

TECHNICAL EXHIBIT  
CONCERNING HUMAN EXPOSURE TO RF ELECTROMAGNETIC ENERGY  
PREPARED FOR  
STATION KNLJ-DT  
JEFFERSON CITY, MISSOURI  
CH 20 1000 KW 314 M

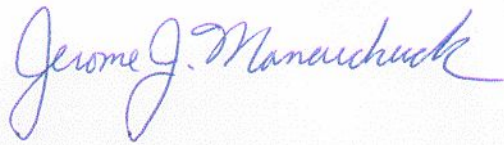
Technical Statement

The proposed 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 proposed DTV antenna is located 279 meters above ground level. The maximum DTV ERP is 1000 kW (horizontal polarization). A “worst-case” vertical plane relative field value of 0.1 (for angles below 60 degrees downward) was presumed for the antenna's downward radiation (see Figure 2). The calculated power density at a point 2 meters above ground level is  $0.0044 \text{ mW/cm}^2$ . This is 1.3% of the FCC's recommended limit of  $0.34 \text{ mW/cm}^2$  for channel 20 for an “uncontrolled” environment. Therefore, based on the responsibility threshold of 5%, the proposal will comply with the RF emission rules.

Access to the transmitting site will be restricted and appropriately marked with RFR warning signs. Furthermore, in the event that workers or other authorized personnel enter the restricted area 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.

Finally, it is noted that this technical exhibit only addresses the potential for radio frequency electromagnetic field exposure. All other aspects of the

environmental processing analysis will be or already has been provided to the FCC by the tower owner as part of the tower registration process.

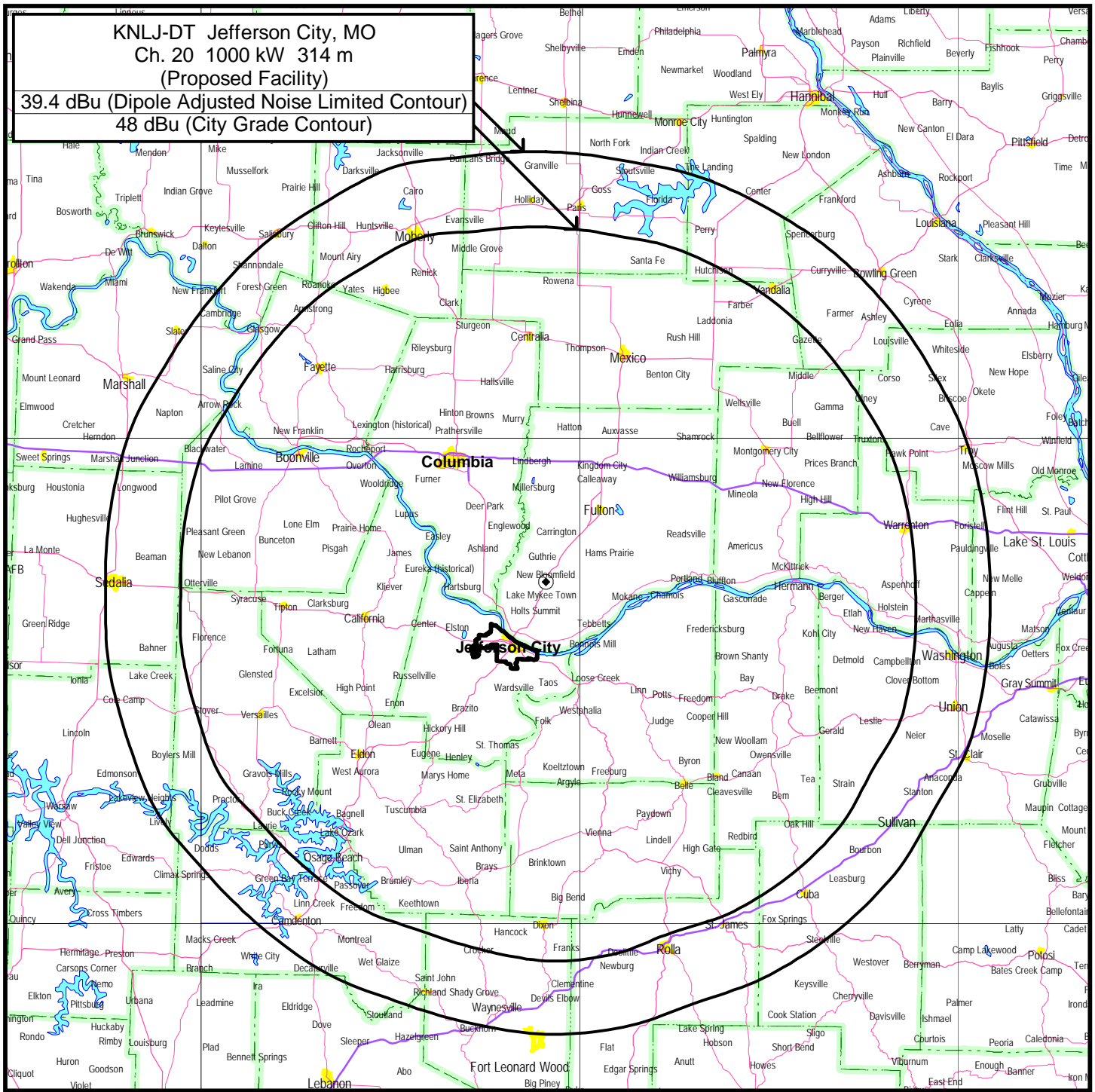


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Figure 1



25 0 25 50 75 100 125  
Kilometers

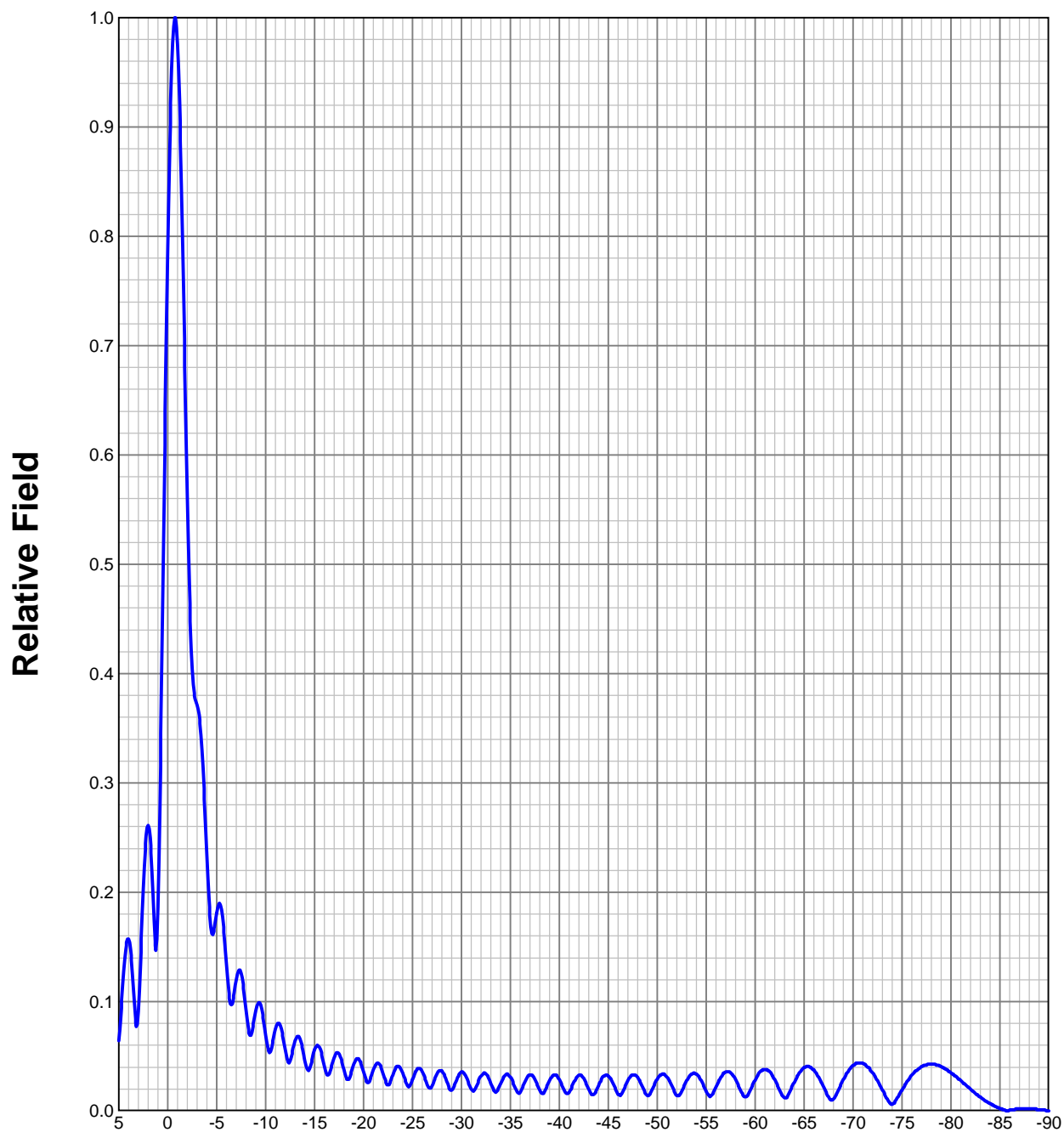
## FCC PREDICTED COVERAGE CONTOURS

DTV STATION KNLJ-DT  
JEFFERSON CITY, MISSOURI  
CH 20 1000 KW 314 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida 34237

### ELEVATION PATTERN

Type:	ATW27H3H		Channel:	20
Directivity:	Numeric	dBd	Location:	New Orleans, LA
Main Lobe:	27.00	14.31	Beam Tilt:	-0.75
Horizontal:	16.77	12.24	Polarization:	Horizontal



Preliminary, subject to final design and review.

**TABULATED DATA FOR ELEVATION PATTERN**

Type: ATW27H3H  
Polarization: Horizontal

ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB
5.00	0.064	-23.88	-6.75	0.105	-19.53	-27.00	0.023	-32.77	-50.50
4.75	0.094	-20.54	-7.00	0.120	-18.42	-27.50	0.034	-29.37	-51.00
4.50	0.128	-17.86	-7.25	0.129	-17.82	-28.00	0.037	-28.64	-51.50
4.25	0.151	-16.42	-7.50	0.126	-17.99	-28.50	0.027	-31.37	-52.00
4.00	0.157	-16.08	-7.75	0.112	-19.02	-29.00	0.019	-34.42	-52.50
3.75	0.143	-16.92	-8.00	0.092	-20.72	-29.50	0.028	-31.06	-53.00
3.50	0.111	-19.09	-8.25	0.074	-22.62	-30.00	0.036	-28.87	-53.50
3.25	0.081	-21.88	-8.50	0.069	-23.22	-30.50	0.031	-30.17	-54.00
3.00	0.091	-20.82	-8.75	0.080	-21.99	-31.00	0.020	-33.98	-54.50
2.75	0.145	-16.77	-9.00	0.092	-20.72	-31.50	0.022	-33.15	-55.00
2.50	0.203	-13.85	-9.25	0.099	-20.13	-32.00	0.032	-29.90	-55.50
2.25	0.245	-12.22	-9.50	0.097	-20.26	-32.50	0.034	-29.37	-56.00
2.00	0.261	-11.67	-9.75	0.085	-21.41	-33.00	0.025	-32.04	-56.50
1.75	0.243	-12.29	-10.00	0.069	-23.22	-33.50	0.017	-35.39	-57.00
1.50	0.197	-14.11	-10.50	0.054	-25.35	-34.00	0.025	-32.04	-57.50
1.25	0.151	-16.42	-11.00	0.075	-22.50	-34.50	0.033	-29.63	-58.00
1.00	0.186	-14.61	-11.50	0.078	-22.16	-35.00	0.031	-30.17	-58.50
0.75	0.316	-10.02	-12.00	0.056	-25.04	-35.50	0.021	-33.56	-59.00
0.50	0.476	-6.45	-12.50	0.046	-26.74	-36.00	0.017	-35.39	-59.50
0.25	0.641	-3.87	-13.00	0.064	-23.88	-36.50	0.027	-31.37	-60.00
0.00	0.788	-2.07	-13.50	0.066	-23.61	-37.00	0.033	-29.63	-60.50
-0.25	0.903	-0.89	-14.00	0.046	-26.74	-37.50	0.029	-30.75	-61.00
-0.50	0.977	-0.20	-14.50	0.039	-28.18	-38.00	0.019	-34.42	-61.50
-0.75	1.000	0.00	-15.00	0.056	-25.04	-38.50	0.018	-34.89	-62.00
-1.00	0.975	-0.22	-15.50	0.058	-24.73	-39.00	0.028	-31.06	-62.50
-1.25	0.905	-0.87	-16.00	0.041	-27.74	-39.50	0.033	-29.63	-63.00
-1.50	0.802	-1.92	-16.50	0.034	-29.37	-40.00	0.029	-30.75	-63.50
-1.75	0.681	-3.34	-17.00	0.049	-26.20	-40.50	0.019	-34.42	-64.00
-2.00	0.561	-5.02	-17.50	0.052	-25.68	-41.00	0.017	-35.39	-64.50
-2.25	0.464	-6.67	-18.00	0.038	-28.40	-41.50	0.027	-31.37	-65.00
-2.50	0.404	-7.87	-18.50	0.029	-30.75	-42.00	0.033	-29.63	-65.50
-2.75	0.380	-8.42	-19.00	0.043	-27.33	-42.50	0.030	-30.46	-66.00
-3.00	0.371	-8.61	-19.50	0.048	-26.38	-43.00	0.020	-33.98	-66.50
-3.25	0.358	-8.92	-20.00	0.036	-28.87	-43.50	0.015	-36.48	-67.00
-3.50	0.330	-9.63	-20.50	0.026	-31.70	-44.00	0.023	-32.77	-67.50
-3.75	0.285	-10.90	-21.00	0.038	-28.40	-44.50	0.032	-29.90	-68.00
-4.00	0.233	-12.65	-21.50	0.044	-27.13	-45.00	0.032	-29.90	-68.50
-4.25	0.186	-14.59	-22.00	0.034	-29.37	-45.50	0.025	-32.04	-69.00
-4.50	0.162	-15.81	-22.50	0.024	-32.40	-46.00	0.015	-36.48	-69.50
-4.75	0.167	-15.57	-23.00	0.033	-29.63	-46.50	0.018	-34.89	-70.00
-5.00	0.181	-14.85	-23.50	0.041	-27.74	-47.00	0.028	-31.06	-70.50
-5.25	0.190	-14.45	-24.00	0.035	-29.12	-47.50	0.033	-29.63	-71.00
-5.50	0.184	-14.70	-24.50	0.023	-32.77	-48.00	0.031	-30.17	-71.50
-5.75	0.163	-15.76	-25.00	0.029	-30.75	-48.50	0.022	-33.15	-72.00
-6.00	0.134	-17.46	-25.50	0.039	-28.18	-49.00	0.014	-37.08	-72.50
-6.25	0.107	-19.37	-26.00	0.036	-28.87	-49.50	0.020	-33.98	-73.00
-6.50	0.097	-20.26	-26.50	0.024	-32.40	-50.00	0.029	-30.75	-73.50

*Preliminary, subject to final design and review.*