

TECHNICAL EXHIBIT
APPLICATION FOR MINOR CHANGE
MODIFICATION OF DTV CONSTRUCTION PERMIT
STATION WPXL-DT (FACILITY ID 21729)
NEW ORLEANS, LOUISIANA

JULY 10, 2002

CH 50 1000 KW (MAX-DA) 272 M

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Technical Narrative

This Technical Exhibit supports a minor change application to modify the construction permit (CP) for digital television (DTV) station WPXL-DT at New Orleans, Louisiana. Station WPXL(TV) currently operates on analog (NTSC) channel 49. The WPXP-DT construction permit (BPCDT-19990915ATF, Facility ID 21729) authorizes a DTV operation on channel 50, the channel allotted by the Federal Communications Commission (FCC) to WPXL for DTV use. The WPXL-DT CP is based on use of a directional antenna (DA) system and maximum effective radiated power (ERP) of 1000 kilowatts (kW). The antenna height above average terrain (HAAT) is 262 meters. The transmitter site coordinates are 29-55-11, 90-01-29 (NAD-27). The FCC tower registration number for the supporting structure is 1020780.

Proposed DTV Facilities

This minor change application proposes to change the directional antenna system and increase the antenna height. There is no proposed change in channel number (50), city of assignment (New Orleans, LA), ERP (1000 kW-DA), transmitter site (29-55-11, 90-01-29), or supporting tower (1020780).

It is proposed to mount a Dielectric TUD-C5-10/50H-1-B directional antenna system 10.4 meters (34 feet) above the height specified in the CP. The proposed antenna

center of radiation will be 272.8 meters above ground level (AGL), 272.8 meters above mean sea level (AMSL). The proposed antenna HAAT will be 272 meters.

The WPXL transmitter site is more than 1400 kilometers from the closest point of the Canadian border. The WPXL site is more than 800 kilometers from the closest point of the Mexican border. The closest FCC monitoring station is at Powder Springs, Georgia, approximately 665 kilometers to the northeast. The closest point of the National Radio Quiet Zone (VA/WV) is more than 1200 kilometers to the northeast. The closest point of the Table Mountain Radio Quiet Zone (CO) is more than 1700 kilometers to the northwest. The closest radio astronomy site operating on TV channel 37 is at North Liberty, Iowa, approximately 1324 kilometers to the north. These separations are considered sufficient to not be a coordination concern.

The WPXL transmitter site is also used for the following authorized full service TV, DTV and FM broadcast stations.

<u>Assignment</u>	<u>Channel</u>
WPXL(TV), New Orleans, LA	NTSC-49
WHNO(TV), New Orleans, LA	NTSC-20
WHNO-DT, New Orleans, LA	DTV-21
WUPL-DT, Slidell, LA	DTV-24
WBXN-CA, New Orleans, LA	NTSC-18
WWNO(FM), New Orleans, LA	210C1
WQUE-FM, New Orleans, LA	227C
WTKL(FM), New Orleans, LA	239C
WEZB(FM), New Orleans, LA	246C
WLMG(FM), New Orleans, LA	270C

The WPXL site is within 3.2 kilometers (2 miles) of the following AM stations.

<u>Assignment</u>	<u>Frequency</u>	<u>Facilities</u>	<u>Distance</u>
WSMB(AM), New Orleans, LA	1350 kHz	5 kW-U, DA-N	1.1 km
WYLD(AM), New Orleans, LA	940	10 kW-D, 0.5 kW-N, DA-2	2.9

No adverse electromagnetic interaction is expected. The supporting structure exists and the proposed change in the antenna mounting is not expected to have an adverse impact. The applicant recognizes that it is responsible to remedy prohibited electromagnetic problems that it may create.

Allocation Study

There is no proposed change in site from that authorized in the WPXL-DT CP. Nor is there a proposed change in the maximum ERP (1000 kW-DA). There is a change in the directional antenna pattern and an increase in antenna HAAT (262 m to 272 m). Interference calculations have been made to pertinent analog (NTSC) and DTV stations and allotments using the procedures outlined in the FCC's OET-69 Bulletin and a 2 kilometer grid spacing. The proposed WPXL-DT operation does not cause calculated interference in excess of the FCC standards or in excess of that already authorized in the current WPXL-DT CP.

Radiofrequency Electromagnetic Field Exposure

The proposed WPXL-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 antenna is located 272.8 meters above ground level. The maximum DTV ERP is 1000 kW. A relative field value of 0.3 was assumed for the antenna's downward radiation (see Figure 2). The calculated power density at a point 2 meters (6.6 feet) above ground level is 0.041 mW/cm^2 . This is less than 9% of the FCC's recommended limit of 0.46 mW/cm^2 for channel 50 for an "uncontrolled" environment. The calculated power density is less than 2% of the FCC's recommended limit for a "controlled" environment.

Access to the transmitting site will be restricted and appropriately marked with warning signs. As this is a multi-user site an agreement will control 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. The proposed WPXL-DT operation appears to be otherwise categorically excluded from environmental processing.

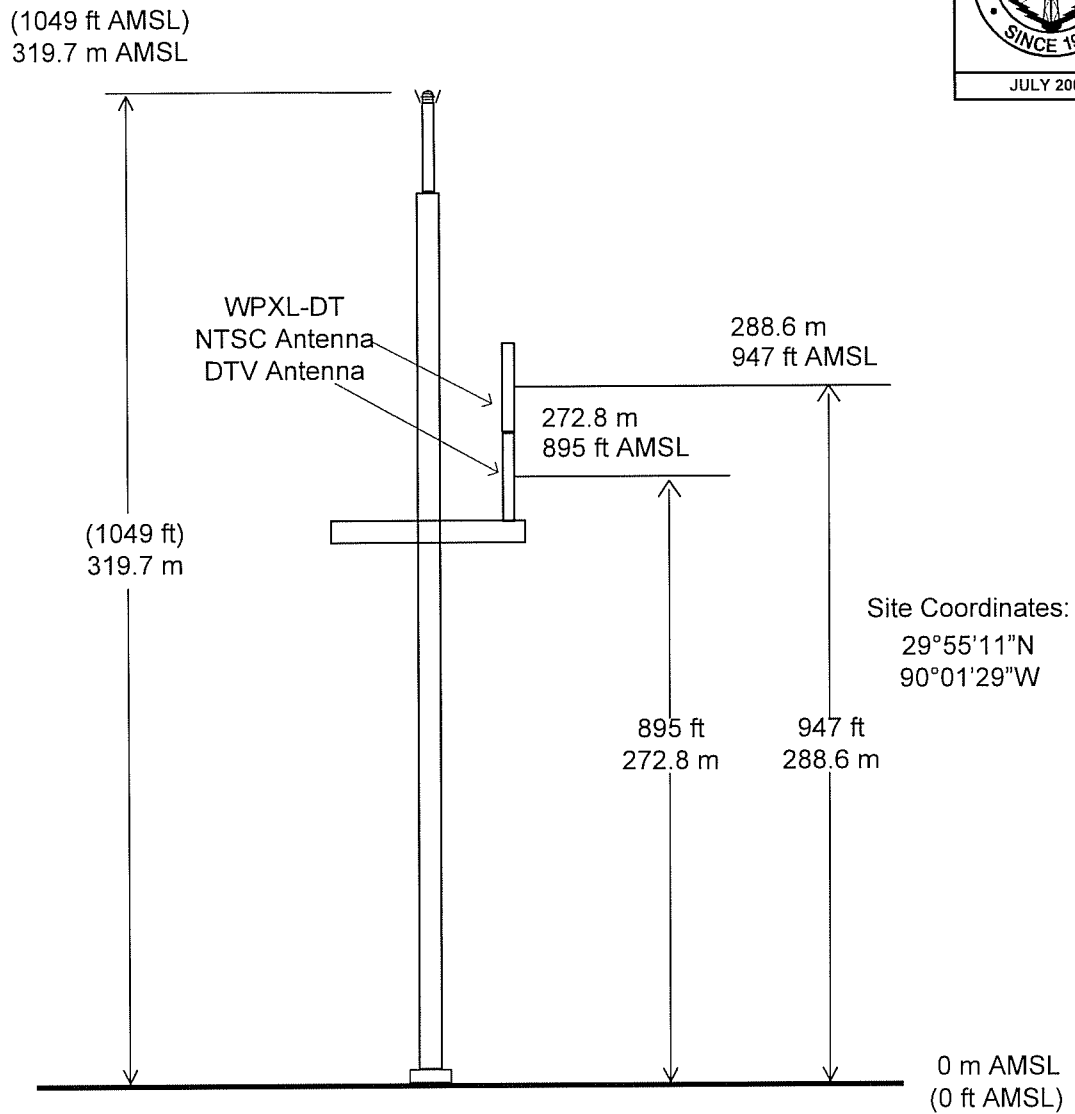
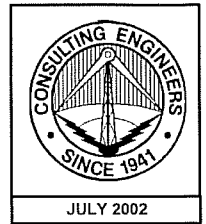
If there are questions concerning the technical portion of this application, please contact the office of the undersigned.

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July 10, 2002

Figure 1



FCC Tower ID: 1020780

PROPOSED ANTENNA AND SUPPORTING STRUCTURE

TELEVISION STATION WPXL
NEW ORLEANS, LOUISIANA
DTV: CH 50 1000 KW (MAX-DA) 272 M
NTSC: CH 49 5000 KW (MAX-DA) 288M

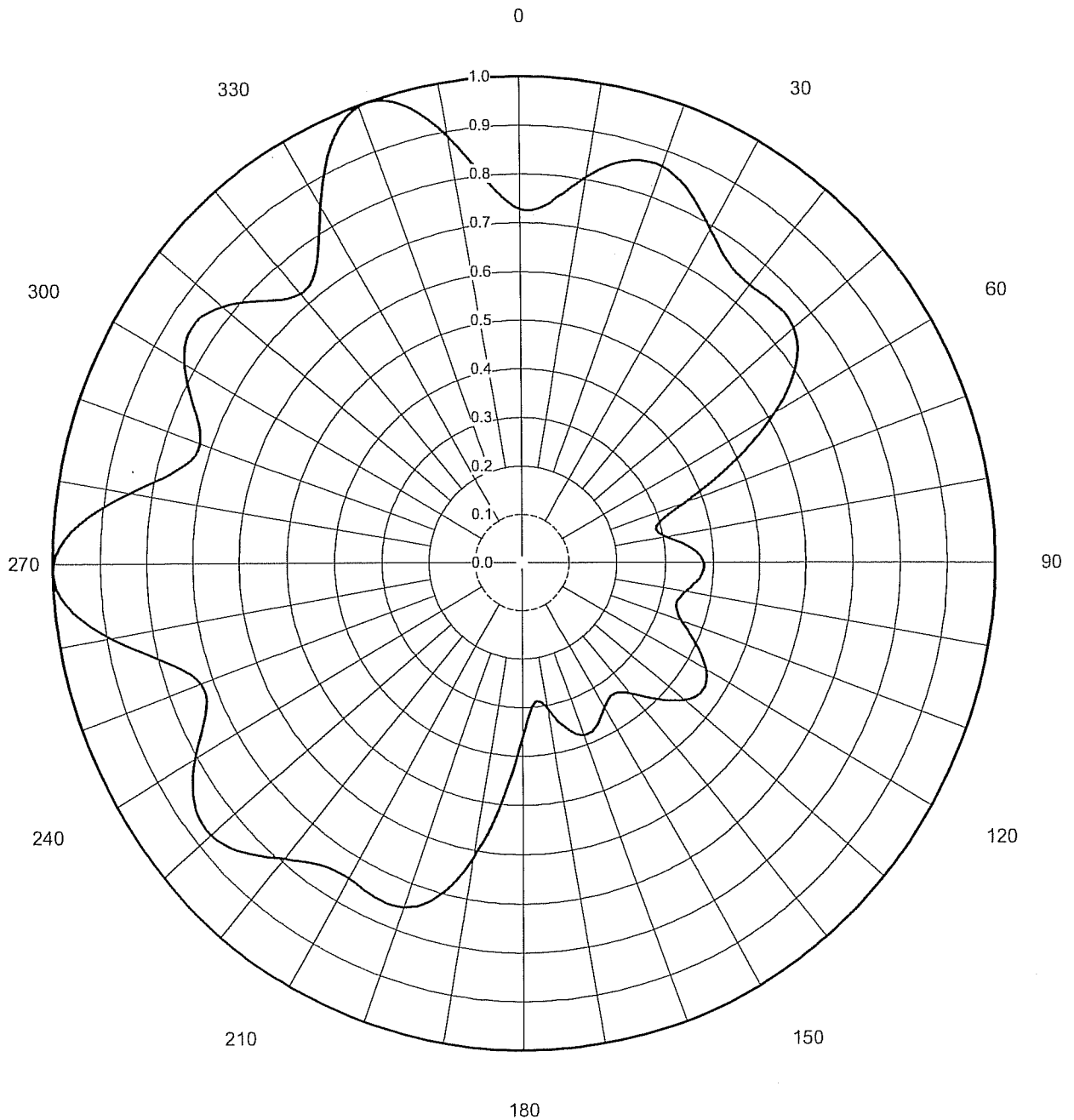
du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Proposal Number	DCA-9724	Revision:	7
Date	29-Apr-02		
Call Letters		Channel	50
Location	New Orleans, LA		
Customer	Spectrasite BQ		
Antenna Type	TUD-C5-10/50H-1-B		

AZIMUTH PATTERN

Gain	2.10	(3.23 dB)
Calculated / Measured		Calculated

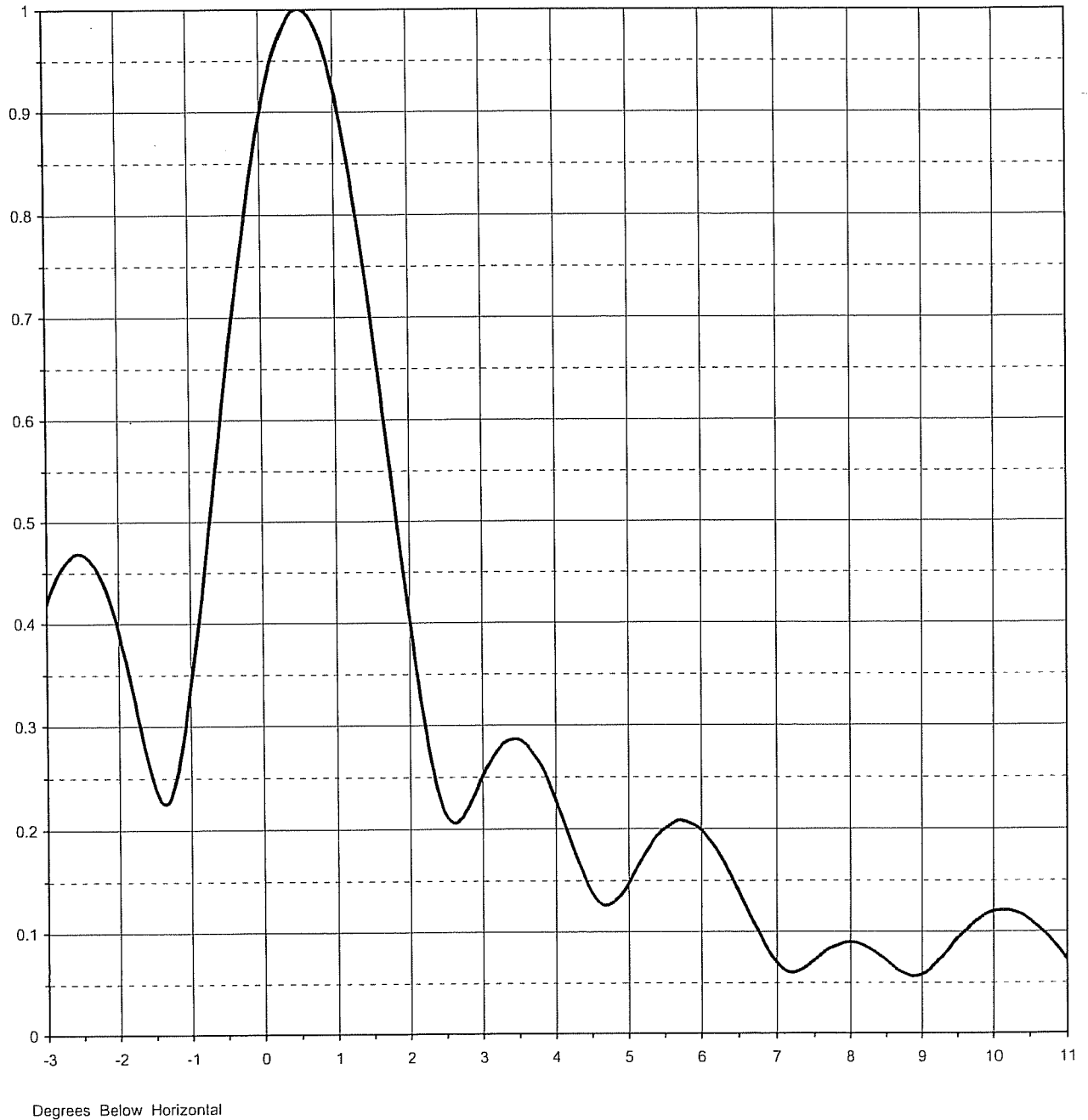
Frequency	689.00 MHz
Drawing #	TUD-C5SP-689



Proposal Number	DCA-9724	Revision:	7
Date	29-Apr-02		
Call Letters		Channel	50
Location	New Orleans, LA		
Customer	Spectrasite BQ		
Antenna Type	TUD-C5-10/50H-1-B		

ELEVATION PATTERN

RMS Gain at Main Lobe	20.83 (13.19 dB)	Beam Tilt	0.50 deg
RMS Gain at Horizontal	16.70 (12.23 dB)	Frequency	689.00 MHz
Calculated / Measured	Calculated	Drawing #	10U208050-B689



Proposal Number	DCA-9724	Revision:	7
Date	29-Apr-02		
Call Letters		Channel	50
Location	New Orleans, LA		
Customer	Spectrasite BQ		
Antenna Type	TUD-C5-10/50H-1-B		

ELEVATION PATTERN

RMS Gain at Main Lobe	20.83 (13.19 dB)	Beam Tilt	0.50 deg
RMS Gain at Horizontal	16.70 (12.23 dB)	Frequency	689.00 MHz
Calculated / Measured	Calculated	Drawing #	10U208050-B689-90

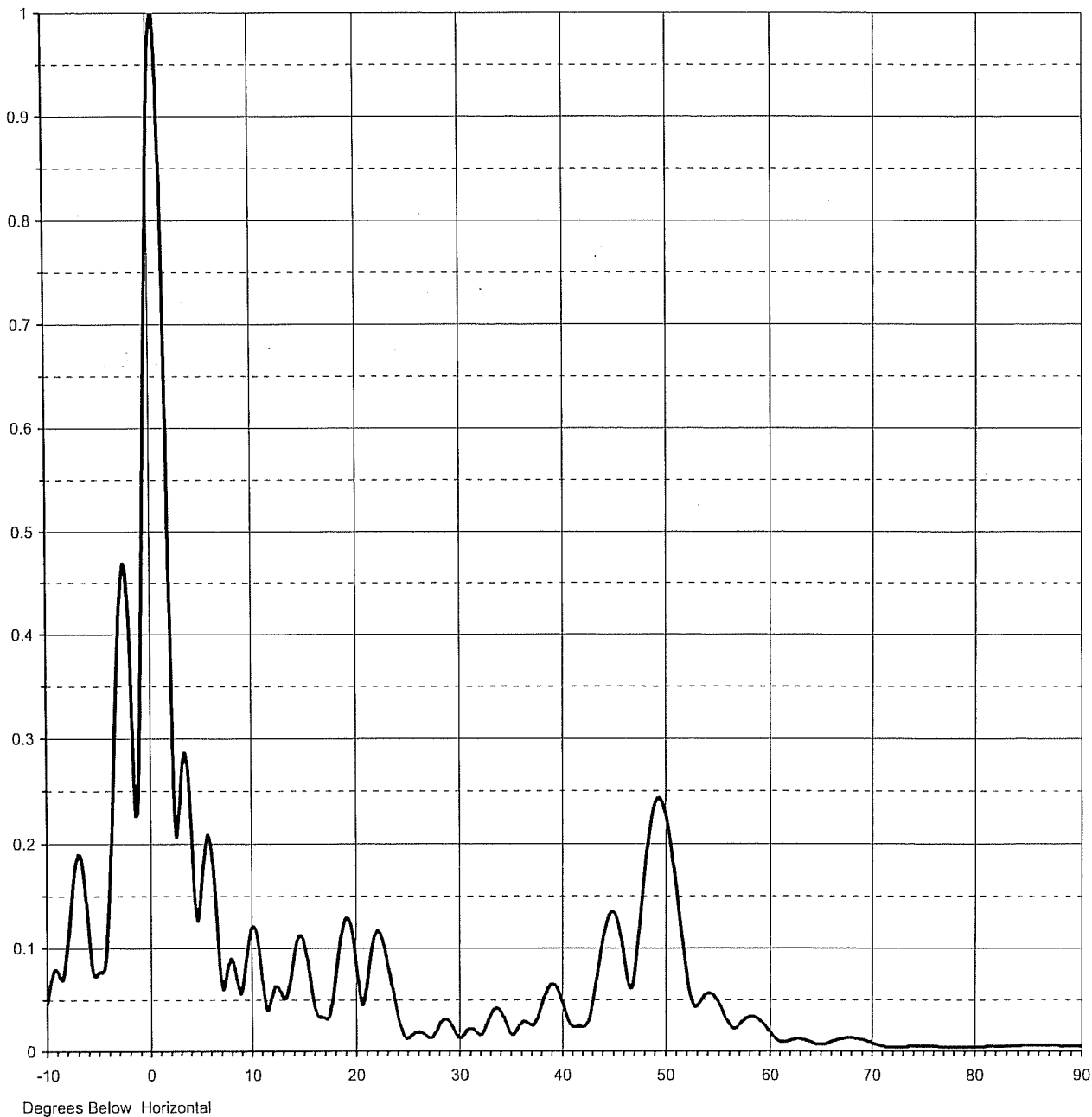
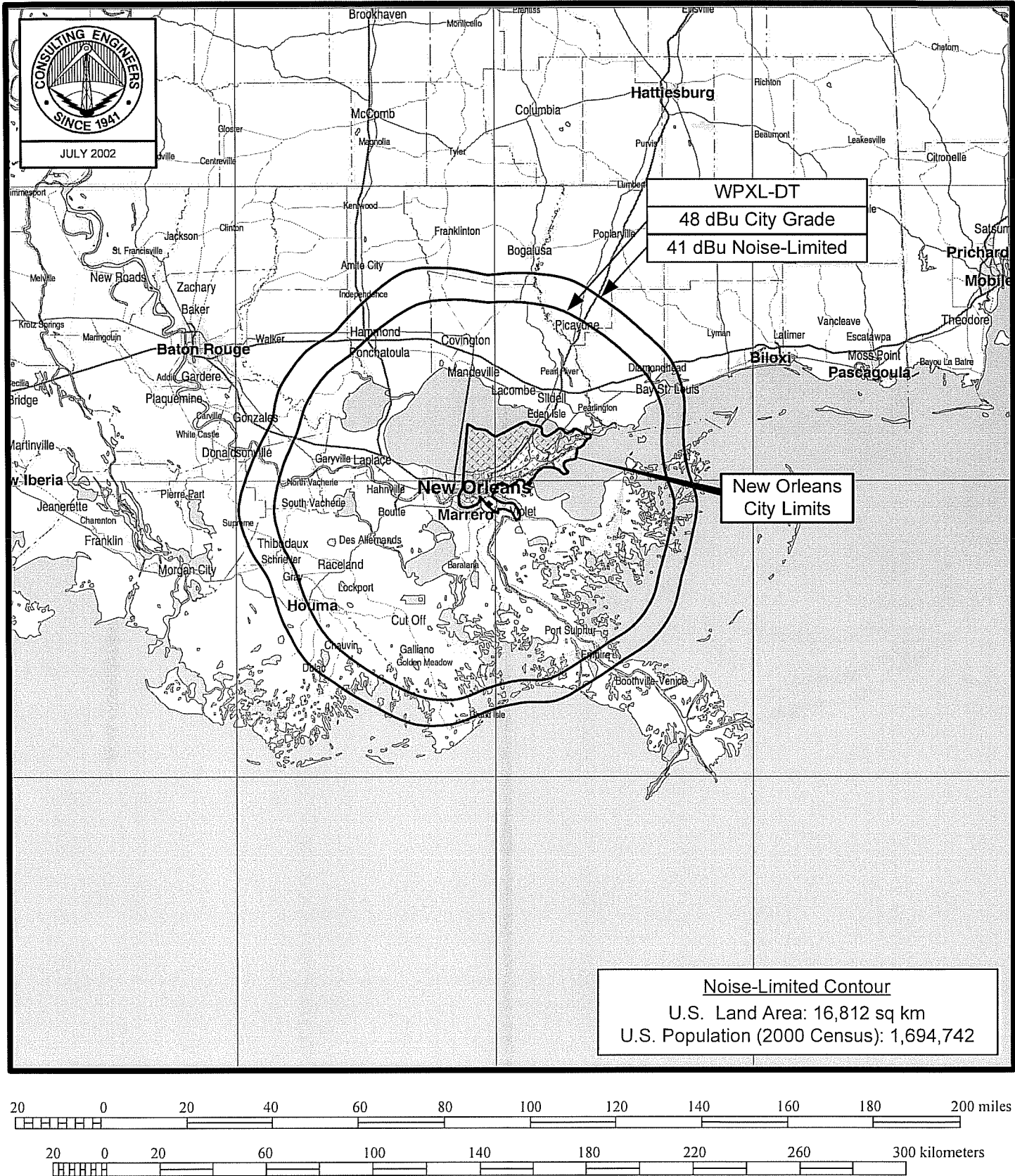


Figure 3



PREDICTED F(50,90) COVERAGE CONTOURS

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Technical Specifications

Channel	50
Frequency	686-692 MHz
Proposed Site Coordinates (NAD 27)	29° 55' 11" North Latitude 90° 01' 29" West Longitude
Site Elevation above mean sea level	0.0 m
Average elevation above mean sea level of 8 equally spaced radials, 3-16 kilometers	0.8 m
Overall height of antenna structure (#1020780)	
Above ground	319.7 m
Above mean sea level	319.7 m
Height of antenna radiation center	
Above ground	272.8 m
Above mean sea level	272.8 m
Above average terrain	272 m
Transmitter rated power output (average)	35 kW
Transmission line	Dielectric 6-1/8 inch 75 Ohm rigid coax
Length	(960 ft) 292.6 m
Efficiency (including combiner)	72.2%
Antenna	Dielectric TUD-C5-10/50H-1-B
Polarization	Horizontal
Peak Power Gain	43.8
Beam Tilt (electrical)	0.50°
Main Lobes	269 & 341° T

Proposed Operation

Transmitter output power (average)	31.6 kW
Transmission line/combiner loss	8.8 kW
Antenna input power	22.8 kW
Maximum DTV Effective Radiated Power (MAX-DA)	1000 kW