

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of FOX TELEVISION STATIONS, INC., licensee of KTXH-DT, Channel 19 in Houston, Texas, in support of its Application for Construction Permit to operate an auxiliary facility.

It is proposed to utilize an existing Dielectric directional antenna, which is mounted at the 525-meter level of the existing 596-meter tower on which the present KTXH-DT antenna is located. Exhibit B provides antenna azimuth and elevation pattern data for the proposed antenna. Exhibit C is a map upon which the predicted service contours of licensed KTXH-DT and the proposed auxiliary facility are plotted. As shown, the auxiliary's 41 dBu contour is completely contained within that authorized to KTXH-DT. As a result, and since this proposal is for an auxiliary facility, an interference study is not provided. Predicted service contours for the proposed auxiliary are plotted in Exhibit D. As shown, the facility places a city-grade service contour over the entirety of the station's city of license. A power density calculation follows as 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 KTXH-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 1059622 to this tower.

EXHIBIT A

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.

A handwritten signature in blue ink, appearing to read "K. T. Fisher". The signature is stylized with a large "K" and "F" and a smaller "T" in the middle.

KEVIN T. FISHER

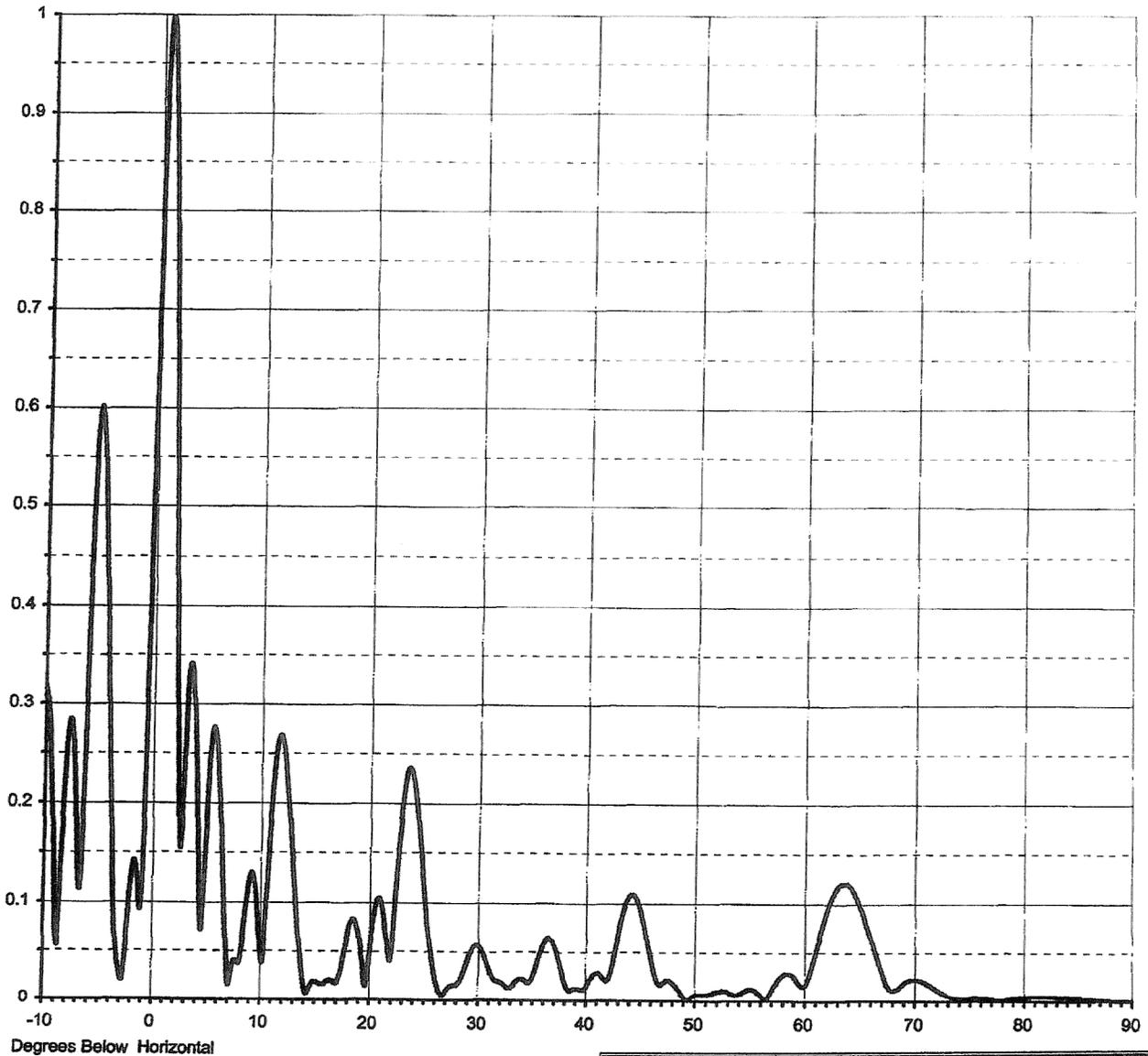
September 27, 2012



Proposal Number **C-02230** Revision: **1**  
Date **11-Jan-08**  
Call Letters **KTXH-DT** Channel **19**  
Location **Houston, TX**  
Customer  
Antenna Type **TFU-24WB-R**

### ELEVATION PATTERN

RMS Gain at Main Lobe	<b>22.00 (13.42 dB)</b>	Beam Tilt	<b>0.75 deg</b>
RMS Gain at Horizontal	<b>12.00 (10.79 dB)</b>	Frequency	<b>503.00 MHz</b>
Calculated / Measured	<b>Calculated</b>	Drawing #	<b>24H220075-90</b>



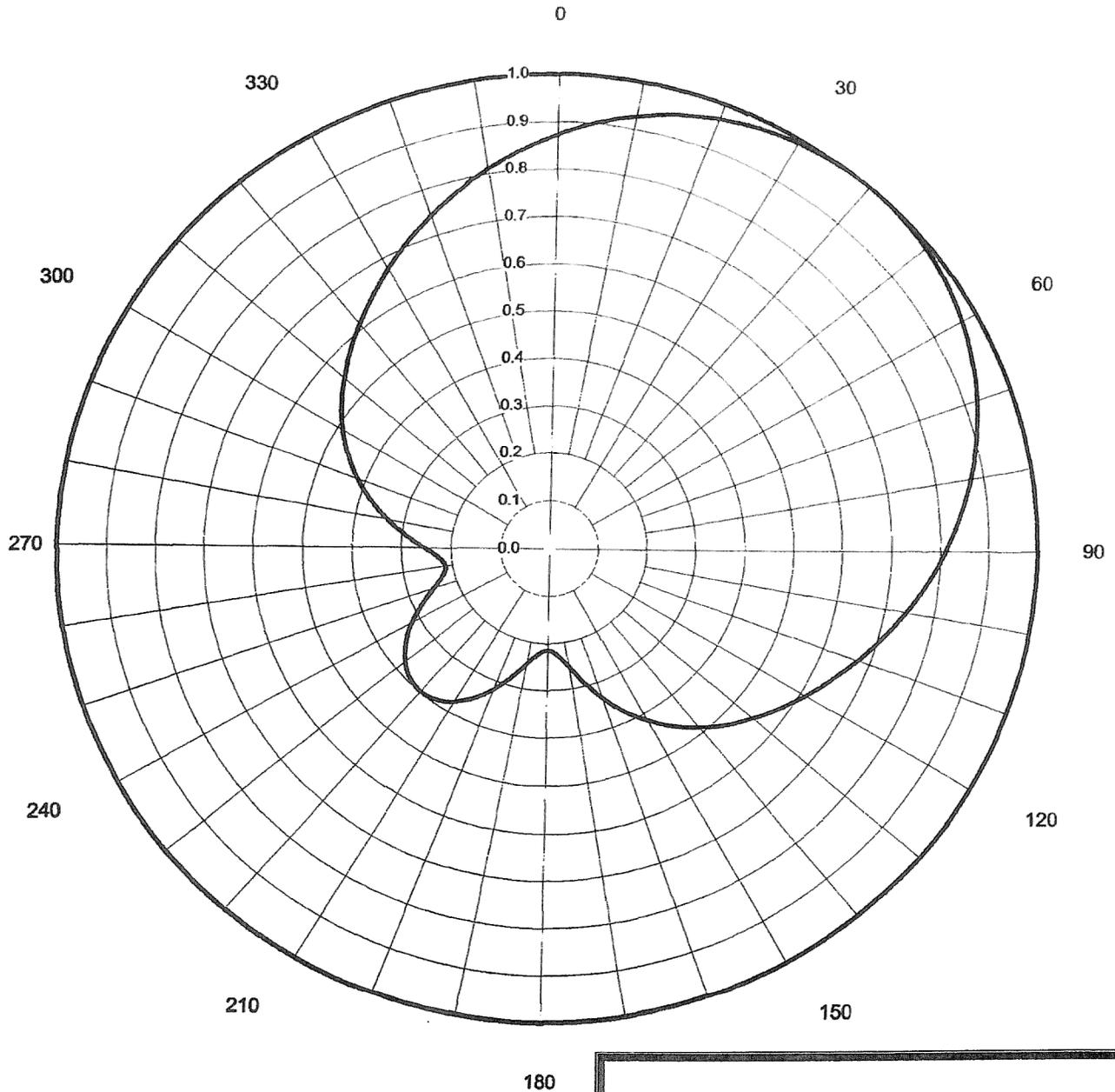
**EXHIBIT B-1**  
**ANTENNA ELEVATION PATTERN**  
**PROPOSED KTXH-DT AUXILIARY**  
**CHANNEL 19 – HOUSTON, TEXAS**  
**SMITH AND FISHER**

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Customer			
Antenna Type	<b>TFU-24WB-R</b>		

## AZIMUTH PATTERN

Gain **2.50 (3.98 dB)**  
Calculated / Measured **Calculated**

Frequency **503.00 MHz**  
Drawing # **TFU-C250**



**EXHIBIT B-2**  
**ANTENNA AZIMUTH PATTERN**  
**PROPOSED KTXH-DT AUXILIARY**  
**CHANNEL 19 – HOUSTON, TEXAS**  
**SMITH AND FISHER**

## ANTENNA AZIMUTH PATTERN DATA

PROPOSED KTXH-DT AUXILIARY  
CHANNEL 19 – HOUSTON, TEXAS

<u>Azimuth</u> <u>(° T)</u>	<u>Relative</u> <u>Field</u>	<u>ERP</u> <u>(dbk)</u>	<u>Azimuth</u> <u>(° T)</u>	<u>Relative</u> <u>Field</u>	<u>ERP</u> <u>(dbk)</u>
0	0.874	25.6	180	0.214	13.4
10	0.927	26.1	190	0.248	14.7
20	0.967	26.5	200	0.318	16.8
30	0.992	26.7	210	0.376	18.3
40	1.000	26.8	220	0.398	18.8
50	0.992	26.7	230	0.376	18.3
60	0.967	26.5	240	0.318	16.8
70	0.927	26.1	250	0.248	14.7
80	0.874	25.6	260	0.214	13.4
90	0.811	25.0	270	0.254	14.9
100	0.743	24.2	280	0.334	17.2
110	0.675	23.4	290	0.417	19.2
120	0.612	22.5	300	0.488	20.5
130	0.551	21.6	310	0.551	21.6
140	0.488	20.5	320	0.612	22.5
150	0.416	19.2	330	0.675	23.4
160	0.334	17.2	340	0.743	24.2
170	0.254	14.9	350	0.811	25.0

KTXH-DT MAIN 41 DBU  
 KTXH-DT AUXILIARY 41 DBU



**EXHIBIT C**  
**41 DBU CONTOUR COMPARISON**  
**MAIN VS. AUXILIARY FACILITIES**  
**PROPOSED KTXH-DT AUXILIARY**  
**CHANNEL 19 - HOUSTON, TEXAS**

**CONTOUR POPULATION  
2010 U.S. CENSUS DATA  
48 DBU : 5,876,802  
41 DBU : 5,993,729**



**EXHIBIT D  
PREDICTED SERVICE CONTOURS  
PROPOSED KTXH-DT AUXILIARY  
CHANNEL 19 - HOUSTON, TEXAS**

POWER DENSITY CALCULATION

PROPOSED KTXH-DT AUXILIARY  
CHANNEL 19 – HOUSTON, 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 Houston facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 475 kW, an antenna radiation center 525 meters above ground, and the elevation pattern of the Dielectric antenna, maximum power density two meters above ground of  $0.00068 \text{ mW/cm}^2$  is calculated to occur 261 meters northeast of the base of the tower. Since this is only 0.2 percent of the  $0.33 \text{ mW/cm}^2$  reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 19 (500-506 MHz), a grant of this proposal may be considered a minor environmental action with respect to public and occupational ground-level exposure to non-ionizing 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 non-ionizing radiation.