

TECHNICAL EXHIBIT
APPLICATION FOR DTV MAXIMIZATION
STATION WOIO(DT) (FACILITY ID 39746)
SHAKER HEIGHTS, OHIO
CH 10 10.3 KW (MAX-DA) 361 M

Technical Narrative

This Technical Exhibit supports an application for digital television (DTV) station WOIO(DT) to maximize its post-transition facility. This application requests a construction permit (CP) for a digital television operation on channel 10, using a Dielectric THV-10A10-R C170 directional transmitting antenna.

Proposed Facilities

Station WOIO(DT) proposes to operate DTV channel 10 with a directional effective radiated power (ERP) of 10.3 kilowatts and antenna height above average terrain (HAAT) of 361 meters. The transmitter site coordinates are:

41° 23' 15" North Latitude
81° 41' 43" West Longitude

A sketch of antenna and pertinent elevations are included as Figure 1. Figure 2 is a map showing the DTV predicted coverage contours. The predicted 43 dBu contour will encompass all of Shaker Heights. The Shaker Heights city limits were derived from information contained in the 2000 U.S. Census of Population and Housing.

Population Served

The herein proposed WOIO(DT) "maximized" facility is predicted to serve 3,934,120 persons, post-transition, based upon the 2000 Census. WOIO(DT)'s associated

Appendix B facility is predicted to serve 3,558,000 persons. Therefore, the herein proposed WOIO(DT) facility would serve more than 100% of WOIO(DT)'s Appendix B population.

Allocation Considerations

The proposed WOIO(DT) operation meets the FCC's 0.5% post-transition interference standards to pertinent Class A and DTV facilities using the procedures outlined in the FCC's OET-69 Bulletin and a standard 2 kilometer cell size and 1 kilometer terrain distance increment.

Canadian Allocation

The proposed WOIO-DT operation was evaluated with respect to the U.S.-Canada Letter of Understanding (LOU). The proposed WOIO-DT operation specifies the same transmitter site as the licensed WOIO-DT facility, both of which do not meet the minimum separation requirements with respect station CFPL-TV on channel 10 at London, Ontario and its proposed digital allotment (10.1 kW/304.8meters). A new directional antenna for WOIO-DT was chosen to further reduce the ERP towards Canada (more than the licensed antenna pattern) while still allowing an increase in coverage domestically. Using the Longley-Rice propagation model with a 1 kilometer grid and a 0.2 kilometer terrain increment and the 2006 Canadian population, the proposed WOIO-DT, 10.3 kW-DA ERP operation is not calculated to increase the interference to CFPL-TV (analog). It is calculated to increase the interference to CFPL-DT (DTV) by 6,500 people or an increase by 0.8%. If required, coordination of the proposed WOIO-DT operation with Canada is respectfully requested.

Radiofrequency Electromagnetic Field Exposure

The proposed WOIO(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 339.7 meters above ground level

with an ERP of 10.3 kW. A conservative relative field value of 0.3 was assumed for the calculation (see Figure 3). The calculated power density at a point 2 meters above ground level will not exceed 0.0003 mW/cm^2 . This is less than 5% of the FCC's recommended limit of 0.2 mW/cm^2 for channel 10 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 station is at reduced power or shut down. The proposed WOIO(DT) operation appears to be otherwise categorically excluded from environmental processing.

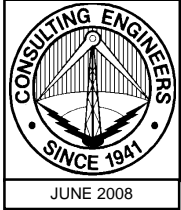
It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner.



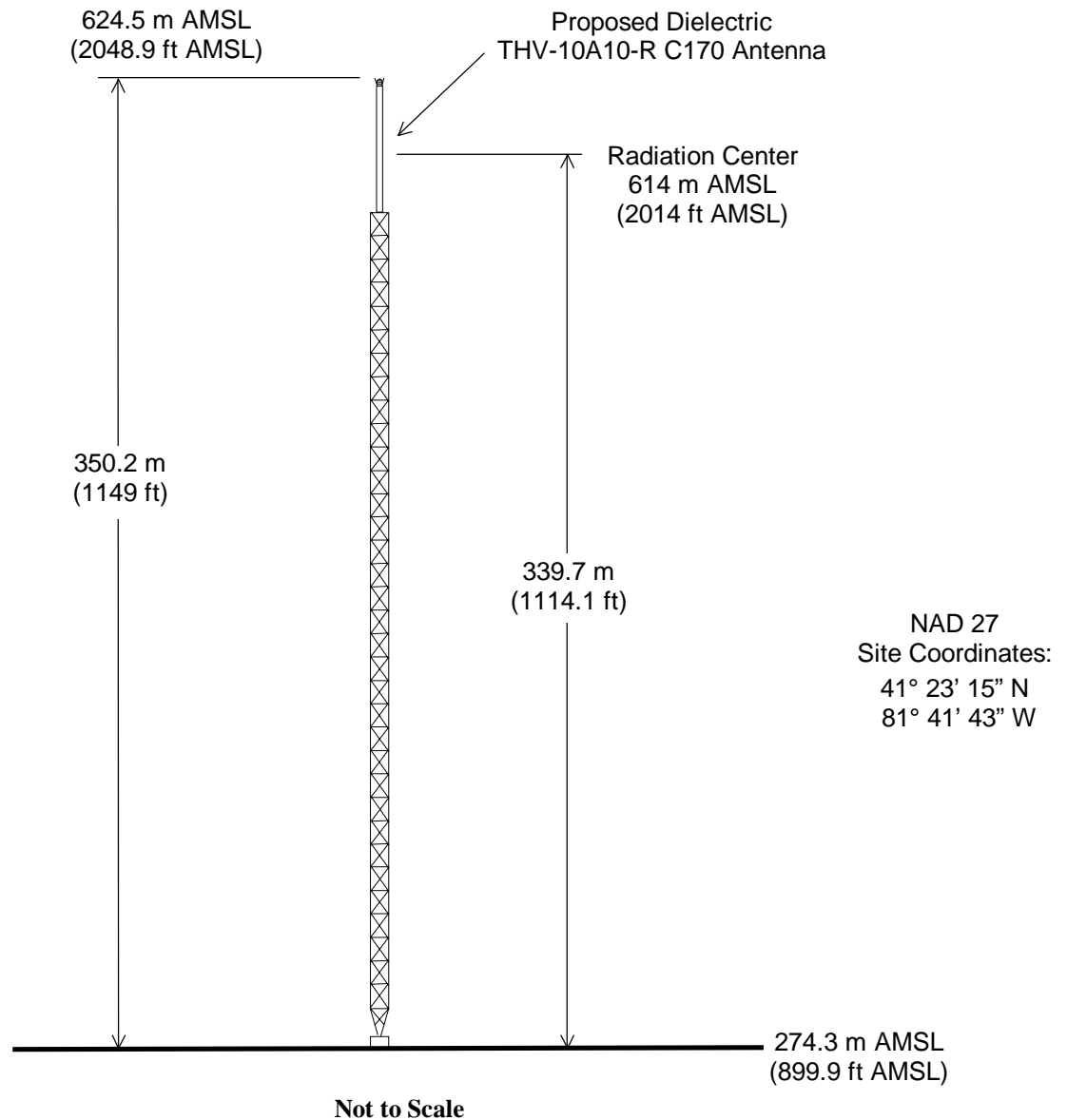
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June 19, 2008

Figure 1



Registration No. 1012089



ANTENNA AND SUPPORTING STRUCTURE

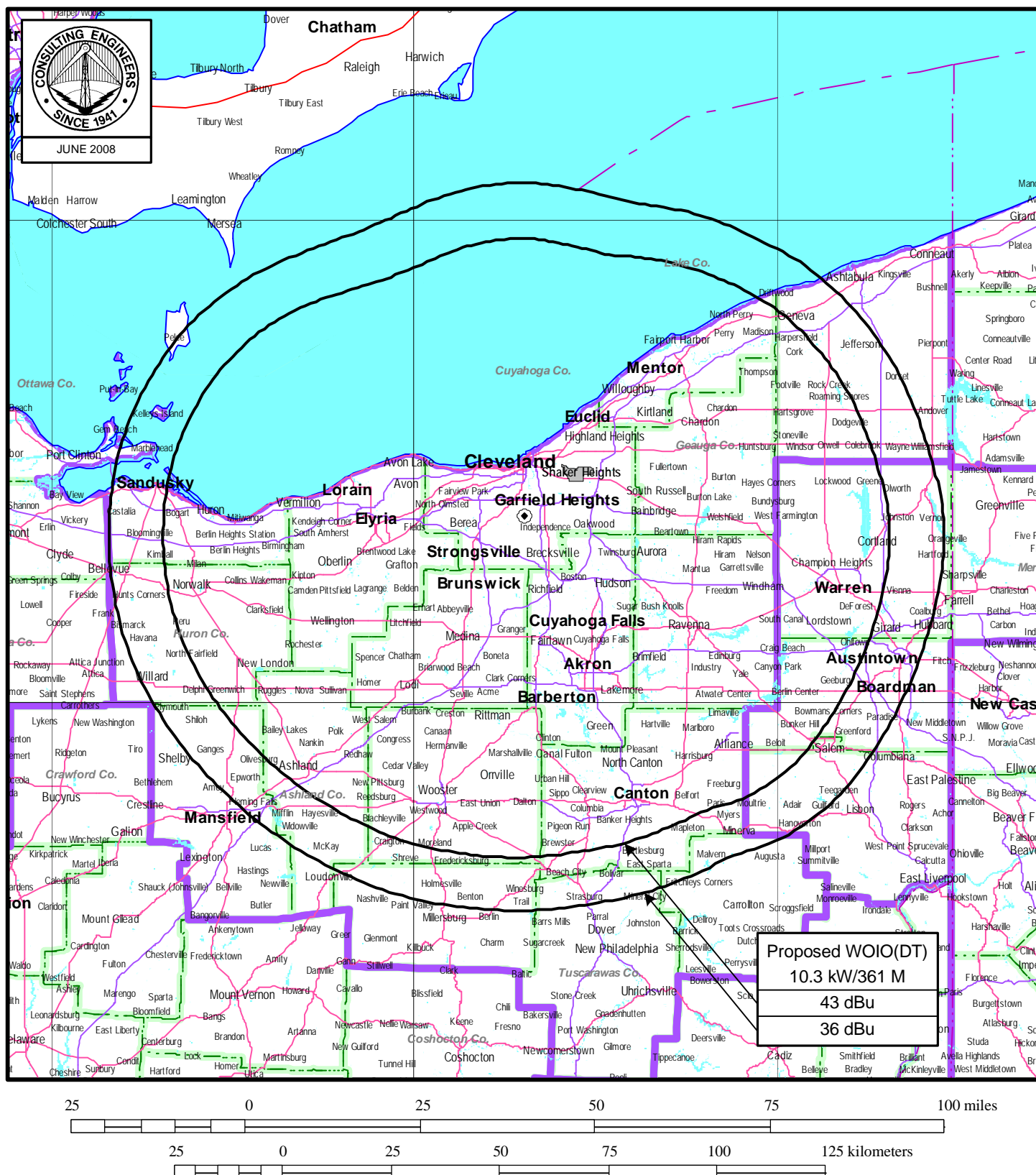
STATION WOIO(DT)

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

Figure 2



PREDICTED COVERAGE CONTOURS

STATION WOIO(DT)

SHAKER HEIGHTS, OHIO

CH 10 10.3 kW (MAX-DA) 361 M

du Treil, Lundin & Rackley, Inc Sarasota, Florida



Date	19 Jun 2008		
Call Letters	WOIO-DT	Channel	10
Location	Shaker Heights, OH		
Customer			
Antenna Type	THV-10A10-R C170		

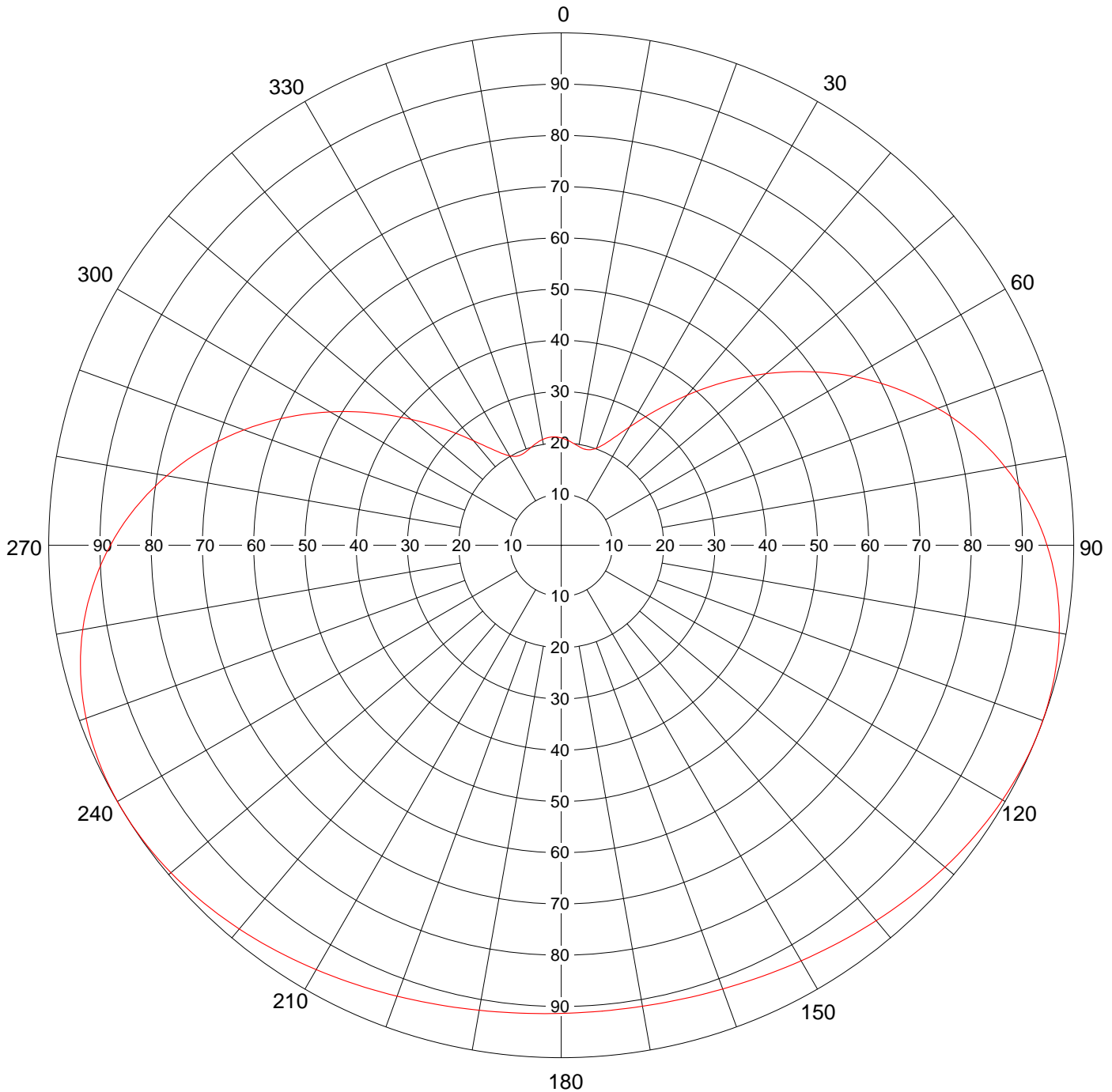
AZIMUTH PATTERN

Gain
Calculated / Measured

1.70 (2.30 dB)
Calculated

Frequency
Drawing #

195 MHz
THV-C170



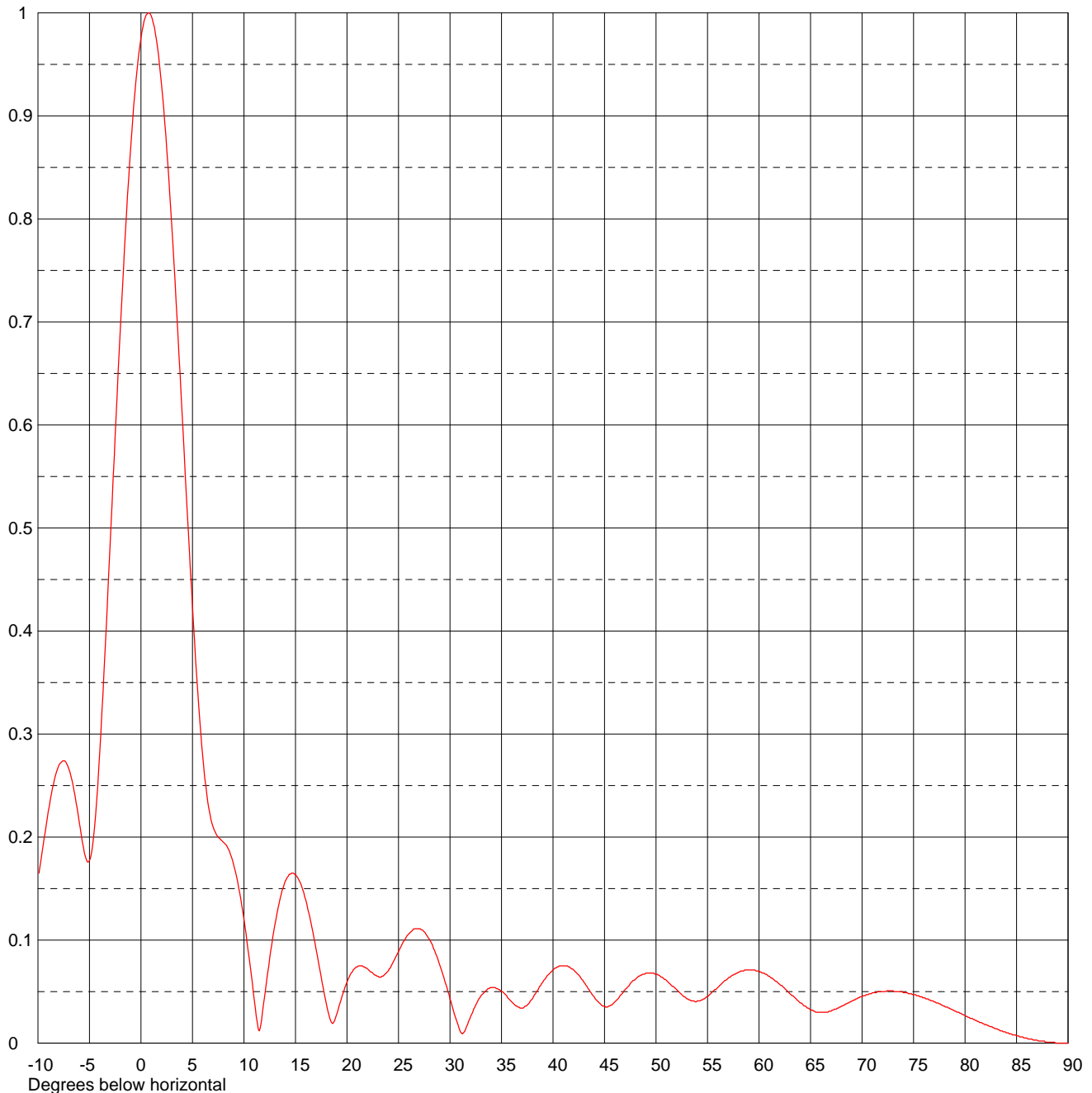
Remarks:



Date	19 Jun 2008		
Call Letters	WOIO-DT	Channel	10
Location	Shaker Heights, OH		
Customer			
Antenna Type	THV-10A10-R C170		

ELEVATION PATTERN

RMS Gain at Main Lobe	10.0 (10.00 dB)	Beam Tilt	0.75 Degrees
RMS Gain at Horizontal	9.5 (9.78 dB)	Frequency	195.00 MHz
Calculated / Measured	Calculated	Drawing #	10V100075-90



Remarks: