

TECHNICAL EXHIBIT
MINOR CHANGE APPLICATION
DIGITAL LOW POWER STATION K38IZ-D
PHOENIX, ARIZONA
CH 38 15 KW

Technical Narrative

This Technical Exhibit supports a minor change application for digital low power television station K38IZ-D at Phoenix, Arizona. Station K38IZ-D is licensed to operate on channel 38, with a non-directional antenna effective radiated power (ERP) of 9.9 kilowatts (kW) and an antenna radiation center height above mean sea level (RCAMSL) of 837 meters.¹

Proposed Facilities

This application proposes only to increase ERP to 15 kW. The site coordinates remain: 33-20-00 N, 112-03-45 W (NAD-27). Figure 1 is a map showing the proposed 51 dBu contour. As the supporting structure is less than 200 feet tall, antenna structure registration is not needed.

Since this is only a proposed increase in ERP with no change in site or antenna pattern, the proposed coverage will completely encompass all of the existing coverage.

Allocation Considerations

A study has been conducted to assure that the proposal will not create prohibited interference with other licensed, authorized or pending analog or digital TV, LPTV/translator

¹ See BLDTL-20081030ACJ

and Class A TV stations. Using the procedures outlined in the FCC's OET-69 Bulletin, a standard 1 kilometer grid and 1 kilometer terrain distance increment, and 2000 U.S. Census, the proposal complies with the current FCC policy (i.e., less than 0.5% new interference caused to other pertinent assignments).

The applicant recognizes the proposal is secondary to other authorized full-service analog and DTV operations. The applicant understands that it must correct and/or eliminate prohibited interference that may result from its proposed operation.

Mexican Coordination

The proposed transmitter site is located 174 kilometers from the U.S.-Mexican border. The proposed site meets the FCC's minimum separation requirements for a full service DTV station on channel 38, in Zone 2. Thus, it is believed that there should not be any Mexican allocation issues. Coordination with Mexico is respectfully requested, if necessary.

Radiofrequency Electromagnetic Field Exposure

The proposed digital facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The radiation center for the antenna is located 26.2 meters above ground level. The proposed ERP is 15 kW. Figure 2 provides a graph and tabulation of the calculated power density and percentage of the FCC's recommended "uncontrolled" environmental limit (0.41 mW/cm^2) at various depression angles and corresponding distances from the antenna radiation center at a height of 2 meters above ground level.

<u>Vertical Angle</u>	<u>Distance</u>	<u>Relative Field</u>	<u>Power Density</u>	<u>Percentage of FCC Limit</u>
90 deg.	24.2 m	0.08	0.0055 mW/cm ²	1.33%
85	24.3	0.13	0.0143	3.49
80	24.6	0.154	0.0196	4.77
75	25.1	0.14	0.0156	3.79
70	25.8	0.08	0.0048	1.17
65	26.7	0.08	0.0045	1.09
60	27.9	0.13	0.0109	2.65
55	29.5	0.07	0.0028	0.69
50	31.6	0.08	0.0032	0.78
47	33.1	0.112	0.0057	1.39
45	36.2	0.1	0.0038	0.09
40	37.6	0.08	0.0023	0.55
37	40.2	0.11	0.0038	0.91
35	42.2	0.09	0.0023	0.55
30	48.4	0.1	0.0021	0.52
28	51.5	0.12	0.0027	0.66
25	57.3	0.07	0.0007	0.18
20	70.8	0.16	0.0026	0.62
15	93.5	0.16	0.0015	0.36
12	116.4	0.25	0.0023	0.56
10	139.4	0.19	0.0009	0.23
5	277.7	0.7	0.0032	0.77
1.5	924.5	1.0	0.0006	0.14

As shown, the calculated power density at a point 2 meters (6.6 feet) above ground level for the proposed K38IZ-D complies with the FCC's recommended limits. Since the calculated power density is less than 5% of the FCC's uncontrolled limit, no analysis was made for the other stations operating at or near the K38IZ-D site.

Access to the transmitting site will be restricted and appropriately marked with warning signs. As this is a multi-user site and agreement will control site access. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over

a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down.

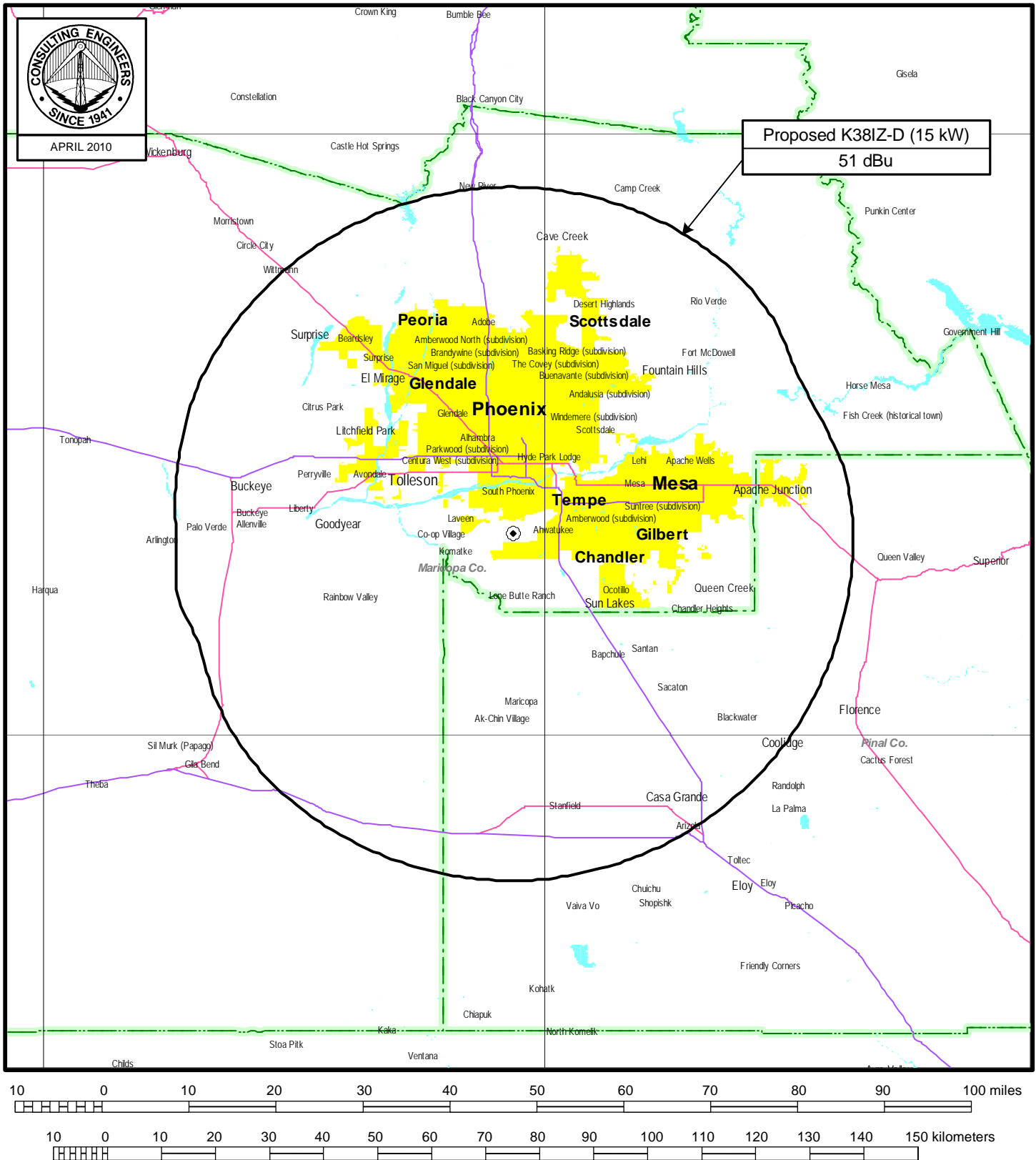
It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner.



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du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
Sarasota, Florida 34237
(941) 329-6000

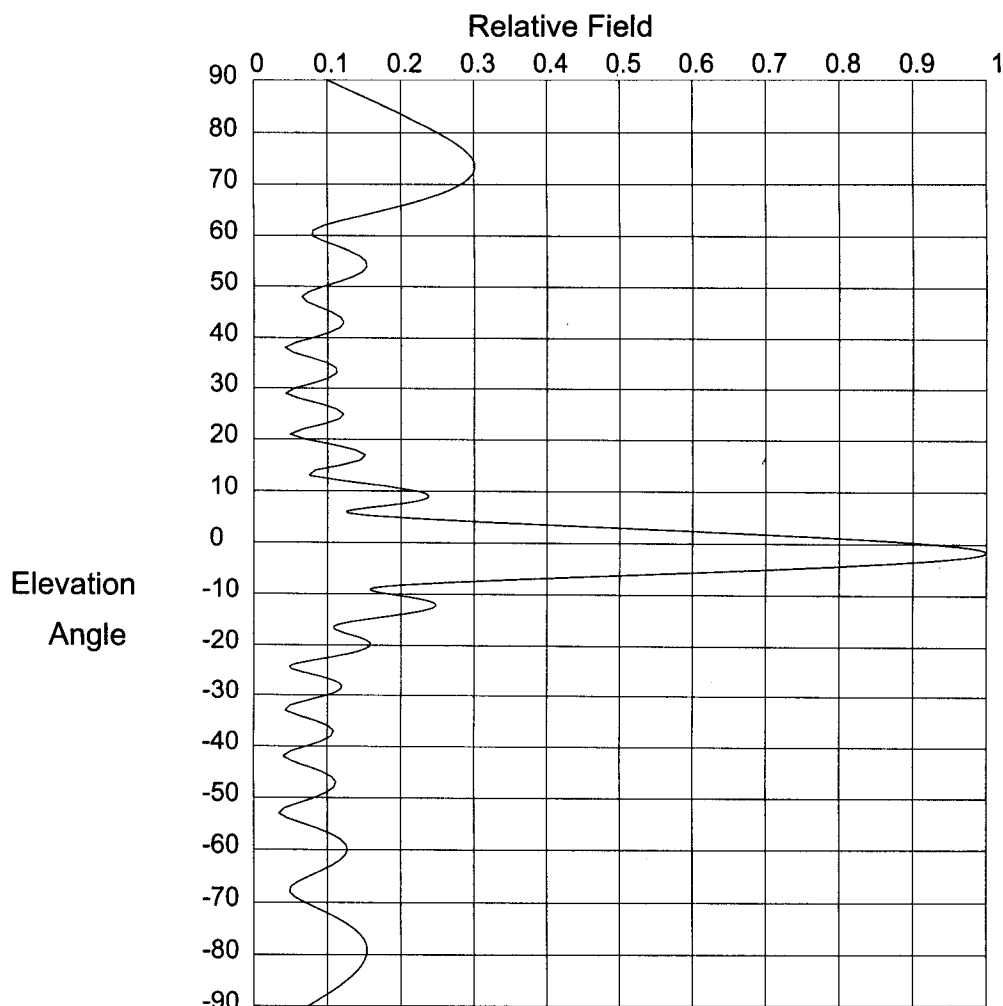
April 19, 2010

Figure 1



PREDICTED COVERAGE CONTOUR
DIGITAL LOW POWER STATION K38IZ-D
PHOENIX, ARIZONA
CH 38 15 KW

du Treil, Lundin & Rackley, Inc Sarasota, Florida



Elevation Pattern

Scale: Linear

Units: Field, Relative

Systems With Reliability

CLIENT: *John Lundin*

Date: 7/6/2005

ANTENNA TYPE: SWMP8OI/38

FREQUENCY: 617

PATTERN POL.: Horizontal

DIRECTIVITY(Peak): 8.121/9.096 dBd

Beam Tilt (Deg.): -1.5

DIRECTIVITY(Horiz): 7.043/8.477 dBd

Null Fill(s)(%): 15, 10, 5

Relative Field Tabulation

Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)
3.2	.468 (-6.588)	-4.4	.785 (-2.101)	-12.0	.248 (-12.118)
3.0	.503 (-5.963)	-4.6	.757 (-2.423)	-12.2	.248 (-12.114)
2.8	.538 (-5.381)	-4.8	.727 (-2.77)	-12.4	.247 (-12.153)
2.6	.573 (-4.84)	-5.0	.696 (-3.146)	-12.6	.245 (-12.234)
2.4	.607 (-4.337)	-5.2	.664 (-3.55)	-12.8	.241 (-12.357)
2.2	.641 (-3.87)	-5.4	.632 (-3.985)	-13.0	.237 (-12.522)
2.0	.673 (-3.435)	-5.6	.599 (-4.451)	-13.2	.231 (-12.727)
1.8	.705 (-3.033)	-5.8	.566 (-4.95)	-13.4	.225 (-12.972)
1.6	.736 (-2.66)	-6.0	.532 (-5.485)	-13.6	.217 (-13.258)
1.4	.766 (-2.316)	-6.2	.498 (-6.056)	-13.8	.209 (-13.583)
1.2	.794 (-2)	-6.4	.464 (-6.666)	-14.0	.201 (-13.947)
1.0	.821 (-1.709)	-6.6	.431 (-7.316)	-14.2	.192 (-14.349)
.8	.847 (-1.444)	-6.8	.398 (-8.008)	-14.4	.182 (-14.787)
.6	.871 (-1.203)	-7.0	.365 (-8.743)	-14.6	.173 (-15.258)
.4	.893 (-0.985)	-7.2	.334 (-9.521)	-14.8	.163 (-15.757)
.2	.913 (-0.791)	-7.4	.304 (-10.34)	-15.0	.153 (-16.279)
.0	.931 (-0.619)	-7.6	.276 (-11.194)	-15.2	.144 (-16.812)
-.2	.947 (-0.469)	-7.8	.249 (-12.073)	-15.4	.136 (-17.343)
-.4	.962 (-0.34)	-8.0	.225 (-12.958)	-15.6	.128 (-17.855)
-.6	.974 (-0.232)	-8.2	.204 (-13.819)	-15.8	.121 (-18.324)
-.8	.983 (-0.145)	-8.4	.186 (-14.609)	-16.0	.116 (-18.726)
-1.0	.991 (-0.078)	-8.6	.172 (-15.272)	-16.2	.112 (-19.033)
-1.2	.996 (-0.032)	-8.8	.163 (-15.75)	-16.4	.109 (-19.227)
-1.4	.999 (-0.006)	-9.0	.158 (-16)	-16.6	.108 (-19.297)
-1.6	1.00 (0)	-9.2	.158 (-16.018)	-16.8	.109 (-19.247)
-1.8	.998 (-0.014)	-9.4	.161 (-15.838)	-17.0	.111 (-19.093)
-2.0	.994 (-0.048)	-9.6	.168 (-15.515)	-17.2	.114 (-18.857)
-2.2	.988 (-0.102)	-9.8	.176 (-15.109)	-17.4	.118 (-18.565)
-2.4	.98 (-0.177)	-10.0	.185 (-14.671)	-17.6	.122 (-18.243)
-2.6	.969 (-0.272)	-10.2	.194 (-14.233)	-17.8	.127 (-17.91)
-2.8	.956 (-0.388)	-10.4	.204 (-13.82)	-18.0	.132 (-17.583)
-3.0	.941 (-0.524)	-10.6	.213 (-13.444)	-18.2	.137 (-17.273)
-3.2	.925 (-0.682)	-10.8	.221 (-13.111)	-18.4	.141 (-16.988)
-3.4	.906 (-0.861)	-11.0	.228 (-12.826)	-18.6	.146 (-16.734)
-3.6	.885 (-1.063)	-11.2	.235 (-12.59)	-18.8	.149 (-16.515)
-3.8	.862 (-1.287)	-11.4	.24 (-12.402)	-19.0	.153 (-16.332)
-4.0	.838 (-1.534)	-11.6	.244 (-12.261)	-19.2	.155 (-16.188)
-4.2	.812 (-1.805)	-11.8	.246 (-12.167)	-19.4	.157 (-16.082)

Systems With Reliability

Page 2 of 3

CLIENT: *John Lundin*

Date: 7/6/2005

ANTENNA TYPE: SWMP8OI/38

FREQUENCY: 617

PATTERN POL.: Horizontal

DIRECTIVITY(Peak): 8.121/9.096 dBd

Beam Tilt (Deg.): -1.5

DIRECTIVITY(Horiz): 7.043/8.477 dBd

Null Fill(s)(%): 15, 10, 5

Relative Field Tabulation

Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)
-19.6	.158 (-16.016)	-27.2	.111 (-19.093)	-54.0	.046 (-26.708)
-19.8	.159 (-15.99)	-27.4	.114 (-18.877)	-55.0	.067 (-23.487)
-20.0	.158 (-16.005)	-27.6	.116 (-18.708)	-56.0	.088 (-21.15)
-20.2	.157 (-16.06)	-27.8	.118 (-18.584)	-57.0	.105 (-19.574)
-20.4	.156 (-16.156)	-28.0	.119 (-18.504)	-58.0	.118 (-18.576)
-20.6	.153 (-16.295)	-28.2	.119 (-18.466)	-59.0	.125 (-18.037)
-20.8	.15 (-16.475)	-28.4	.119 (-18.47)	-60.0	.127 (-17.89)
-21.0	.146 (-16.7)	-28.6	.119 (-18.516)	-61.0	.124 (-18.099)
-21.2	.142 (-16.97)	-28.8	.117 (-18.604)	-62.0	.117 (-18.653)
-21.4	.137 (-17.287)	-29.0	.116 (-18.733)	-63.0	.105 (-19.555)
-21.6	.131 (-17.652)	-29.2	.113 (-18.905)	-64.0	.091 (-20.823)
-21.8	.125 (-18.068)	-29.4	.111 (-19.119)	-65.0	.075 (-22.456)
-22.0	.118 (-18.537)	-29.6	.107 (-19.376)	-66.0	.061 (-24.342)
-22.2	.111 (-19.062)	-29.8	.104 (-19.679)	-67.0	.05 (-25.958)
-22.4	.104 (-19.645)	-30.0	.10 (-20.028)	-68.0	.049 (-26.234)
-22.6	.097 (-20.288)	-31.0	.075 (-22.528)	-69.0	.057 (-24.939)
-22.8	.089 (-20.991)	-32.0	.049 (-26.13)	-70.0	.07 (-23.096)
-23.0	.082 (-21.753)	-33.0	.043 (-27.398)	-71.0	.085 (-21.385)
-23.2	.074 (-22.566)	-34.0	.061 (-24.232)	-72.0	.10 (-19.972)
-23.4	.068 (-23.413)	-35.0	.085 (-21.45)	-73.0	.114 (-18.849)
-23.6	.061 (-24.262)	-36.0	.102 (-19.869)	-74.0	.126 (-17.977)
-23.8	.056 (-25.055)	-37.0	.109 (-19.288)	-75.0	.136 (-17.316)
-24.0	.052 (-25.711)	-38.0	.105 (-19.583)	-76.0	.144 (-16.834)
-24.2	.049 (-26.131)	-39.0	.092 (-20.757)	-77.0	.15 (-16.506)
-24.4	.049 (-26.241)	-40.0	.072 (-22.91)	-78.0	.153 (-16.314)
-24.6	.05 (-26.028)	-41.0	.05 (-25.989)	-79.0	.154 (-16.244)
-24.8	.053 (-25.554)	-42.0	.04 (-27.927)	-80.0	.153 (-16.285)
-25.0	.057 (-24.912)	-43.0	.052 (-25.682)	-81.0	.151 (-16.43)
-25.2	.062 (-24.193)	-44.0	.073 (-22.723)	-82.0	.147 (-16.674)
-25.4	.067 (-23.461)	-45.0	.092 (-20.68)	-83.0	.141 (-17.016)
-25.6	.073 (-22.755)	-46.0	.106 (-19.503)	-84.0	.134 (-17.456)
-25.8	.079 (-22.095)	-47.0	.112 (-19.047)	-85.0	.126 (-17.997)
-26.0	.084 (-21.493)	-48.0	.109 (-19.238)	-86.0	.117 (-18.645)
-26.2	.09 (-20.95)	-49.0	.099 (-20.078)	-87.0	.107 (-19.412)
-26.4	.095 (-20.467)	-50.0	.083 (-21.644)	-88.0	.096 (-20.312)
-26.6	.10 (-20.042)	-51.0	.062 (-24.093)	-89.0	.085 (-21.371)
-26.8	.104 (-19.674)	-52.0	.043 (-27.415)	-90.0	.074 (-22.623)
-27.0	.108 (-19.358)	-53.0	.034 (-29.323)	-90.0	.00 (-50)

Systems With Reliability

Page 3 of 3

CLIENT: John Lundin

Date: 7/6/2005

ANTENNA TYPE: SWMP80I/38

FREQUENCY: 617

PATTERN POL.: Horizontal

DIRECTIVITY(Peak): 8.121/9.096 dBd

Beam Tilt (Deg.): -1.5

DIRECTIVITY(Horiz): 7.043/8.477 dBd

Null Fill(s)(%): 15, 10, 5