

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of KTBC LICENSE, INC., licensee of KTBC-DT, Channel 56 in Austin, Texas, in support of its Application for Construction Permit to operate a post-transition auxiliary facility on Channel 7, the allotted KTBC-DT post-transition channel.

It is proposed to utilize the existing analog Channel 7 Dielectric directional antenna at the 145-meter level of the existing 339-meter tower on which the present KTBC-DT antenna is mounted. Exhibit B provides antenna azimuth and elevation pattern data, and proposed operating parameters are tabulated in Exhibit C. Exhibit D is a map upon which the predicted service contours of the authorized KTBC-DT post-transition facility and the proposed auxiliary facility are plotted. As shown, the auxiliary's 36 dBu contour is completely contained within that authorized to KTBC-DT on Channel 7. As a result, and since this proposal is for an auxiliary facility, an interference study is not provided. A power density calculation appears in Exhibit E.

It is not expected that the proposed facility would cause objectionable interference to any other broadcast or non-broadcast station authorized to operate at or near the KTBC-DT site. However, if such should occur, the owner of this station recognizes its obligation to take whatever corrective actions are necessary.

Since no change in overall height or location of the existing tower is proposed herein, the FAA has not been notified of this application. In addition, the FCC issued Antenna Structure Registration Number 1043248 to this tower.

I declare under penalty of perjury that the foregoing statements and the attached exhibits, which were prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.

April 24, 2008

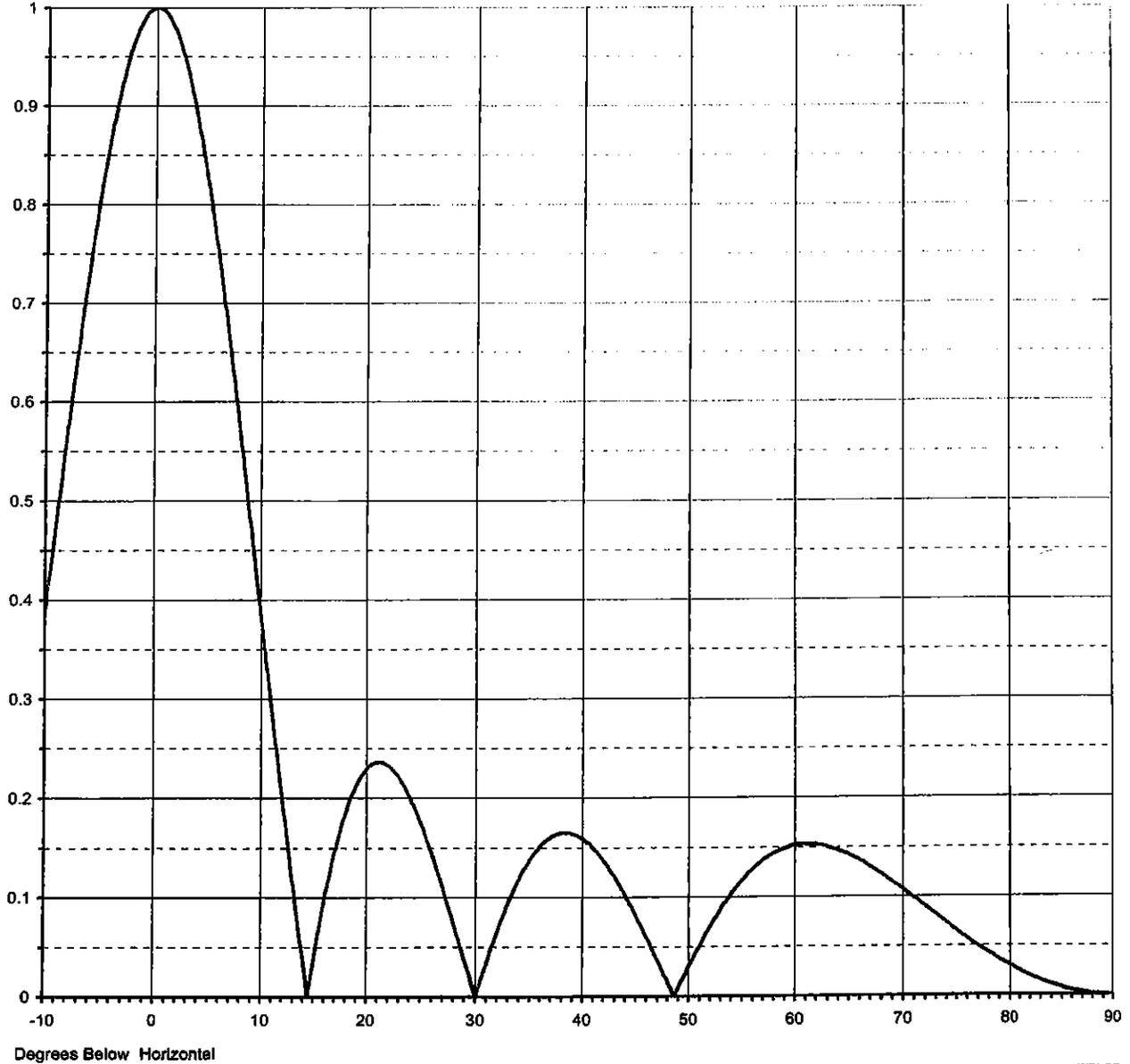
  
KEVIN T. FISHER



Proposal Number **DCA-10872** Revision: **1**  
Date **3-May-05**  
Call Letters **KTBC** Channel **7**  
Location **Austin, TX**  
Customer  
Antenna Type **TLS-V4**

### ELEVATION PATTERN

RMS Gain at Main Lobe	<b>4.00 ( 6.02 dB )</b>	Beam Tilt	<b>0.00 deg</b>
RMS Gain at Horizontal	<b>4.00 ( 6.02 dB )</b>	Frequency	<b>177.00 MHz</b>
Calculated / Measured	<b>Calculated</b>	Drawing #	<b>04S040000-90</b>



**EXHIBIT B-1**  
**ANTENNA ELEVATION PATTERN**  
**PROPOSED KTBC-DT AUXILIARY**  
**CHANNEL 7 – AUSTIN, TEXAS**  
**SMITH AND FISHER**

Date **24 Apr 2008**  
Call Letters  
Location  
Customer  
Antenna Type **TLS-V4**

Channel **7**

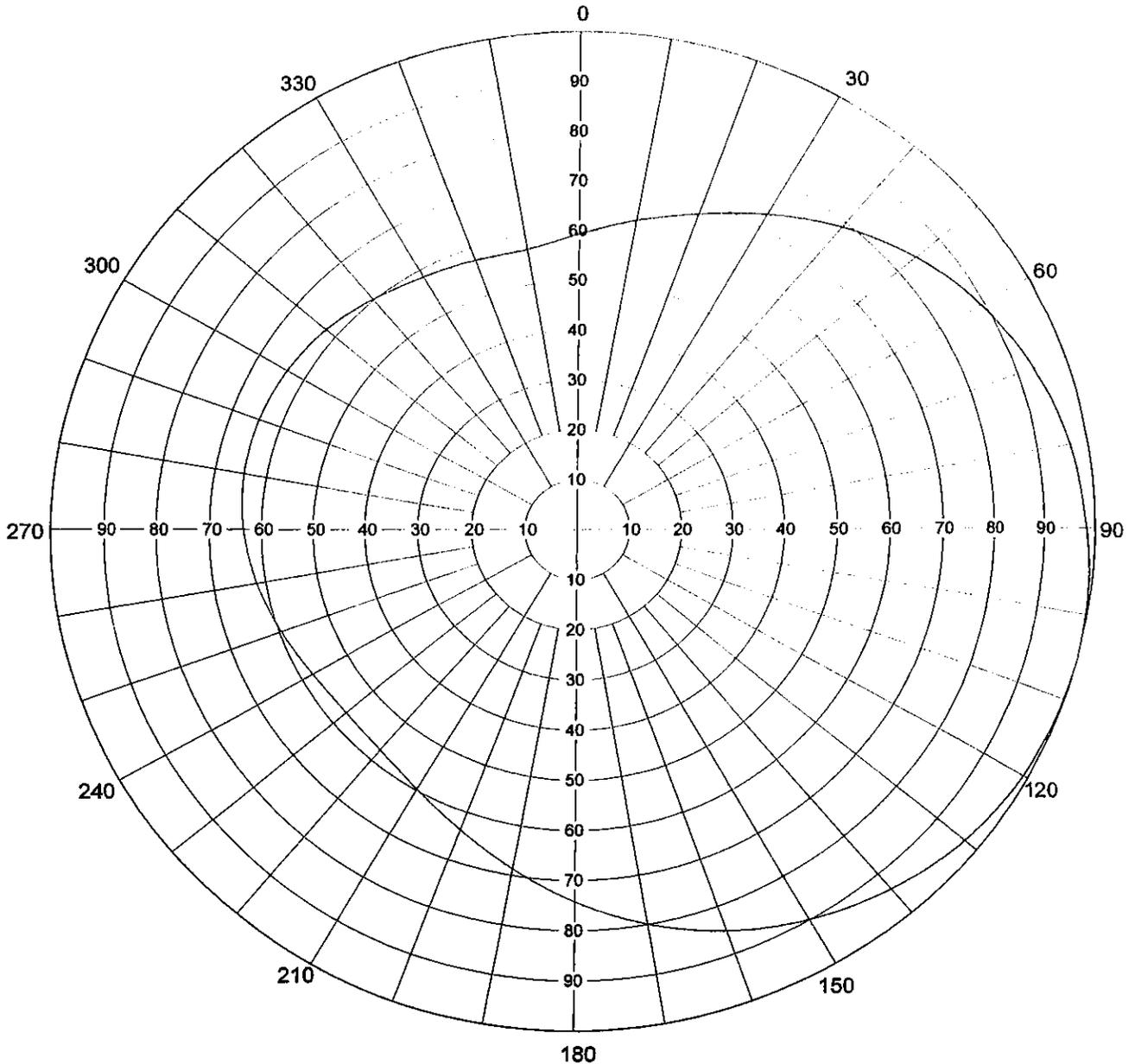
## AZIMUTH PATTERN

Gain  
Calculated / Measured

**1.70 (2.30 dB)**  
**Calculated**

Frequency  
Drawing #

**177 MHz**  
**TLS-S170**



Remarks:

**EXHIBIT B-2**

**ANTENNA AZIMUTH PATTERN**  
**PROPOSED KTBC-DT AUXILIARY**  
**CHANNEL 7 – AUSTIN, TEXAS**

SMITH AND FISHER

# Dielectric

Date **24 Apr 2008**

Call Letters

Channel **7**

Location

Customer

Antenna Type **TLS-V4**

## TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing # **TLS-S170**

Angle	Field	ERP (kW)	ERP (dBk)
0	0.593	11.9	10.75
10	0.629	13.4	11.26
20	0.673	15.3	11.85
30	0.728	17.9	12.53
40	0.789	21.0	13.23
50	0.844	24.1	13.82
60	0.893	27.0	14.31
70	0.934	29.5	14.70
80	0.964	31.4	14.97
90	0.984	32.7	15.15
100	0.998	33.7	15.27
110	0.998	33.7	15.27
120	0.990	33.1	15.20
130	0.970	31.8	15.02
140	0.939	29.8	14.74
150	0.899	27.3	14.36
160	0.852	24.5	13.90
170	0.799	21.6	13.34
180	0.742	18.6	12.70
190	0.687	16.0	12.03
200	0.637	13.7	11.37
210	0.597	12.0	10.81
220	0.574	11.1	10.47
230	0.568	10.9	10.38
240	0.577	11.3	10.51
250	0.596	12.0	10.79
260	0.618	12.9	11.11
270	0.634	13.6	11.33
280	0.644	14.0	11.47
290	0.644	14.0	11.47
300	0.637	13.7	11.37
310	0.623	13.1	11.18
320	0.602	12.2	10.88
330	0.584	11.5	10.62
340	0.574	11.1	10.47
350	0.571	11.0	10.42

### Maxima

Angle	Field	ERP (kW)	ERP (dBk)
105	1.000	33.8	15.29
285	0.645	14.1	11.48

### Minima

Angle	Field	ERP (kW)	ERP (dBk)
229	0.568	10.9	10.38
347	0.570	11.0	10.41

Remarks:

### EXHIBIT B-3

ANTENNA RELATIVE FIELD VALUES

PROPOSED KTBC-DT AUXILIARY  
CHANNEL 7 – AUSTIN, TEXAS

SMITH AND FISHER

PROPOSED OPERATING PARAMETERS

PROPOSED KTBC-DT AUXILIARY  
CHANNEL 7 – AUSTIN, TEXAS

Transmitter Power Output:	5.0 kw
Transmission Line Efficiency:	80.2%
Antenna Power Gain – Main Lobe:	6.8 kw
Effective Radiated Power – Main Lobe:	27.3 kw
Transmitter Make and Model:	Type-accepted
Transmission Line Make and Model:	Dielectric Flexline
Size and Type:	3-1/8" air dielectric
Length:	585 feet
Antenna:	
Make and Model:	Dielectric TLS-V4
Orientation	105 degrees true
Beam Tilt	none
Radiation Center Above Ground:	145 meters
Radiation Center Above Mean Sea Level:	425 meters



POWER DENSITY CALCULATION

PROPOSED KTBC-DT AUXILIARY  
CHANNEL 7 – AUSTIN, TEXAS

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Austin facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 27.3 kw, an antenna radiation center 145 meters above ground, and the elevation pattern of the Dielectric antenna, maximum power density two meters above ground of  $0.00081 \text{ mw/cm}^2$  is calculated to occur 76 meters east-southeast of the base of the tower. Since this is only 0.4 percent of the  $0.2 \text{ mw/cm}^2$  reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 7 (174-180 MHz), a grant of this proposal may be considered a minor environmental action with respect to public and occupational ground-level exposure to nonionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive nonionizing radiation.