

TECHNICAL EXHIBIT  
MINOR CHANGE APPLICATION  
STATION WTVM-DT (FACILITY ID 595)  
COLUMBUS, GEORGIA

OCTOBER 20, 2004

CH 47 302 KW (MAX-DA) 323 M

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Technical Narrative

This Technical Exhibit was prepared on behalf of digital television station WTVM-DT at Columbus, Georgia, in support of an application for minor change to the existing facility. Station WTVM-DT is licensed to operate on channel 47 with a directional antenna maximum effective radiated power (ERP) of 528 kW and an antenna height above average terrain (HAAT) of 323 meters (BLCDT-20030312AOD).

The proposed facility will not result in any extension of the allotted noise-limited contour as shown in Figure 2. Therefore, the proposal meets the terms of the FCC Filing Freeze for digital television stations.<sup>1</sup>

Proposed Facilities

This "checklist" application proposes to decrease ERP, increase antenna height and change to a non-directional antenna. The proposed antenna will be mounted on a taller, adjacent tower, with no change in site coordinates: 32-19-25 N, 84-46-46 W (NAD27). The FCC antenna structure registration number is 1019721. Figure 1 is a sketch of the proposed antenna and supporting structure.

There are no AM broadcast stations within 5 kilometers of the proposed transmitter site. The following is a list of full service FM and TV stations within 16 kilometers of the proposed site.

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

<u>Station</u>	<u>Channel</u>	<u>Bearing(°True)</u>	<u>Distance(km)</u>
WVRK, Columbus, GA	275C	0	0.0
WEAM-FM, Buena Vista, GA	264A	79	11.9
WRBL, Columbus, GA	3	0	0.0
WTVM, Columbus, GA	9	0	0.0
WRBL-DT, Columbus, GA	15	0	0.0
WSWS-TV, Opelika, AL	66	0	0.0
WSWS-TV, Opelika, AL	31	256	1.1

No adverse impact is expected to any other surrounding station. Furthermore, the applicant recognizes its responsibility to correct problems that may result from its proposed operation.

Figure 2 is a map showing the predicted noise-limited (41 dBu) and city-grade (48 dBu) contours for the proposed operation. The Columbus city limits were derived from information contained in the 2000 U.S. Census for Georgia. The proposal complies with the city coverage requirements of Section 73.625(a).

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 WTVM-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.

<b>Stations Potentially Affected by Proposed WTVM-DT</b>						
Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
33	WCAG-LP	LA GRANGE GA	84.1	LIC	BLTTL	-19891128JR
39	960920KM	DOTHAN AL	122.1	APP	BPET	-19960920KM
39	970331LQ	DOTHAN AL	128.4	APP	BPET	-19970331LQ
43	WGIQ	LOUISVILLE AL	91.3	LIC	BLET	-19921016KG
43	WGIQ	LOUISVILLE AL	91.3	CP	BPET	-20030620AAV
45	WMCF-TV	MONTGOMERY AL	133.3	LIC	BLCT	-19930302KF
46	WMCF-TV	MONTGOMERY AL	133.3	CP	BPCDT	-19991013ABR
46	WMCF-DT	MONTGOMERY AL	133.3	PLN	DTVPLN	-DTVP1316
46	WGCL-TV	ATLANTA GA	169.9	LIC	BLCT	-2619
46	WCTV	THOMASVILLE GA	202.0	CP MOD	BMPCDT	-20030804AAZ
46	WCTV	THOMASVILLE GA	200.2	LIC	BPRM	-20000328AAL
47	WPMI-TV	MOBILE AL	328.8	LIC	BLCDT	-20020510ABE
47	WPMI-DT	MOBILE AL	330.9	PLN	DTVPLN	-DTVP1349

47	WOIL-LP	TALLADEGA AL	180.0	LIC	BLTTL	-19950531IR
47	WTEV-TV	JACKSONVILLE FL	380.7	LIC	BLCT	-19881116KG
47	WPCT-DT	PANAMA CITY BEACH FL	256.2	PLN	DTVPLN	-DTVP1355
47	WZRB	COLUMBIA SC	400.4	CP	BNPCT	-20020320ACH
47	960722KG	COLUMBIA SC	400.4	APP	BPCT	-19960722KG
47	WDEF-DT	CHATTANOOGA TN	316.5	PLN	DTVPLN	-DTVP1373
47	WDEF-TV	CHATTANOOGA TN	316.5	CP	BPCDT	-19991025ACX
48	WRJM-TV	TROY AL	114.0	CP	BPCDT	-19991101AKR
48	WRJM-DT	TROY AL	135.8	PLN	DTVPLN	-DTVP1380
48	WFXU	LIVE OAK FL	198.0	CP	BPCDT	-19981028KF
48	WUVG-TV	ATHENS GA	169.9	CP MOD	BMPCDT	-20020118AAD
48	WNGM-DT	ATHENS GA	217.8	PLN	DTVPLN	-DTVP1388
54	WXTX	COLUMBUS GA	17.9	LIC	BLCT	-19941207KE
55	WSST-TV	CORDELE GA	103.0	LIC	BLCT	-19890607KI

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 WTVM-DT operation are shown in the interference table.

Study Station	Baseline	Net Population Change/Interference
43 WGIQ LOUISVILLE AL (LIC)	267,672	-137 (0.1%) <b>Less Net Interference</b>
43 WGIQ LOUISVILLE AL (CP)	243,697	-35 (0.0%) <b>Less Net Interference</b>
46 WMCF-DT MONTGOMERY AL (CP)	366,415	-9,143 (2.5%) <b>Less Net Interference</b>
47 WPMI-DT MOBILE AL (LIC)	1,038,647	-11 (0.0%) <b>Less Net Interference</b>
47 WPMI-DT MOBILE AL (PLN)	1,038,647	-21 (0.0%) <b>Less Net Interference</b>
47 WDEF-DT CHATTANOOGA TN (PLN)	1,043,063	-13,586 (1.3%) <b>Less Net Interference</b>
47 WDEF-DT CHATTANOOGA TN (CP)	1,043,063	-7,449 (0.7%) <b>Less Net Interference</b>
48 WRJM-TV TROY AL (CP)	429,742	-1,246 (0.3%) <b>Less Net Interference</b>
48 WRJM-TV TROY AL (PLN)	429,742	-353 (0.1%) <b>Less Net Interference</b>

The proposed WTVM-DT operation does not cause calculated interference to any other 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 stations.

Environmental Considerations

The proposed WTVM-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 300 meters above ground level. The proposed ERP is 302 kW. A conservative relative field value of 0.2 was assumed for the calculation (see Figure 3). Therefore, the "worst-case" calculated power density at a point 2 meters above ground level will be  $0.0045 \text{ mW/cm}^2$ . This is 1.0 % of the FCC's recommended limit of  $0.45 \text{ mW/cm}^2$  for channel 47 for an "uncontrolled" environment.

Access to the transmitting site will be restricted and appropriately marked with warning signs. As this will be a multi-user site, an 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 as part of the tower registration process.



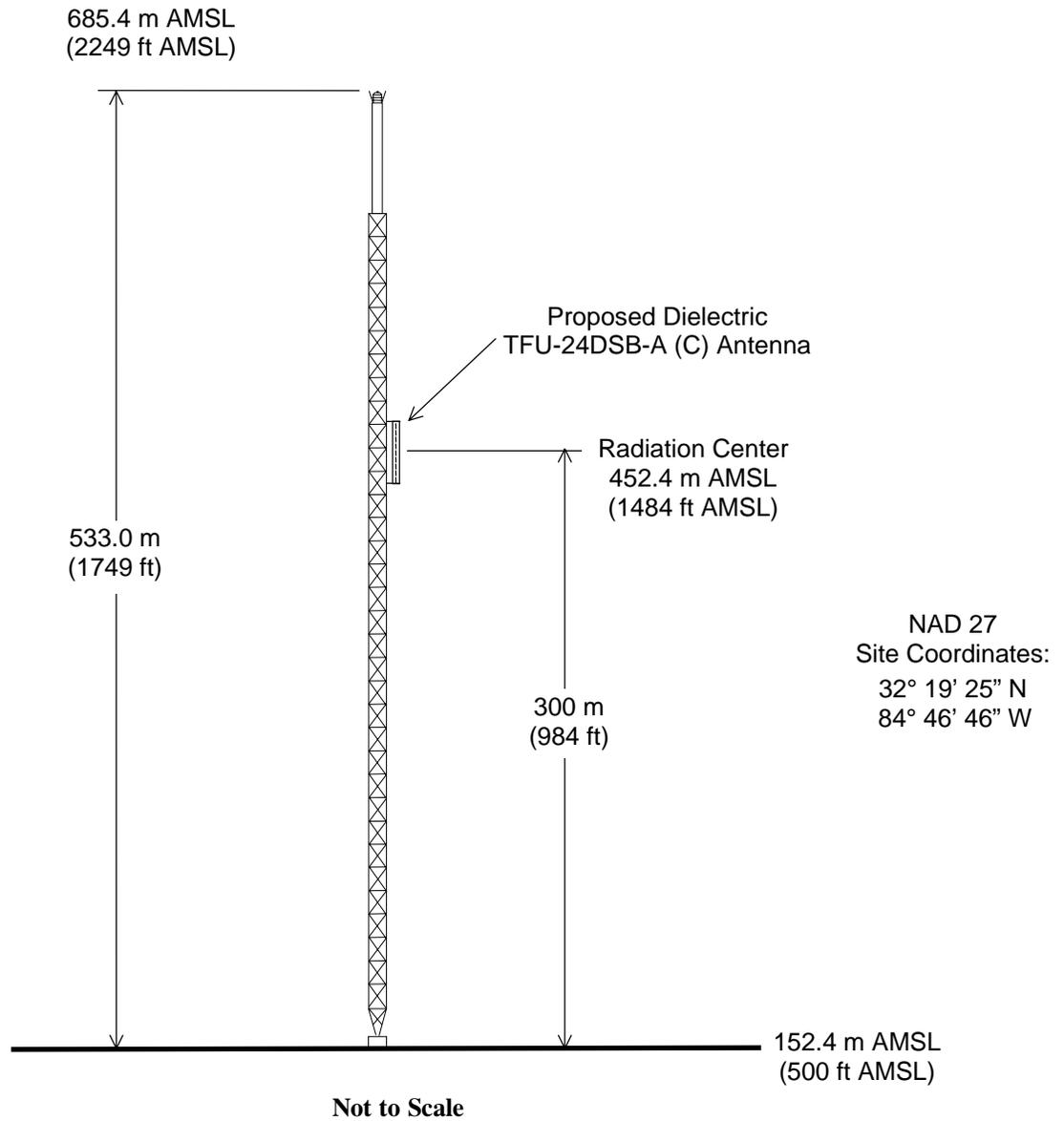
Jonathan N. Edwards

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

October 20, 2004



Registration No. 1019721



## ANTENNA AND SUPPORTING STRUCTURE

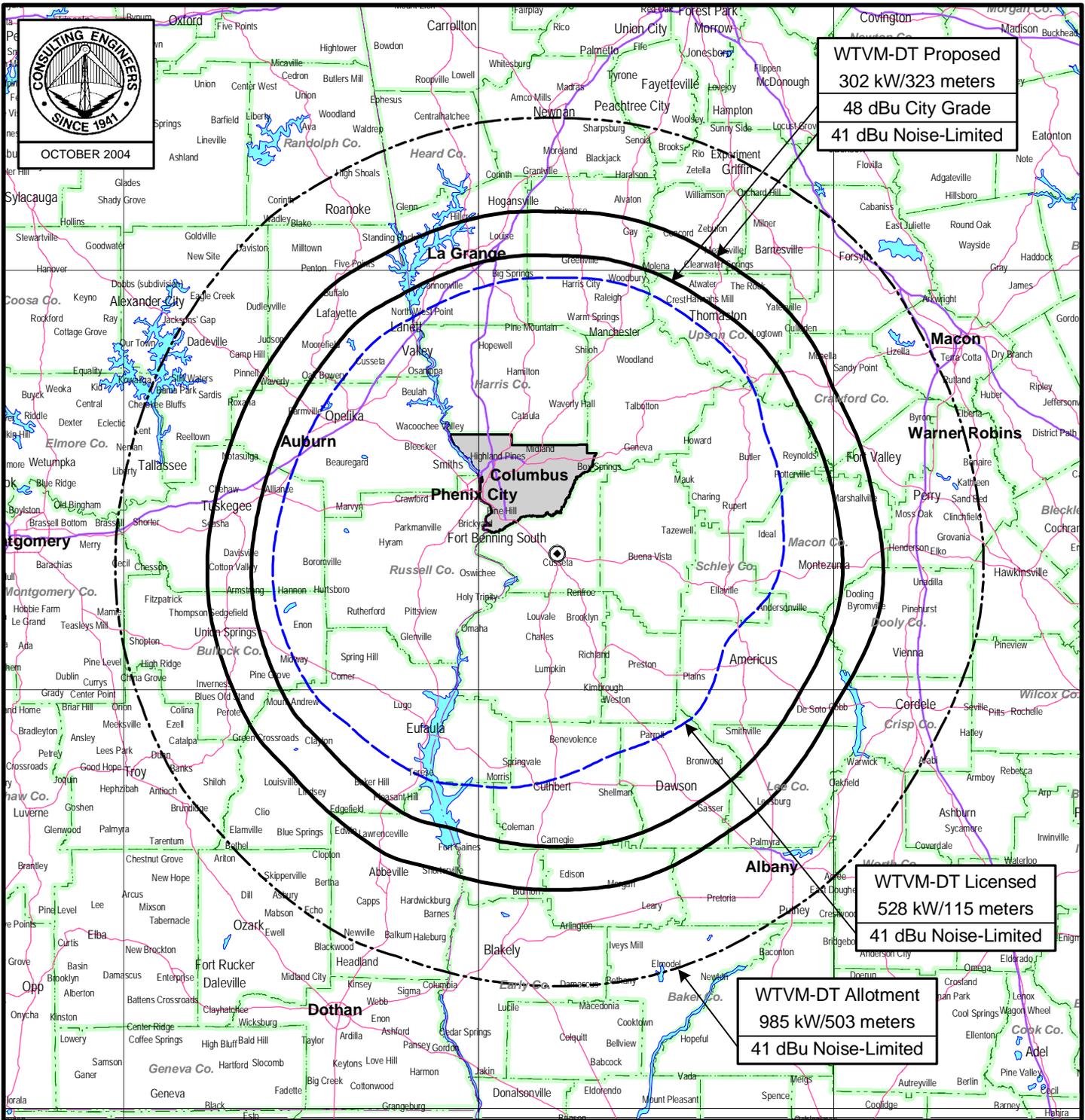
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du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 2



# PREDICTED F(50,90) COVERAGE CONTOURS

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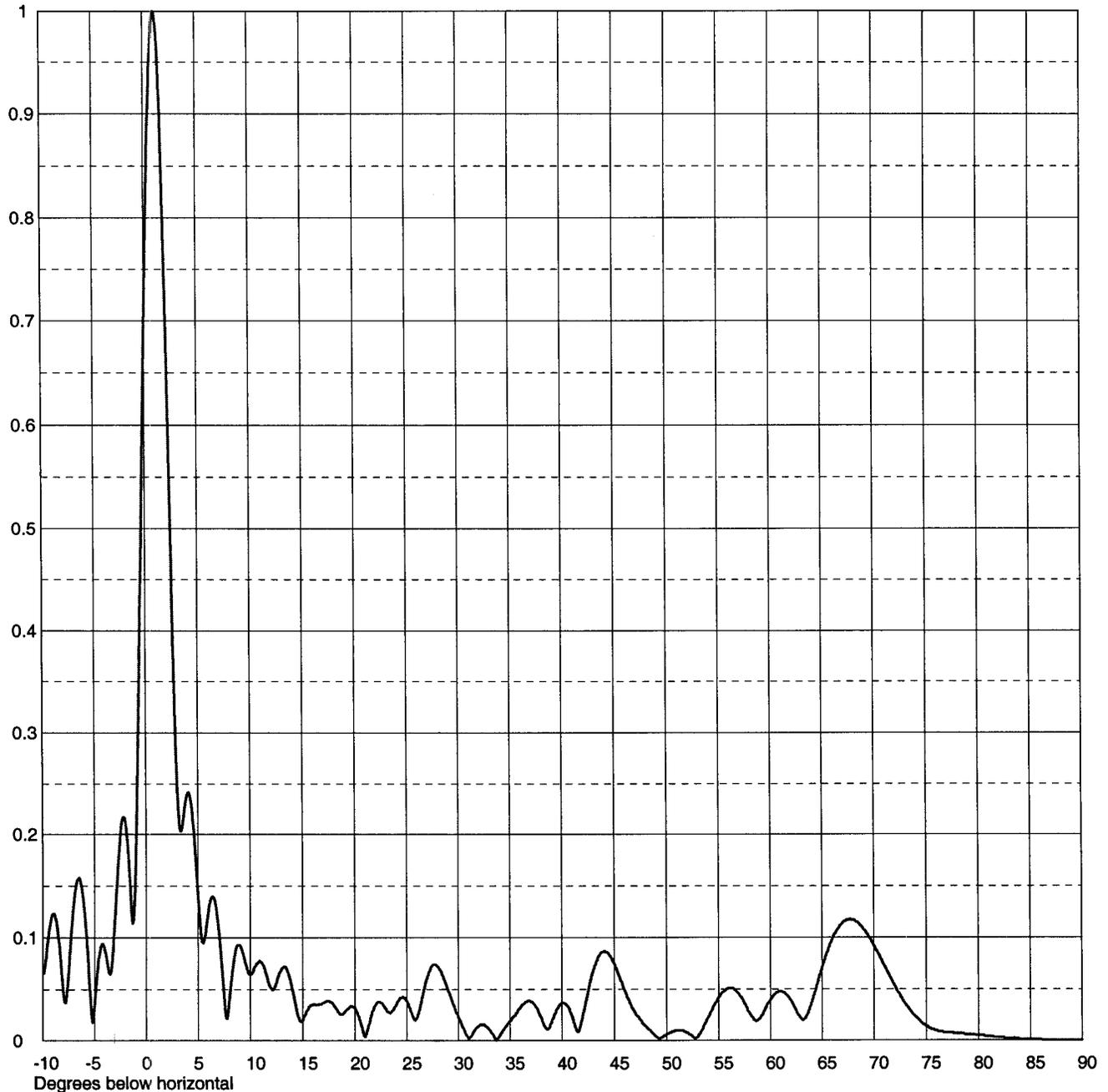
du Treil, Lundin & Rackley, Inc Sarasota, Florida

# Dielectric

Date **20 Oct 2004**  
Call Letters **WTVM-DT** Channel **47**  
Location  
Customer  
Antenna Type **TFU-24DSB-A (C)**

## ELEVATION PATTERN

RMS Gain at Main Lobe	<b>24.0 (13.80 dB)</b>	Beam Tilt	<b>1.00 Degrees</b>
RMS Gain at Horizontal	<b>11.9 (10.76 dB)</b>	Frequency	<b>671.00 MHz</b>
Calculated / Measured	<b>Calculated</b>	Drawing #	<b>24B240100-90</b>



Remarks: