19	123	36	26	0.9000	3350	27.71	151.21	CP
	50	KSND	95.100	44	53	19	123	36	26	1.0000	3304	27.71	151.21	LIC
	51	NEWx	95.100	44	58	59	123	08	39	0.0005	1111	30.63	192.07	APP
	52	KUJZ	95.300	44	00	04	123	06	45	0.6300	1864	30.00	344.89	LIC
	53	NEWx	95.700	44	00	08	123	06	50	0.0200	1457	29.92	344.97	APP
	54	NEWx	95.700	44	03	10	123	06	37	0.0800	515	27.05	342.99	APP
	55	NEWx	95.700	44	33	56	123	20	02	0.0800	794	5.18	161.00	APP
	56	NEWx	95.700	44	38	12	124	01	36	0.0025	1111	32.62	106.32	APP
	57	NEWx	95.900	44	37	52	124	02	57	0.2500	118	33.45	105.31	APP
	58	KZEL	96.100	44	00	05	123	06	48	100.0000	1722	29.98	344.95	LIC
	59	K242	96.300	44	56	33	123	02	01	0.2500	276	29.68	202.01	LIC
	60	KPCN	96.300	45	08	29	122	51	21	111.1111	397	43.64	205.33	CP
	61	NEWx	96.300	45	08	29	122	51	21	111.1111	1111	43.64	205.33	APP
	62	NEWx	96.300	45	08	31	122	51	13	111.1111	318	43.72	205.42	CP
	63	KKJC	96.300	45	09	39	123	09	14	111.1111	259	41.05	188.38	LIC
	64	K243	96.500	44	38	25	123	16	25	0.2500	1486	9.43	185.42	LIC
	65	KCRF	96.700	44	45	22	124	02	57	19.5000	1152	36.13	116.87	LIC
	66	K245	96.900	44	00	11	123	06	48	0.0063	1111	29.88	344.90	LIC
	67	KSHL	97.500	44	45	22	124	02	57	17.0000	1112	36.13	116.87	LIC
	68	KSHL	97.500	44	45	24	124	02	53	14.0000	1106	36.11	116.95	CP
	69	NEWx	97.700	44	51	18	123	07	15	0.0200	1243	23.47	198.40	APP
	70	NEWx	97.900	45	00	00	122	41	37	0.2500	1427	40.18	219.59	APP
	71	K252	98.300	44	04	00	123	37	42	0.0003	1111	28.85	29.81	LIC
	72	NEWx	98.300	44	45	24	124	02	50	0.0300	1148	36.08	116.98	APP
	73	NEWx	98.300	44	45	24	124	02	53	0.0300	1079	36.11	116.95	APP
	74	K253	98.500	44	26	34	124	04	12	0.2500	312	33.30	85.75	CP
	75	KWPB	98.700	44	38	57	124	03	08	111.1111	187	33.88	107.02	LIC
	76	KODZ	99.100	44	06	56	122	59	56	100.0000	2421	25.49	330.13	LIC
	77	K258	99.500	44	06	58	122	59	50	0.0100	2205	25.49	329.96	LIC
	78	KRKT	99.900	44	38	46	123	16	11	100.0000	1581	9.79	186.20	LIC
	79	K263	100.500	44	24	52	122	44	22	0.2500	863	24.13	279.94	LIC
	80	K264	100.700	44	38	45	123	16	13	0.0200	1598	9.77	186.07	LIC
	81	KPPT	100.700	44	45	23	124	03	01	17.5000	1076	36.18	116.86	LIC
	82	K265	100.900	44	00	07	123	06	53	0.0005	1111	29.93	345.04	LIC
	83	KFLY	101.500	44	17	28	123	32	18	27.5000	3406	15.59	42.12	LIC
	84	K270	101.900	44	11	53	122	59	07	0.0003	1111	21.68	322.28	CP
	85	KEHK	102.300	44	00	08	123	06	50	100.0000	1568	29.92	344.97	LIC
	86	KYTE	102.700	44	45	22	124	02	57	65.0000	1152	36.13	116.87	LIC
	87	K274	102.700	44	51	14	123	07	22	0.2500	1207	23.38	198.26	CP
	88	K275	102.900	44	02	01	123	00	25	0.0010	1111	29.71	335.43	LIC
	89	KPIK	102.900	44	41	00	122	46	54	111.1111	1276	24.97	241.36	LIC
	90	K276	103.100	44	38	24	123	16	25	0.0200	1552	9.41	185.43	LIC
	91	K276	103.100	44	45	25	124	02	50	0.0005	1111	36.08	117.00	CP
	92	NEWx	103.300	44	02	48	123	07	49	0.2500	505	27.17	344.95	APP
*	93	KHPE	103.700	44	38	46	123	16	11	100.0000	1660	9.79	186.20	LIC
	94	NEWx	104.100	44	19	20	123	19	05	0.0600	925	9.75	5.96	APP
	95	NEWx	104.100	44	40	34	124	02	31	0.0400	830	33.96	109.85	APP
	96	NEWx	104.300	44	00	08	123	06	50	0.0200	1457	29.92	344.97	APP
	97	NEWx	104.300	44	33	49	123	14	37	0.2500	443	5.25	204.44	APP
	98	NEWx	104.300	44	33	56	123	20	02	0.0800	794	5.18	161.00	APP
	99	NEWx	104.300	44	38	12	124	01	36	0.0025	1111	32.62	106.32	APP
	100	NEWx	104.300	44	39	17	123	00	53	0.0800	820	15.75	229.39	APP
	101	NEWx	104.300	44	40	34	124	02	31	0.0400	830	33.96	109.85	APP
	102	KDUK	104.700	44	17	35	123	32	15	62.0000	3406	15.48	42.31	LIC

	103	KEUG	105.500	44	00	11	123	06	48	2.8000	1650	29.88	344.90	LIC
	104	K288	105.500	44	52	30	123	59	00	0.0500	984	37.61	128.61	LIC
	105	K288	105.500	44	58	22	123	08	18	0.0005	1111	30.08	192.78	CP
	106	K290	105.900	44	29	02	122	34	55	0.0500	4029	30.50	270.00	LIC
	107	KLOO	106.300	44	33	25	123	16	22	27.5000	335	4.48	191.94	LIC
	108	KLOO	106.300	44	38	45	123	16	13	100.0000	1640	9.77	186.07	LIC
	109	KLVU	107.100	44	28	59	122	34	55	9.6000	4085	30.50	270.09	LIC
	110	K296	107.100	44	39	10	124	03	09	0.2500	220	33.95	107.37	CP
	111	K297	107.300	44	11	46	122	59	10	0.1000	3317	21.75	322.54	CP
*	112	KNRQ	107.900	44	00	08	123	06	50	100.0000	1640	29.92	344.97	LIC
	113	VEUG	112.900	44	07	15	123	13	22	0.1500	380	22.00	351.96	VOR
	114	VCVO	115.400	44	29	58	123	17	37	0.1500	265	0.93	182.18	VOR
	115	VONP	117.100	44	34	31	124	03	38	0.1500	167	33.22	99.50	VOR

Interference thresholds are computed using the following:

Facility antenna type: 8 Element LPD 17 dBi Gain
Service volume type: ILS, U.S. Standard

Evaluation of adjacent channel (A2) and overload (B2) interference

No A2/B2 interference found.

Evaluation of 2-signal intermodulation interference

No 2-signal intermodulation interference found.

Evaluation of 3-signal intermodulation interference

No 3-signal intermodulation interference found.

ATTACHMENT B

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Comments of Hatfield & Dawson Consulting Engineers, LLC

Docket No. FAA-2006-25002
Safe, Efficient Use and Preservation of the Navigable Airspace

September 2006

Hatfield & Dawson Consulting Engineers, LLC (Hatfield & Dawson) hereby submits its comments in Docket No. FAA-2006-25002, regarding proposed changes to the regulations governing objects that may affect the navigable airspace.

Hatfield & Dawson is a consulting electrical engineering firm. A large percentage of our clients own AM, FM and TV broadcast stations, and we also regularly perform work for land-mobile and public safety agencies. On behalf of those clients, we are actively involved in the preparation and filing of FAA Form 7460-1, and in responding to FAA queries regarding tower proposals. In addition, for several years we have utilized the FAA's EMI evaluation software "Airspace Analysis Model" to study potential intermodulation effects and to rebut FAA hazard determinations.

As outlined below, Hatfield & Dawson strongly opposes most of the proposed rule changes. In particular, the proposed EMI notification requirements are an over-reaching power grab by an agency which has demonstrated neither the authority, the necessity, nor the competence to implement these new rules.

The FAA Lacks The Authority to Perform Broad Interference Evaluations

Contrary to what the FAA maintains, it lacks the authority to perform the type of far-reaching interference evaluations contemplated in the NPRM. If one reviews the legislative history of the law upon which the FAA is relying, it is clear that Congress only intended to grant the FAA authority to review physical interference, i.e. physical obstructions, for their effect upon the navigable airspace.

No authority was intended for the FAA to evaluate electromagnetic interference. Rightly so, since that is the responsibility of another existing federal agency, the FCC.

The FAA Has Not Demonstrated That The Current System Needs Fixing

Our overarching objection to the adoption of the proposed notification requirements is that the FAA has not demonstrated that there is a problem which needs to be solved. Lacking any appropriate justification for the new requirements, the FAA resorts to vague allegations of potential interference based solely on the fact that FM and VHF TV facilities operate on frequencies adjacent or close to FAA radio navigation frequencies, despite a long history of coexistence of these services.

Indeed, the NPRM cites to only two instances of alleged interference to ILS frequencies, one case in Aurora IL and one case in Traverse City MI. Ironically, both of these cases are outstanding examples of how the current system works just fine. In the Aurora case, two ILS frequencies were changed to eliminate the problem. In the Traverse City case, one ILS frequency was changed to eliminate the problem, at the radio station's expense.

The FAA cannot rely on two isolated cases, both of which were resolved within the current framework, as justification to overhaul a functional system and impose onerous new requirements upon broadcasters and other spectrum users.

There is already a mechanism in place to address actual and verifiable[1] interference problems. Step 1: contact the spectrum user and/or the FCC to have the problem-causing transmitter shut down or reduced in power. Step 2: pursue modifications to the transmitter and/or the ILS frequencies in order to eliminate the problem.

Furthermore, we are concerned that the FAA is attempting to use the imposition of new notice requirements as a method to shut down the option of changing ILS frequencies in the case of a predicted interference problem. Changing ILS frequencies should be retained as a valid mechanism for resolving actual interference problems which may occur. It is appropriate that costs for such changes be borne by the spectrum user creating the interference.

The FAA Lacks the Competence to Perform This Type of Evaluation

Despite the fact that the FAA has performed EMI evaluations for the past several years, the agency has utterly failed to demonstrate that its methodology produces an accurate result. Indeed, it can be easily demonstrated that the FAA's methodology dramatically overstates the potential interference

[1] That the problem be "verifiable" is of critical importance. We have seen cases where a reported interference problem is actually the result of malfunctioning or substandard receivers. Such situations are not the responsibility of the spectrum user to solve.

which may be caused by an FM facility. Lacking the demonstrated competence to perform this type of evaluation, the FAA should not be granted the broad administrative authority it has requested, since the end result will be that nearly every FM facility proposal filed will result in an erroneous hazard determination.

In order to illustrate the inherent inaccuracy of the FAA's EMI evaluation methodology, this firm has performed EMI interference studies using the FAA's Airspace Analysis Model v5.0 ("AAM") software[2] on ILS frequencies in use at five airports in different parts of the country. All ILS frequencies were studies for standard front course. The results of these studies are included as Appendices 1 through 5, as printouts of the "RFI.TXT" files produced by the FAA's software.

According to the results from the FAA's own software, planes must be falling out of the sky over Seattle, Billings, San Diego, Austin, and Buffalo. For each of the ILS facilities studied, the FAA's software predicted A2/B2 (adjacent channel and overload) interference, 2-signal intermod, and/or 3-signal intermod combinations causing interference to the ILS frequency, <u>from existing and operational FM stations</u>. In some cases, interference was predicted from FAA VOR and COM facilities.

At Seattle, ILS frequencies SEA (110.3 MHz) and SNQ (110.3 MHz) were studied.

SEA (110.3 MHz)

1 FAA VOR facility (VSEA 116.8 MHz) was predicted to cause A2/B2 interference.
1 FAA COM facility (CGLX 126.875 MHz) was predicted to cause A2/B2 interference.
1 existing FM station was predicted to contribute to 3-signal intermod, in combination with three pending FM translator applications on 104.5 MHz, and with an existing FM translator on 106.5 MHz which the FAA program assigned an ERP of 111 kW.

SNQ (110.3 MHz)

6 existing FM station was predicted to contribute to 3-signal intermod, in some cases in combination with three pending FM translator applications on 104.5 MHz, and with an existing FM translators on 106.5 MHz and 105.5 MHz which the FAA program assigned an ERP of 111 kW.

At Billings, ILS frequencies BIL (110.3 MHz) and BMO (111.5 MHz) were studied.

BIL (110.3 MHz)

1 existing FM station was predicted to cause A2/B2 interference.
1 FAA VOR facility (VBIL 114.5 MHz) was predicted to cause A2/B2 interference.

[2] This firm most recently downloaded a copy of AAM and the accompanying databases on August 2, 2006. We note today (September 7, 2006) that the website where the software and databases were available is no longer accessible. While it is possible that this is a temporary technical problem, this raises concern in our minds that the FAA is deliberately trying to limit distribution of the software to conceal its inherent flaws, in connection with this proceeding.

7 existing FM stations were predicted to contribute to 3-signal intermod, in some cases in combination with a pending FM translator application on 100.9 MHz which the FAA program assigned an ERP of 111 kW.

BMO (111.5 MHz)
2 existing FM stations were predicted to cause A2/B2 interference.
2 existing FM stations were predicted to contribute to 2-signal intermod.
13 existing FM stations were predicted to contribute to 3-signal intermod.

At Austin, ILS frequencies GFQ (110.3 MHz) and BSM (110.3 MHz) were studied.

GFQ (110.3 MHz)
3 existing FM stations were predicted to contribute to 2-signal intermod.
11 existing FM stations were predicted to contribute to 3-signal intermod.

BSM (110.3 MHz)
3 existing FM stations were predicted to contribute to 3-signal intermod.

At San Diego, ILS frequencies SAN (110.9 MHz) and UBR (110.9 MHz) were studied.

SAN (110.9 MHz)
4 existing FM stations were predicted to contribute to 2-signal intermod.
14 existing FM stations were predicted to contribute to 3-signal intermod.

UBR (110.9 MHz)
2 existing FM stations were predicted to cause A2/B2 interference.
2 existing FM stations were predicted to contribute to 2-signal intermod.
5 existing FM stations were predicted to contribute to 3-signal intermod.

At Buffalo, ILS frequencies BUF (111.3 MHz) and GBI (108.5 MHz) were studied.

BUF (111.3 MHz)
1 existing FM station was predicted to contribute to 2-signal intermod, in combination with two pending FM translator applications on 107.3 MHz which the FAA program assigned an ERP of 111 kW.
1 existing FM station was predicted to contribute to 3-signal intermod, in combination with two pending FM translator applications on 107.3 MHz which the FAA program assigned an ERP of 111 kW.

GBI (108.5 MHz)
1 existing FM station was predicted to cause A2/B2 interference
3 existing FM stations were predicted to contribute to 2-signal intermod, often in combination with pending FM translator applications which the FAA program assigned an ERP of 111 kW.

14 existing FM stations were predicted to contribute to 3-signal intermod, often in combination with pending FM translator applications which the FAA program assigned an ERP of 111 kW.

It should be noted that no studied ILS facilities have been omitted from this report. In other words, for every ILS facility studied, existing interference was predicted by the FAA's software.

Based on these results, and on the fact that airplanes are not known to be regularly falling out of the skies over these cities, there is one inescapable conclusion: the FAA's analysis methodology dramatically overstates the potential for interference from FM stations to ILS receivers. Therefore, the FAA cannot be relied upon to make accurate predictions of interference which may result from FM stations.

The FAA is simply institutionally incompetent to perform this type of analysis.

These results are hardly surprising to this firm. In our practice, we have on numerous occasions been hired to perform complex intermodulation analyses at transmitter sites hosting dozens of spectrum users, utilizing hundreds of frequencies. Our experience has shown that one can only produce a meaningful intermodulation study when one has highly detailed data on the equipment being used at the site. The data collection burden by itself is huge. Since the FAA's methodology collects maybe one-tenth of the relevant data, it is highly unlikely to produce an accurate result.

Nor are the flaws inherent in the FAA's evaluation methodology confined only to their AAM software program. During 2006, this firm filed a Form 7460-1 with the FAA, proposing to increase the height of an existing tower by 20 feet in order to accommodate the installation of a new transmitting antenna in the 700 MHz band. That filing included mention of an existing FM station on the same tower, which had been in operation for over one year. The FAA issued a Notice of Presumed Hazard, stating:

> *The present study indicates that the proposal will exceed our in-band (LPS) spurious frequency level by 22 dB at the Larch Mountain Remote Communications Air/Ground (RCAG). Mitigation requires the proponent to state, in writing, that the spurious radiation in the bands 108 to 137 MHz and 225 to 400 MHz will be reduced and maintained 22 dB below the FCC 80 dBc requirement. This represents 102 dBc of spurious attenuation. This level of additional spurious attenuation can normally be achieved by including additional transmitter filtering in your installation.*
>
> *In addition, the present study indicates the proposal will exceed our out-of-band (LP1) interfering level by 3 dB. Mitigation requires the proponent to either lower the power, directionalize the radiation pattern, or relocate the facility to an equivalent 3 dB of space loss.*

The supporting calculations acquired from the FAA (see Appendix 6) made clear that the interference which the FAA determined "will" result was derived not from our client's proposed 700 MHz band station, but from the existing FM station at the site, already in operation for over one year. Our client was in no position to compel the owner of the FM station to make any written promises to the FAA, nor to make any changes in its operational FM station with no documented history of actual interference problems caused to FAA facilities.

The FAA Does Not Have a Database Capable of the Task

The NPRM would require that notice be filed for any changes or modifications to an existing antenna system, including changes in antenna specifications. As proposed, this can be interpreted to include the simple replacement of one antenna model with another. This is something that in many cases does not even require advance notice to the FCC. For example, if the licensee of a non-directional FM station decides to retire an existing 4-bay ERI "rototiller" antenna and replace it with a new 6-bay Shively antenna, the FCC requires only that the licensee file a Form 302-FM modification of license application, after the antenna swap has been implemented. Under the NPRM, the licensee would first have to file a Form 7460-1 with the FAA, wait an unknown amount of time for a favorable determination, and wait <u>another</u> 40 days for the determination to become effective. Only then could the antenna replacement occur.

This raises even more serious implications when an antenna fails and has to be replaced immediately to ensure continued service to the public, or when a station must put up an emergency antenna at a new location due to loss of the existing transmitter site. In those situations, the licensee simply cannot (and we can assure you will not) remain off-the-air for perhaps two months awaiting a favorable determination to become effective.

The concept of requiring notice for antenna modifications implies that the FAA will be able to access a database of antenna types for existing radio stations in order to perform the most accurate predictions possible. It would be interesting to know where that database is going to be acquired. Not even the FCC database contains antenna models for every FM station. Older stations, in particular, were licensed prior to the FCC entering that information into a database. Numerous other stations have changed out their antennas and have never bothered to notify the FCC. In our broadcast engineering consulting practice we encounter this situation regularly.

Furthermore, many FCC applications do not require an antenna model to be specified until licensing. At the time of initial filing with the FCC for a construction permit, it is not at all uncommon for the antenna make and model to be as-yet-undetermined, not to be selected until a construction permit is granted by the FCC and bids are solicited from antenna manufacturers.

Absent a comprehensive database of existing antenna locations and types, the FAA simply cannot carry out EMI studies of a proposed antenna installation with the accuracy implied by the NPRM.

The FAA simply does not have the resources to go out and chase down missing antenna data from the other components of each intermodulation combination. Rather, the FAA will come back with an EMI hazard determination, and the proponent will face the additional burden of acquiring the necessary antenna data, often from competitors who may have no interest in cooperating with the information request. We sometimes have to do that now in the case of ground-level RFR exposure studies, but it is a wretched way to build a database. Furthermore, can the FAA truly rely on this second-hand reporting of antenna data to fill in the holes in its database?

We know from personal experience with the FAA's current EMI software (Airspace Analysis Model v5.0) that the database in use does not include antenna models for any existing FM stations. And in an exceptionally large number of cases the data which the FAA has complied (presumably from FCC databases) contains gaping holes. A chief complaint is that in any case where an ERP or height value is missing, the software gives the option of replacing the missing value with "dummy values" of 111.1111 kW ERP and 1111 feet AMSL. While this may in many cases produce a "worst case" analysis (except where the 1111 foot height AMSL places the antenna significantly below ground), as often as not the result is an erroneous determination of hazard.

By way of example, we have had cases where the FAA has issued a determination of EMI hazard. Upon our own subsequent analysis with the AAM software, we have found the "culprit" to be a predicted 3-signal intermod combination which includes an FM translator which has been assumed to be operating with 111.1111 kW at an outrageous antenna height. FM translators are only authorized by the FCC for an ERP of up to 250 Watts. Thus, the FAA's assumption of 111.1111 kW overstated the translator's ERP by more than 26 dB! Fortunately, we were able to clarify this situation to FAA staff and receive determinations of no hazard. But an unsophisticated proponent without the means to hire a qualified consultant would be completely and unfairly stymied by the erroneous hazard determination.

For that matter, a full-power FM station's proposal should never be denied due to predicted intermodulation interference in combination with an FM translator. By the FCC's rules, FM translators are secondary services and should themselves be shut down if necessary to accommodate a full power FM station.

The database used with the current AAM software also includes numerous records for non-operating facilities such as vacant FM allotments. Again, each of these is assigned an ERP of 111.1111 kW and an antenna height of 1111 feet, regardless of the power and height limitations which may pertain to that particular allotment. We have also seen allotment records included in the database when that allotment has a licensed and operating facility at a different location. Again, the wildly inaccurate ERP and height values are applied to the allotment record.

The Threshold of Interference for a Hazard Determination is Unspecified

Assuming that the FAA does indeed go forward with the proposed EMI notice requirements, despite the lack of evidence that the current system is inadequate, the NPRM raises far too many questions as to how this evaluation process will be implemented. The FAA is apparently seeking carte blanche to reach determinations, despite a lack of expertise, a lack of data, and a lack of concrete guidelines.

That is not the rule of law; it is the rule of whim.

The NPRM gives no indication of the threshold of interference which would result in a hazard determination. Will a certain amount of predicted interference be permitted, or will there be a zero tolerance for predicted interference? As is clearly demonstrated by the sample studies discussed above, it is highly doubtful that the FAA's prediction model is accurate enough to calculate interference beyond a reasonable doubt.

Furthermore, the NPRM is silent on what procedures might be used by a proponent to challenge the FAA's determination. As far as can be determined from the NPRM, the FAA's determination may be final and unassailable. This despite the fact that the FAA simply has not demonstrated any competence for this type of analysis.

The FAA Dramatically Underestimates the Number of Proposals it will Receive

The FAA states that "many broadcast companies already submit notice to the FAA," as justification that the proposed EMI notice requirements would not be a burden. We submit that the FAA is being extremely naive about the number of broadcasters submitting such notices. Our own experience is that broadcasters studiously avoid providing such notice, except in the case of new tower construction. Small wonder, given how the FAA's methodology dramatically overstates the potential for interference, predicting widespread and non-existent interference from operating stations.

Numerous other commenters agree that the number of proposals which the FAA will actually receive will be much higher than the number which the FAA expects to be filed. The FAA estimates that 26,794 forms will be filed on an annual basis as a result of the proposed rule changes. However:

> CTIA estimates that the FAA's proposal will affect over 66,000 licensees, and that 11,500 to 13,500 new transmission facilities per year will be proposed in the 2.5 GHz band alone.
>
> NAM/MRFAC points to the approximately 69,365 Private Land Mobile Radio applications filed with the FCC during 2005.
>
> Even the FCC, <u>the agency in the best position to know how many transmission facilities are utilized in various frequency bands</u>, believes that the number of notices that will be filed annually would greatly exceed the FAA's estimate. The FCC points out the large number of

> applications it receives annually (19,729 in 2005 and 13,991 in the first half of 2006), and surmises that the total number of proposals received by the FAA, for all the frequency bands included in the NPRM, could top 1 million annually.

The FAA fails to persuasively show that it possesses the necessary resources to process the significant increase in the number of filings which would result from the proposed rules. As a consequence, the required evaluation time for notices would become greatly extended, with significant economic consequences for all spectrum users and the country as a whole.

The FAA's Cost Analysis is Grossly Inaccurate

The FAA's cost analysis is grossly inaccurate. In particular, the FAA estimates a cost of $445 for applications where the proponent employs the services of a consulting firm to file the obstruction evaluation notice. This estimated cost is inaccurate for at least two reasons.

First, the wise consultant will recommend to his broadcast client that, prior to filing, a study be conducted using the FAA's AAM software, to identify any problems which might exist. Our own experience with using this software is that such a study can take several hours to complete. Thus, it is not simply the cost of preparing and filing the form which must be taken into account, but the cost of any necessary studies which must be undertaken prior to preparation and filing. This drives up the cost considerably.

Second, the FAA seems blissfully unaware that FM station proponents often consider multiple transmitter site options before filing an application with the FCC. A given applicant, for example, may consider operation from three different sites, evaluating coverage and cost, before filing the FCC application. If a full FAA AAM study is conducted, and notice is filed, for each of these options, that triples the cost to both the proponent and the FAA.

As was pointed out by Marcus Spectrum Communications in its comments, the "FAA continues to allow aircraft operating only within US airspace to use ILS receivers that do not meet ICAO standards for immunity to FM signals from ILS receiver-generated intermodulation." Is that the fault of broadcasters and other spectrum users? No. It is a gross manipulation for the FAA to tolerate the use of sub-standard receivers, and to then turn around and use the existence of such poor receivers to justify these new notice requirements for other spectrum users. Rather than shifting the cost to other spectrum users, the FAA should instead mandate the upgrade of ILS receivers. The FAA needs to impose costs on its own constituency to solve their own problems before it tries to impose costs on another agency's constituency.

Nor should the cost burden of the FAA's proposal upon its own operations be ignored. Given the substantial number of new proposals which can be expected to be filed, the FAA will incur substantial additional costs in personnel and data systems, with corresponding increased costs for physical

facilities including buildings, parking, electrical power, and air cooling. None of this comes free, and the funds will either have to be diverted from other more-crucial FAA functions, or will require significant new budgetary outlays. Either that, or the FAA obstruction evaluation system will grind to a screeching halt and nothing will be able to be accomplished.

The FAA's Proposal Will Disrupt Efficient FCC Application Processing

Over the past several years, the FCC has acted to greatly streamline the processing of FM and TV applications. The imposition of the FAA EMI notice requirements and a 40 day delay in effectiveness will do much to upset the gains that the FCC has made. More applications will reach the top of the processing queue prior to the effective date of a determination of no hazard, thus delaying FCC action on the application. This also imposes new time and cost burdens on the FCC.

Furthermore, as pointed out by the FCC in their comments, the new regulations would require FAA notification for many changes that are routine in nature and already expressly permitted by the FCC rules, such as changes to antenna beam tilt, power levels, antenna model, etc. These are changes that the FCC has already determined are too minor to have any realistic potential for interference to other services, and which typically do not require prior FCC notice or approval.

The New Requirement for Deliberate Action to Renew FAA Determinations is Unwarranted

The FAA has proposed that determinations would be valid for 18 months, with a 12 month extension available on request for FCC-authorized facilities (for a total of 30 months), and also that proponents must actively request the extension.

The time periods proposed by the FAA demonstrate a gross ignorance of the construction periods for FCC-authorized broadcast stations. The FCC Rules grant most FM and TV facilities an unencumbered 36 months to construct new or modified facilities.

What is particularly nonsensical is that the FAA has proposed an 18+18 month period for structures which are <u>not</u> subject to an FCC authorization. That matches the 36 month period allowed by the FCC for construction permits. Did anybody at the FAA even bother to read the FCC rules on construction periods?

If an FCC construction permit were issued 1 day after the effective date of an FAA determination of no hazard, the determination would expire 6 months before the FCC permit expired and would have to be re-proposed. Furthermore, it is common that an FAA determination is issued weeks if not months (and sometimes years) before the FCC permit is issued.

Enactment of the FAA proposal will result in FAA determinations regularly expiring prior to construction of the FCC-authorized facility. The current system does not need fixing. FAA

determinations of no hazard should remain valid so long as the FCC application is pending and/or the FCC permit is valid.

The Rule Title Should Not Be Changed

The FAA has proposed that the title of part 77 should be changed from "Objects Affecting Navigable Airspace" to "Safe, Efficient Use, and Preservation of the Navigable Airspace." This change should not be made. The present title clearly describes the agency's obligation to evaluate potential physical obstructions to use of the airspace.

Conclusion

For the reasons outlined above, the proposed changes to the regulations governing objects that may affect the navigable airspace, and in particular the EMI notice requirements, should not be adopted. The FAA has demonstrated neither the authority, the necessity, nor the competence to implement these new rules. Indeed, sample studies performed using the FAA's own EMI evaluation software prove that their faulty methodology dramatically overstates the potential for interference, predicting widespread existing interference where there is no apparent problem.

The proposed rules are nothing more than a solution in search of a problem, and further consideration of them should be abandoned.

Respectfully submitted this September the 7th, 2006,

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CERTIFICATE OF SERVICE

I, Rasheema S. Smith, hereby certify that on this 17th day of January, 2007, true and correct copies of the foregoing Reply to Opposition to Petition for Reconsideration *have been served via U.S. mail, postage prepaid, upon the following persons:*

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