

TECHNICAL EXHIBIT
MINOR MODIFICATION APPLICATION
STATION WJKT-DT (FACILITY ID 68519)
JACKSON, TENNESSEE

NOVEMBER 2, 2004

CH 39 392 KW 296 M

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Technical Narrative

This Technical Exhibit was prepared on behalf of digital television broadcast station WJKT-DT at Jackson, Tennessee. Station WJKT-DT is authorized for operation on channel 39 with a directional antenna maximum effective radiated power (ERP) of 800 kW and an antenna height above average terrain (HAAT) of 296 meters (BMPCDT-20000501ABP).

The proposed facility will not result in any extension of the authorized noise-limited contour as shown in Figure 3. Therefore, the proposal meets the terms of the FCC Filing Freeze for digital television stations.¹

Proposed Facilities

This application proposes to authorize its current STA facilities. This involves a reduction in authorized ERP. There is no proposed change in site, channel (39) or city of license (Jackson). The site coordinates remain (NAD27): 35-47-22 N, 89-06-14 W. A non-directional antenna ERP of 392 kW and antenna HAAT of 296 meters are proposed. The FCC antenna structure registration number is 1049754.

Figure 3 is a map showing the predicted noise-limited (41 dBu) and city-grade (48 dBu) contours for the proposed operation, along with the noise-limited contour for the authorized WJKT-DT operation. The Jackson city limits were derived from information

¹ See August 2004 Filing Freeze PN, DA 04-2446 (MB released Aug. 3, 2004).

contained in the 2000 U.S. Census for Tennessee. The proposal complies with the city coverage requirements of Section 73.625(a).

Nearby Broadcast Facilities

AM station WCTA on 810 kilohertz is located 2 kilometers northwest of the WJKT site. WCTA operates during the daytime hours with a directional power of 250 Watts. FM station WWGM is licensed to operate on channel 226C3 at a location 8.3 kilometers southeast of the WJKT site. There are no other known authorized full service FM and TV stations within 16 kilometers (10 miles) of the WJKT site. Since there is no actual construction proposed (implementation of the existing STA facilities), no adverse electromagnetic impact is expected, the applicant recognizes its responsibility to correct problems that may result from its proposed operation.

Allocation Considerations

Interference calculations have been made using the procedures outlined in the FCC's OET-69 bulletin, using a 2 kilometer grid spacing. The proposed WJKT-DT operation does not cause excessive (greater than 2%, up to 10% total) calculated interference to any analog or DTV assignment. Below is the list of stations considered in the OET-69 analysis.

Stations Potentially Affected by Proposed WJKT-DT						
Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
24	WPTY-TV	MEMPHIS TN	83.5	LIC	BLCT	-19990615KG
39	960724KV	TUSCALOOSA AL	300.2	APP	BPET	-19960724KV
39	KASN	PINE BLUFF AR	320.2	LIC	BLCDT	-20020904AAF
39	KASN-DT	PINE BLUFF AR	320.2	PLN	DTVPLN	-DTVP1077
39	NEW	NEW ALBANY IN	373.6	ADD	BPRM	-20000717ADC
39	WBAK-DT	TERRE HAUTE IN	411.2	PLN	DTVPLN	-DTVP1090
39	WBAK-TV	TERRE HAUTE IN	411.2	CP MOD	BMPCDT	-19991101AJG
39	KETC-DT	ST. LOUIS MO	320.5	PLN	DTVPLN	-DTVP1094
39	W39CD	FULTON MS	207.2	LIC	BLTTL	-19980511JB
39	WYHB-CA	CHATTANOOGA TN	351.9	LIC	BLTTL	-19980824JC
39	WHTN	MURFREESBORO TN	242.7	CP	BPCT	-20020509AAS
39	WHTN	MURFREESBORO TN	242.6	LIC	BLCT	-19840120KK
40	WBUY-TV	HOLLY SPRINGS MS	103.5	LIC	BLCT	-19910920KG
42	W42BY	MEMPHIS TN	112.0	LIC	BLTTL	-19980629JE
46	960116KK	GOSNELL AR	77.5	APP	BPCT	-19960116KK

From the above list of stations considered, the table below shows the calculated interference caused to each station. Only stations that are predicted to receive interference from the proposed WJKT-DT operation are shown in the interference table.

Study Station	Baseline	Net Population Change/Interference
24 WPTY-TV MEMPHIS TN (LIC)	1,235,042	126 (0.0%) New Interference
39 960724KV TUSCALOOSA AL (APP)	1,182,554	236 (0.0%) New Interference
39 KASN-DT PINE BLUFF AR (LIC)	803,628	114 (0.0%) New Interference
39 KASN-DT PINE BLUFF AR (PLN)	803,628	22 (0.0%) New Interference
39 KETC-DT ST. LOUIS MO (PLN)	2,687,761	0 (0.0%) New Interference
39 WHTN MURFREESBORO TN (CP)	1,098,062	2,892 (0.2%) New Interference
39 WHTN MURFREESBORO TN (LIC)	1,102,278	2,360 (0.2%) New Interference
46 960116KK GOSNELL AR (APP)	1,009,480	483 (0.0%) New Interference

The proposed WJKT-DT operation does not cause calculated interference to any analog or DTV station. Therefore, it is believed the proposal complies with the FCC's "de minimis" interference policy.

With respect to Class A TV station protection, the proposal has been evaluated according to the requirements of Section 73.613 of the FCC Rules. The analysis reveals no potential impact to any Class A station.

Radiofrequency Electromagnetic Field Exposure

The proposed WJKT-DT 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 283 meters above ground level with an ERP of 392 kW. A "conservative" relative field value of 0.2 was assumed for the antenna calculation (See Figure 2). The calculated power density at a point 2 meters above ground level will be 0.0066 mW/cm². This is less than 5% of the FCC's recommended limit of 0.42 mW/cm² for channel 39 for an "uncontrolled" environment.

Access to the transmitting site will be restricted and appropriately marked with warning signs. 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 as part of the tower registration process.



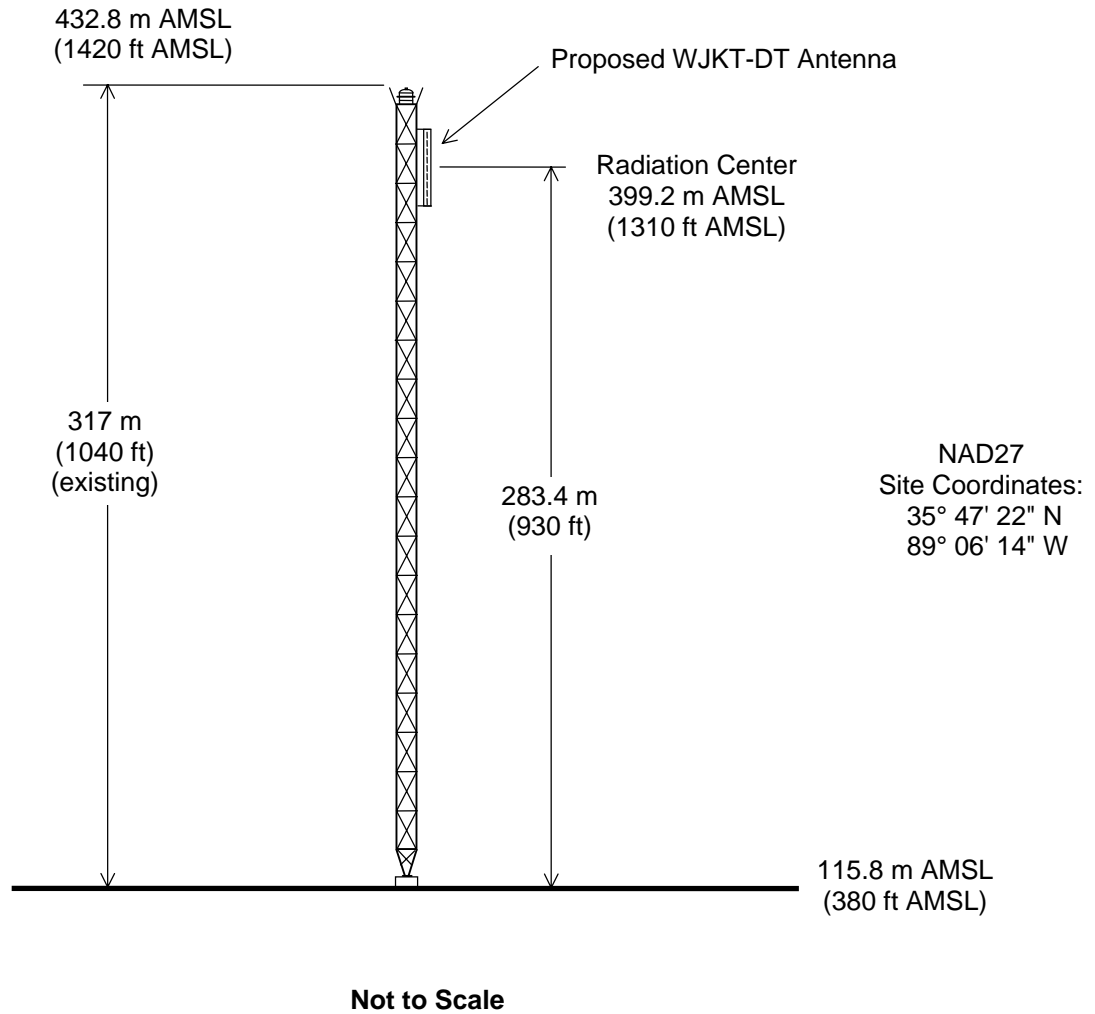
Jonathan N. Edwards

du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
Sarasota, Florida 34237
(941) 339-6000

November 2, 2004



ASRN: 1049754



ANTENNA AND SUPPORTING STRUCTURE

STATION WJKT-DT
JACKSON, TENNESSEE
CH 39 392 KW 296 M

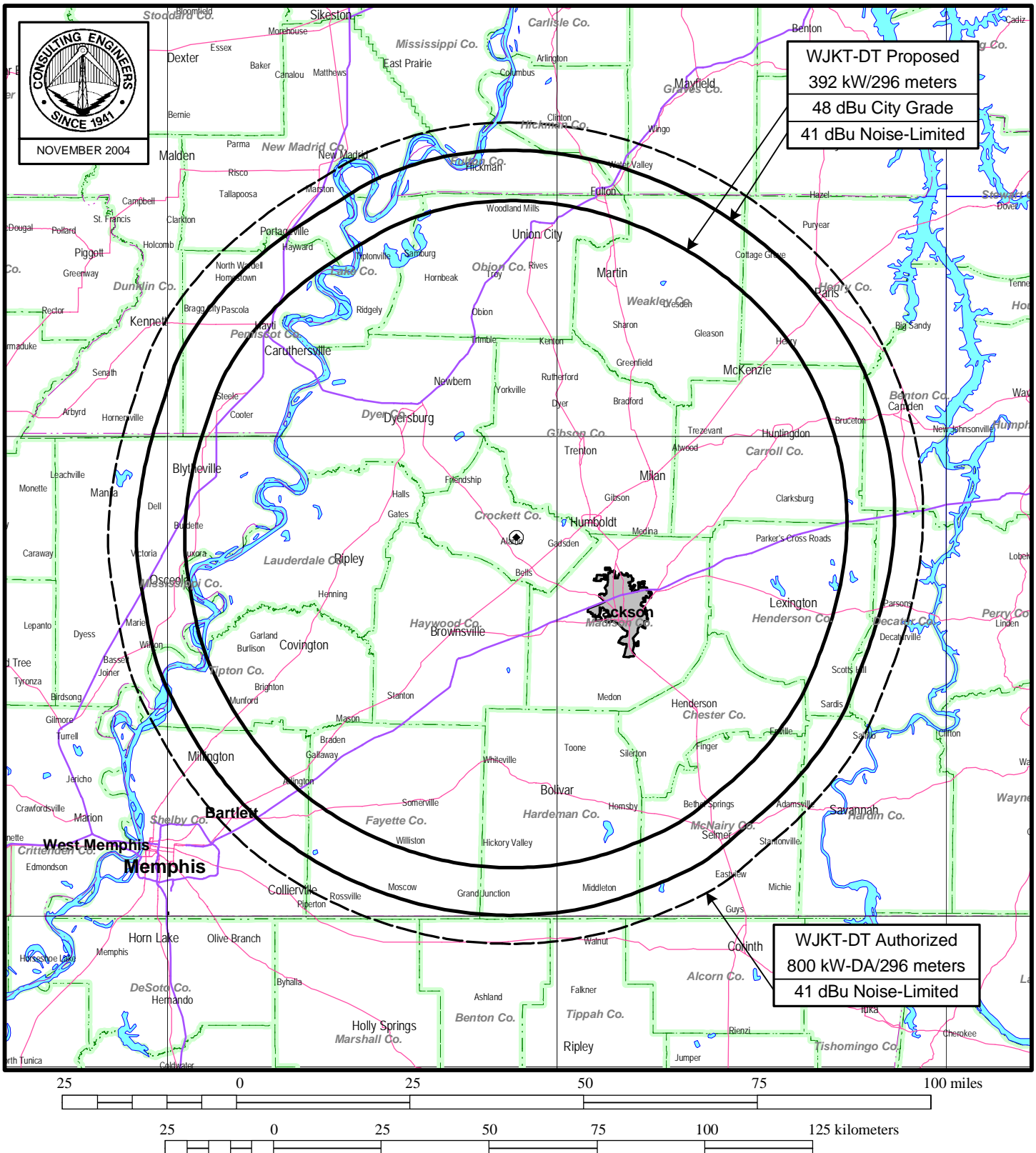
du Treil, Lundin & Rackley, Inc. Sarasota, Florida



TABULATED DATA FOR ELEVATION PATTERN
TYPE : ATL25H3H

Angle Field dB -5 To 10 In 0.25 Increments			Angle Field dB 10 To 90 In 0.5 Increments			Angle Field dB			Angle Field dB		
-5.00	0.127	-17.95	8.75	0.109	-19.22	35.00	0.020	-34.15	62.50	0.024	-32.57
-4.75	0.145	-16.78	9.00	0.090	-20.89	35.50	0.021	-33.76	63.00	0.032	-29.99
-4.50	0.148	-16.57	9.25	0.078	-22.17	36.00	0.031	-30.22	63.50	0.037	-28.72
-4.25	0.135	-17.37	9.50	0.079	-22.08	36.50	0.036	-28.87	64.00	0.038	-28.40
-4.00	0.108	-19.34	9.75	0.089	-20.99	37.00	0.032	-29.87	64.50	0.036	-28.95
-3.75	0.076	-22.41	10.00	0.101	-19.93	37.50	0.022	-33.27	65.00	0.030	-30.45
-3.50	0.071	-22.97	10.50	0.106	-19.50	38.00	0.017	-35.58	65.50	0.022	-33.23
-3.25	0.111	-19.06	11.00	0.083	-21.60	38.50	0.026	-31.82	66.00	0.012	-38.35
-3.00	0.165	-15.63	11.50	0.060	-24.37	39.00	0.034	-29.38	66.50	0.005	-45.92
-2.75	0.213	-13.43	12.00	0.073	-22.74	39.50	0.034	-29.25	67.00	0.012	-38.27
-2.50	0.244	-12.25	12.50	0.088	-21.16	40.00	0.027	-31.39	67.50	0.022	-33.26
-2.25	0.251	-12.01	13.00	0.078	-22.13	40.50	0.017	-35.48	68.00	0.030	-30.49
-2.00	0.230	-12.75	13.50	0.055	-25.26	41.00	0.019	-34.64	68.50	0.036	-28.89
-1.75	0.185	-14.66	14.00	0.052	-25.66	41.50	0.029	-30.81	69.00	0.039	-28.07
-1.50	0.136	-17.36	14.50	0.069	-23.18	42.00	0.035	-29.15	69.50	0.040	-27.87
-1.25	0.152	-16.38	15.00	0.072	-22.84	42.50	0.033	-29.61	70.00	0.039	-28.23
-1.00	0.257	-11.81	15.50	0.056	-25.10	43.00	0.024	-32.26	70.50	0.035	-29.16
-0.75	0.399	-7.99	16.00	0.041	-27.80	43.50	0.015	-36.35	71.00	0.029	-30.77
-0.50	0.550	-5.19	16.50	0.052	-25.74	44.00	0.019	-34.40	71.50	0.022	-33.32
-0.25	0.695	-3.16	17.00	0.062	-24.10	44.50	0.029	-30.73	72.00	0.013	-37.57
0.00	0.821	-1.71	17.50	0.056	-25.11	45.00	0.035	-29.22	72.50	0.004	-47.12
0.25	0.919	-0.74	18.00	0.038	-28.39	45.50	0.033	-29.67	73.00	0.005	-46.83
0.50	0.980	-0.18	18.50	0.037	-28.55	46.00	0.025	-32.15	73.50	0.013	-37.71
0.75	1.001	0.01	19.00	0.052	-25.73	46.50	0.015	-36.26	74.00	0.021	-33.65
1.00	0.981	-0.17	19.50	0.055	-25.20	47.00	0.018	-35.14	74.50	0.028	-31.21
1.25	0.923	-0.69	20.00	0.043	-27.40	47.50	0.027	-31.22	75.00	0.033	-29.61
1.50	0.835	-1.57	20.50	0.030	-30.59	48.00	0.034	-29.26	75.50	0.037	-28.56
1.75	0.726	-2.78	21.00	0.038	-28.38	48.50	0.035	-29.12	76.00	0.040	-27.91
2.00	0.610	-4.29	21.50	0.049	-26.17	49.00	0.029	-30.75	76.50	0.042	-27.58
2.25	0.503	-5.98	22.00	0.047	-26.64	49.50	0.019	-34.40	77.00	0.042	-27.50
2.50	0.420	-7.53	22.50	0.033	-29.70	50.00	0.014	-37.35	77.50	0.041	-27.66
2.75	0.374	-8.54	23.00	0.027	-31.28	50.50	0.021	-33.52	78.00	0.040	-28.03
3.00	0.359	-8.90	23.50	0.039	-28.15	51.00	0.031	-30.29	78.50	0.037	-28.60
3.25	0.358	-8.91	24.00	0.046	-26.77	51.50	0.036	-28.95	79.00	0.034	-29.37
3.50	0.354	-9.01	24.50	0.039	-28.07	52.00	0.035	-29.18	79.50	0.030	-30.34
3.75	0.337	-9.46	25.00	0.027	-31.50	52.50	0.028	-31.03	80.00	0.027	-31.53
4.00	0.303	-10.36	25.50	0.028	-31.15	53.00	0.018	-34.83	80.50	0.023	-32.96
4.25	0.259	-11.74	26.00	0.039	-28.09	53.50	0.012	-38.07	81.00	0.018	-34.66
4.50	0.212	-13.47	26.50	0.043	-27.34	54.00	0.020	-34.14	81.50	0.015	-36.70
4.75	0.176	-15.09	27.00	0.035	-29.20	54.50	0.029	-30.68	82.00	0.011	-39.19
5.00	0.163	-15.78	27.50	0.023	-32.61	55.00	0.035	-29.03	82.50	0.008	-42.29
5.25	0.171	-15.35	28.00	0.028	-31.18	55.50	0.036	-28.82	83.00	0.005	-46.32
5.50	0.186	-14.59	28.50	0.038	-28.36	56.00	0.032	-29.96	83.50	0.003	-51.35
5.75	0.196	-14.14	29.00	0.040	-27.97	56.50	0.023	-32.71	84.00	0.002	-53.36
6.00	0.194	-14.24	29.50	0.031	-30.13	57.00	0.013	-37.46	84.50	0.003	-50.20
6.25	0.179	-14.93	30.00	0.021	-33.52	57.50	0.012	-38.25	85.00	0.004	-47.58
6.50	0.155	-16.20	30.50	0.027	-31.50	58.00	0.021	-33.41	85.50	0.005	-46.02
6.75	0.128	-17.88	31.00	0.037	-28.70	58.50	0.030	-30.36	86.00	0.005	-45.22
7.00	0.108	-19.34	31.50	0.038	-28.33	59.00	0.036	-28.91	86.50	0.006	-45.00
7.25	0.105	-19.59	32.00	0.030	-30.44	59.50	0.037	-28.67	87.00	0.005	-45.28
7.50	0.118	-18.72	32.50	0.020	-34.03	60.00	0.033	-29.56	87.50	0.005	-46.04
7.75	0.130	-17.72	33.00	0.024	-32.34	60.50	0.026	-31.75	88.00	0.004	-47.36
8.00	0.139	-17.17	33.50	0.034	-29.30	61.00	0.016	-35.90	88.50	0.003	-49.40
8.25	0.138	-17.23	34.00	0.037	-28.62	61.50	0.008	-41.54	89.00	0.002	-52.60
8.50	0.127	-17.92	34.50	0.030	-30.36	62.00	0.014	-37.24	89.50	0.001	-58.44

Figure 3



PREDICTED COVERAGE CONTOURS

STATION WJKT-DT
JACKSON, TENNESSEE
CH 39 392 KW 296 M

du Treil, Lundin & Rackley, Inc Sarasota, Florida