

Engineering Exhibit 1

WPCS-FM

Pensacola, FL (FACID – 52230)

RF Radiation Compliance

WPCS-FM is licensed for 95 kW ERP (H & V) and utilizes a 12 bay Dielectric DCRM antenna mounted on a 458 meter guyed tower with a Center of Radiation of 399 meters above ground level.

OET Bulletin 65, Edition 97-01, Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields, Appendix A, Table 1 specifies the Maximum Permissible Exposure (MPE) in the 30 MHz to 300 MHz region should be limited to $1000 \mu\text{w}/\text{cm}^2$ for occupational/controlled exposure and $200 \mu\text{w}/\text{cm}^2$ for general population/uncontrolled exposure.

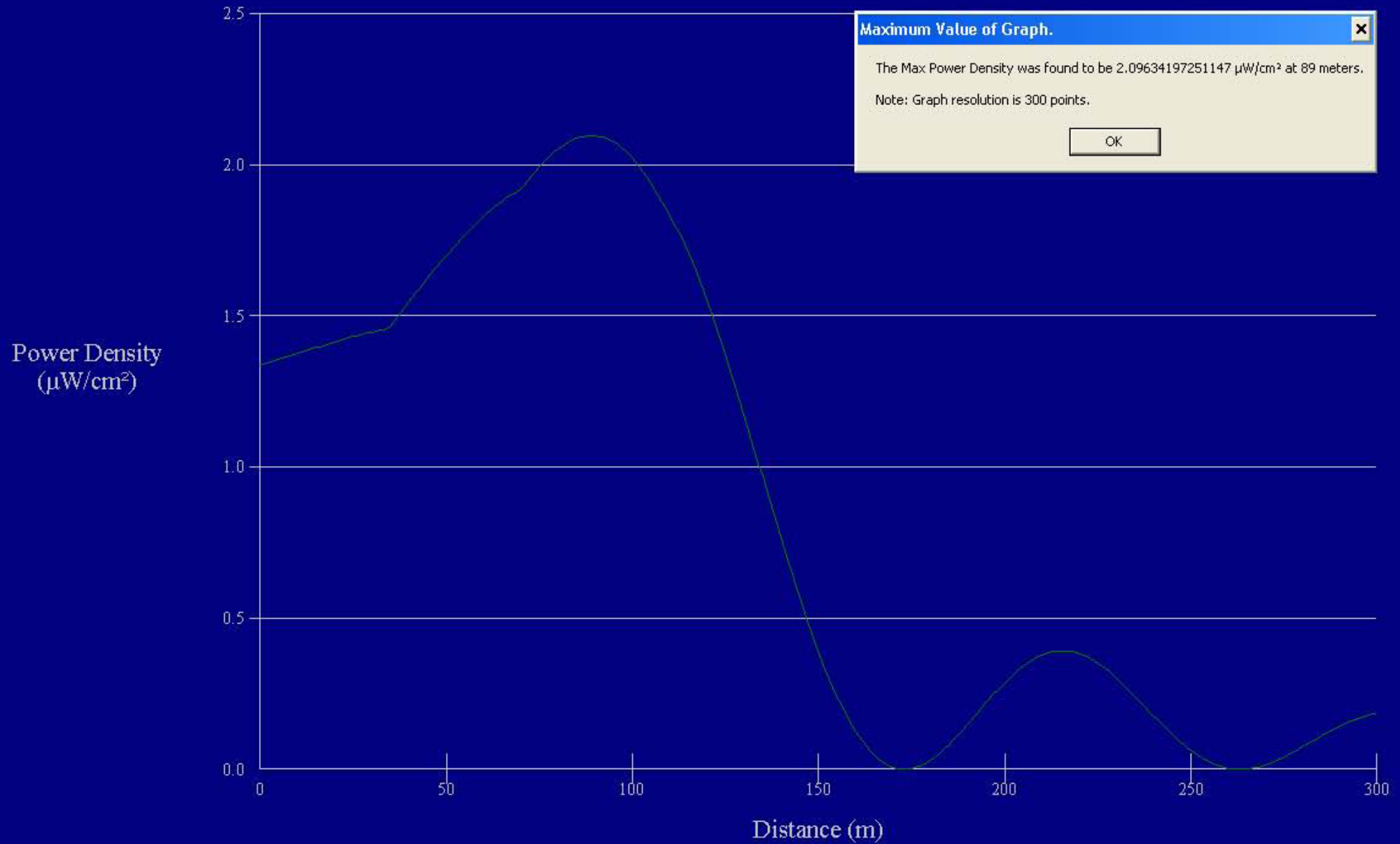
This antenna was evaluated with the Commission's FMModel program, acquired from the FCC Office of Engineering and Technology (OET) Internet site, using the Dielectric DCRM antenna element pattern. As demonstrated by the Graph on page 2 of this exhibit, the antenna produces less than $2.1 \mu\text{w}/\text{cm}^2$ at 89 meters from the base of the tower. This is 0.21% of the general population exposure limit specified in OET Bulletin 65

To confirm the FMModel findings, measurements were made December 17, 2007 around the transmitter site out to a distance of 150 meters. A Narda RF Radiation Meter and Probe model 8250 calibrated to read between 50 and 220 MHz was utilized. The measurements by this meter confirmed that the RF exposure was no greater than $2.1 \mu\text{w}/\text{cm}^2$ anywhere in the 150 meter range from the tower.

Using the meter mentioned above, measurements were taken at various places inside the transmitter room. The meter never exceeded $20 \mu\text{w}/\text{cm}^2$, 2 % of the allowed $1,000 \mu\text{w}/\text{cm}^2$ MPE for occupational/controlled environments.

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Pensacola, FL 32503

Power Density vs Distance



Update Graph

Office of Engineering and Technology

Distance (m): Antenna Type:

Horizontal ERP (W):

Vertical ERP (W):

Antenna Height (m):

Number of Elements:

Element Spacing:

Distance (meters) = 300
 Horizontal ERP (W) = 95000
 Vertical ERP (W) = 95000
 Antenna Height (m) = 399
 Antenna Type = 7 Di el ectri c DCRM
 Number of Elements = 12
 Element Spacing = 1
 Y-axis (Linear) = -1
 X-axis Setup = -1, 300

X (meters)	Y ($\mu\text{W}/\text{cm}^2$)
0	1. 3364589995539
1	1. 3404588380834
2	1. 34445055239255
3	1. 34843370889256
4	1. 35240771789808
5	1. 35637183153098
6	1. 36032514168839
7	1. 36426657807804
8	1. 36819490632507
9	1. 37210872615443
10	1. 37600646965382
11	1. 37988639962255
12	1. 38374660801226
13	1. 38758501446573
14	1. 39139936496086
15	1. 39518723056719
16	1. 39894600632284
17	1. 40267291024042
18	1. 4063649824508
19	1. 41001908449405
20	1. 41363189876777
21	1. 41719992814286
22	1. 42071949575779
23	1. 4241867450025
24	1. 42759763970384
25	1. 4309479645243
26	1. 43423332558692
27	1. 4374491513388
28	1. 4405906936666
29	1. 44365302927741
30	1. 44663106135855
31	1. 44951952153029
32	1. 45231297210556
33	1. 45500580867076
34	1. 45759226300199
35	1. 463799662739
36	1. 48018845508195
37	1. 49652965037503
38	1. 51281238853338
39	1. 52902539667202
40	1. 54515698701119
41	1. 56119505556219
42	1. 57712708164104
43	1. 59294012825784
44	1. 60862084343011
45	1. 62415546246869
46	1. 63952981128475
47	1. 65472931076638
48	1. 66973898227315
49	1. 68454345429624
50	1. 69912697033128
51	1. 71347339801025
52	1. 72756623953728

53	1. 74138864347223
54	1. 75492341790414
55	1. 76815304505472
56	1. 78105969734996
57	1. 79362525499554
58	1. 80583132508894
59	1. 81765926229819
60	1. 82909019113372
61	1. 84010502983638
62	1. 85068451590059
63	1. 8608092332473
64	1. 87045964105689
65	1. 87961610426731
66	1. 88825892573732
67	1. 89636838006943
68	1. 90392474908088
69	1. 91090835890524
70	1. 91729961870055
71	1. 93422356542962
72	1. 95049828465412
73	1. 96607332679858
74	1. 98091851831444
75	1. 995003771017
76	2. 00829914526811
77	2. 0207749156533
78	2. 03240163907112
79	2. 04315022513977
80	2. 05299200881215
81	2. 0618988250773
82	2. 06984308561191
83	2. 07679785723155
84	2. 0827369419769
85	2. 08763495865593
86	2. 09146742564844
87	2. 09421084476511
88	2. 09584278593874
89	2. 09634197251147
90	2. 09568836686776
91	2. 0938632561495
92	2. 09084933777653
93	2. 0866308044832
94	2. 08119342856988
95	2. 07452464505673
96	2. 06661363341689
97	2. 05745139755641
98	2. 04703084369966
99	2. 03534685583157
100	2. 02239636834124
101	2. 00817843550683
102	1. 99269429745731
103	1. 97594744224452
104	1. 95794366365816
105	1. 93869111441665
106	1. 91820035436966
107	1. 89889097301989
108	1. 87970714964633
109	1. 8591874287558
110	1. 83734796774577
111	1. 81420778243182
112	1. 78978877457843
113	1. 76411575152763
114	1. 73721643756602
115	1. 70912147669005
116	1. 67986442645172
117	1. 64948174259101

118	1. 61801275418826
119	1. 58549962909891
120	1. 55198732946433
121	1. 51752355712641
122	1. 48215868880927
123	1. 4459457009695
124	1. 4089400842563
125	1. 37119974756474
126	1. 33278491170866
127	1. 29375799278493
128	1. 25418347534726
129	1. 21412777555522
130	1. 17365909451252
131	1. 13284726205877
132	1. 0917635713275
133	1. 05048060443482
134	1. 00907204971209
135	. 967612510946996
136	. 92617730914597
137	. 884842277380412
138	. 84368354932628
139	. 802777342152985
140	. 762199734462409
141	. 722026440021117
142	. 682332578069498
143	. 643192441029372
144	. 604679260466494
145	. 56675927619248
146	. 529527070294411
147	. 493161566452873
148	. 457727848493252
149	. 423288722584801
150	. 389904498447356
151	. 357632775724693
152	. 326528236501277
153	. 296642444935792
154	. 268023654976308
155	. 240716627108763
156	. 214762455071576
157	. 190198403445903
158	. 167057757001738
159	. 145369682646383
160	. 125159104782343
161	. 106446594837701
162	. 089248275682672
163	7. 35757415922839E-02
164	5. 94359943564005E-02
165	4. 68313960754488E-02
166	3. 57596391129516E-02
167	2. 62137336050061E-02
168	. 018182012852145
169	1. 16481568411091E-02
170	6. 59123406319099E-03
171	2. 98576171246325E-03
172	8. 0178426168865E-04
173	4. 97032652250925E-06
174	5. 56727640171103E-04
175	2. 41433587146989E-03
176	5. 53109692983504E-03
177	9. 85650231124307E-03
178	1. 53364169508098E-02
179	2. 19132789601643E-02
180	. 029526314542188
181	3. 81117672923206E-02
182	. 047603141014993

183	5. 79314551064265E-02
184	6. 90255114814659E-02
185	8. 08121719527164E-02
186	9. 31751253658146E-02
187	. 10606202278652
188	. 119400270791383
189	. 133111564696409
190	. 14711732464323
191	. 161339005613057
192	. 175698407934279
193	. 190117986870912
194	. 204521159870264
195	. 218832610046967
196	. 232978584486736
197	. 246887185966992
198	. 260488656713011
199	. 273715652837203
200	. 286503508145694
201	. 298790486040189
202	. 310518018294314
203	. 321630929541548
204	. 332077646376796
205	. 341810390044768
206	. 350785351765643
207	. 35896284983149
208	. 366307467695047
209	. 372788172365545
210	. 378378412523504
211	. 383056195867484
212	. 386804145310073
213	. 389609533747236
214	. 39146429723413
215	. 392365026510795
216	. 392312936932261
217	. 39131381696891
218	. 389377955553695
219	. 386520048662467
220	. 38275908562153
221	. 378118215742016
222	. 372624595983069
223	. 366309220444678
224	. 359206732585489
225	. 351355221150834
226	. 342796000880579
227	. 333573379145157
228	. 323734409730472
229	. 313328635058049
230	. 302339098434307
231	. 290876598481457
232	. 279015548486762
233	. 266812884732866
234	. 254326549721219
235	. 241615195027328
236	. 228737883299085
237	. 215753790916935
238	. 202721912824756
239	. 189700771022259
240	. 176748128183276
241	. 163920707830001
242	. 151273922450989
243	. 138861610900974
244	. 126735786363537
245	. 114946396093893
246	. 103541094088555
247	9. 25650277524134E-02

248	8. 20606395516376E-02
249	7. 20674845539313E-02
250	6. 26220646659927E-02
251	. 053757680282553
252	4. 55042999623994E-02
253	3. 78884486450674E-02
254	3. 09331148179382E-02
255	2. 46576769380002E-02
256	1. 90778493060752E-02
257	. 014205647484561
258	. 010049373243288
259	6. 61361891257787E-03
260	3. 89929091861846E-03
261	1. 90365217439688E-03
262	6. 20382900337723E-04
263	3. 96593528986025E-05
264	1. 48249847319981E-04
265	9. 29627372963253E-04
266	2. 36409801668118E-03
267	4. 42894433189621E-03
268	7. 0985827189155E-03
269	1. 03447338158449E-02
270	. 014136604839615
271	1. 84410827633856E-02
272	2. 32229371701667E-02
273	2. 84450315831352E-02
274	3. 40685420409172E-02
275	4. 00531816612202E-02
276	. 046357429918651
277	. 052938765352426
278	5. 97536407921029E-02
279	6. 67423113756546E-02
280	. 073873458930444
281	8. 11028698802067E-02
282	8. 83865433693662E-02
283	9. 56809166981008E-02
284	. 102943085217834
285	. 110131015592492
286	. 117203751382374
287	. 124121609964044
288	. 130846369861044
289	. 137341447625756
290	. 143572063482256
291	. 149505395012851
292	. 155110718246743
293	. 160359535587524
294	. 165225690096321
295	. 169685465729118
296	. 173717673209293
297	. 177303721299584
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299	. 183076288846279
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