

ENGINEERING STATEMENT

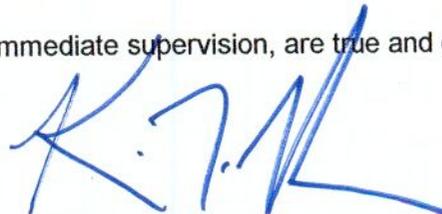
The engineering data contained herein have been prepared on behalf of TRINITY BROADCASTING NETWORK, permittee of WELF-DT, Channel 16 in Dalton, Georgia, in support of its application for modification of Construction Permit BPCDT-19991013ABQ, to specify a decrease in effective antenna height. No change in site location, antenna model or effective radiated power is proposed herein.

Exhibit B provides directional antenna pattern data, which remain unchanged. Exhibit C is a map upon which the predicted service contours are plotted. As shown, the city of license is completely contained within the proposed 48 dBu service contour. It is important to note that the proposed 41 dBu contour is completely contained within that authorized to WELF-DT in BPCDT-19991013ABQ. As a result, no interference study is required. A power density calculation is provided in Exhibit D.

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

Since no change in the 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 1028358 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.



KEVIN T. FISHER

December 1, 2004



**ANDREW**

Channel: 16

Type: ATW22H3

Directivity: 22 (13.4 dBd)

Beam Tilt: 0.75

Beam Width: 2 degrees

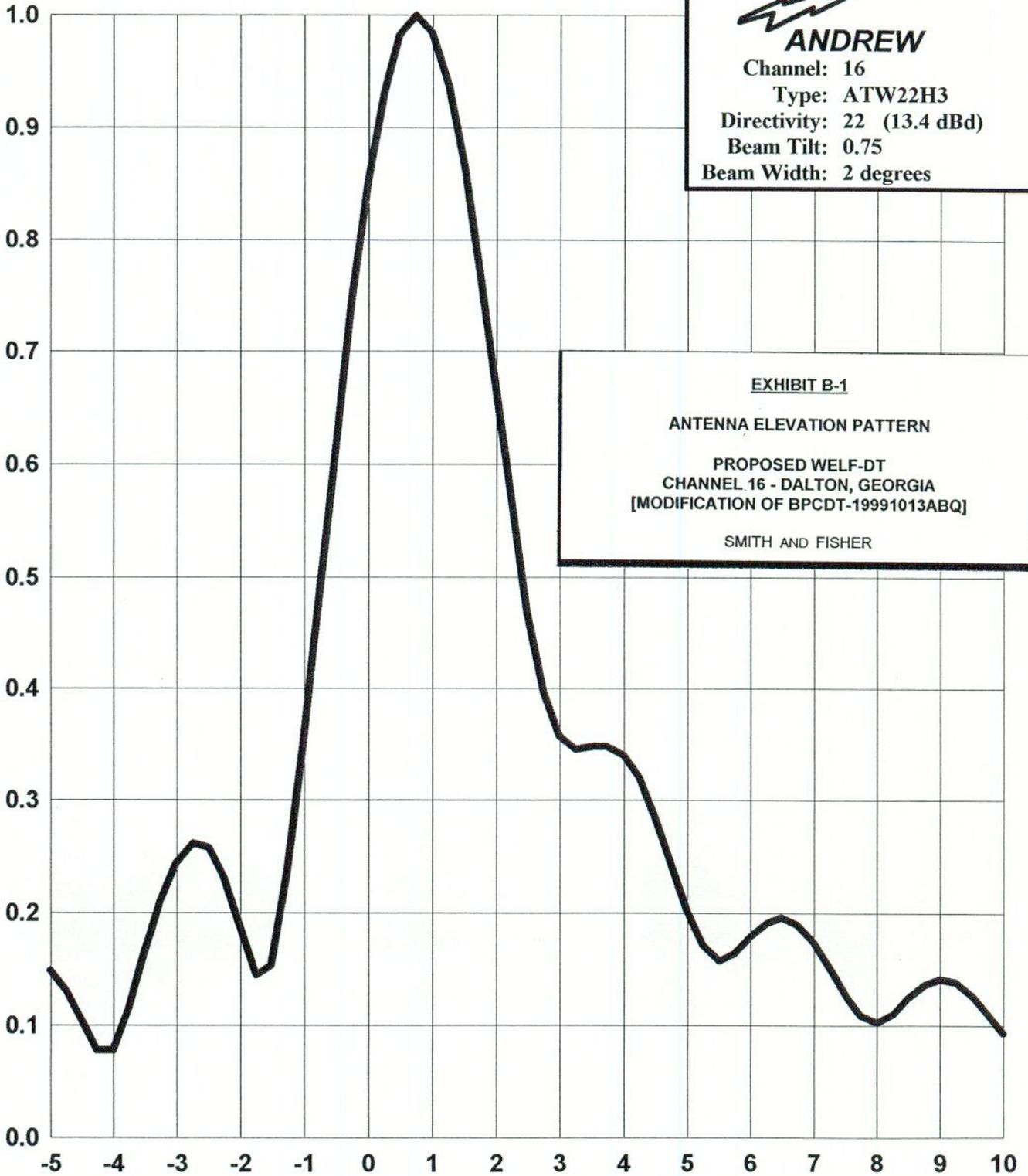


EXHIBIT B-1

ANTENNA ELEVATION PATTERN

PROPOSED WELF-DT  
CHANNEL 16 - DALTON, GEORGIA  
[MODIFICATION OF BPCDT-19991013ABQ]

SMITH AND FISHER

**ANDREW CORPORATION**  
10500 W. 153rd Street  
Orland Park, Illinois U.S.A. 60462

Company:  
Site:  
Proposal Number:

Date: 12/1/04  
Author:

**EXHIBIT B-2**

**ANTENNA AZIMUTH PATTERN**

**PROPOSED WELF-DT  
CHANNEL 16 - DALTON, GEORGIA  
[MODIFICATION OF BPCDT-19991013ABQ]**

SMITH AND FISHER



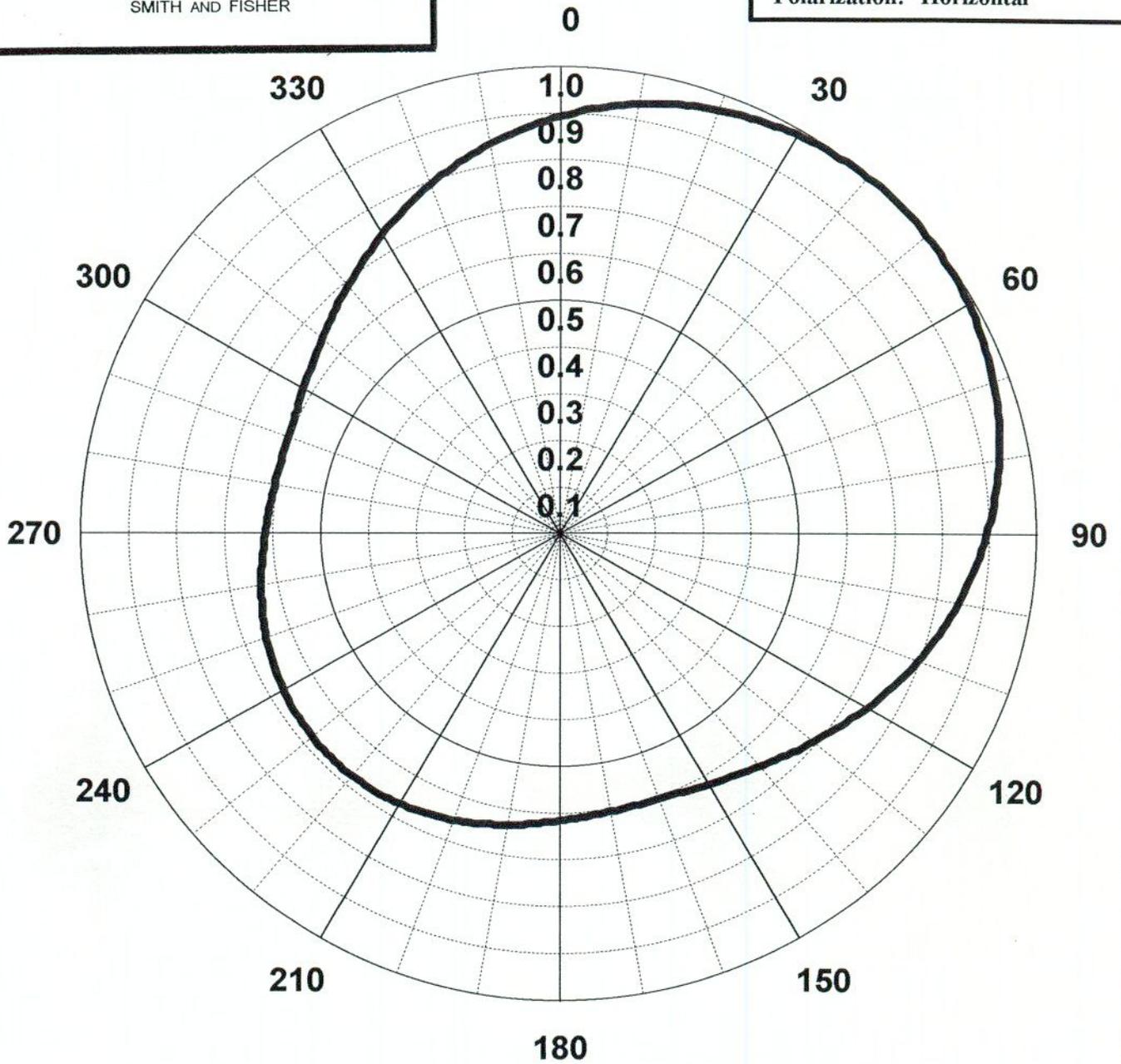
**ANDREW**

Channel: 16

Type: ATW-OC

Gain: 2 (3.01 dB)

Polarization: Horizontal



**ANDREW CORPORATION**  
10500 W. 153rd Street  
Orland Park, Illinois U.S.A. 60462

Company:  
Site:  
Proposal Number:

Date: 12/1/04  
Author:

## ANTENNA RADIATION VALUES

PROPOSED WELF-DT  
CHANNEL 16 - DALTON, GEORGIA  
[MODIFICATION OF BPCDT-19991013ABQ]

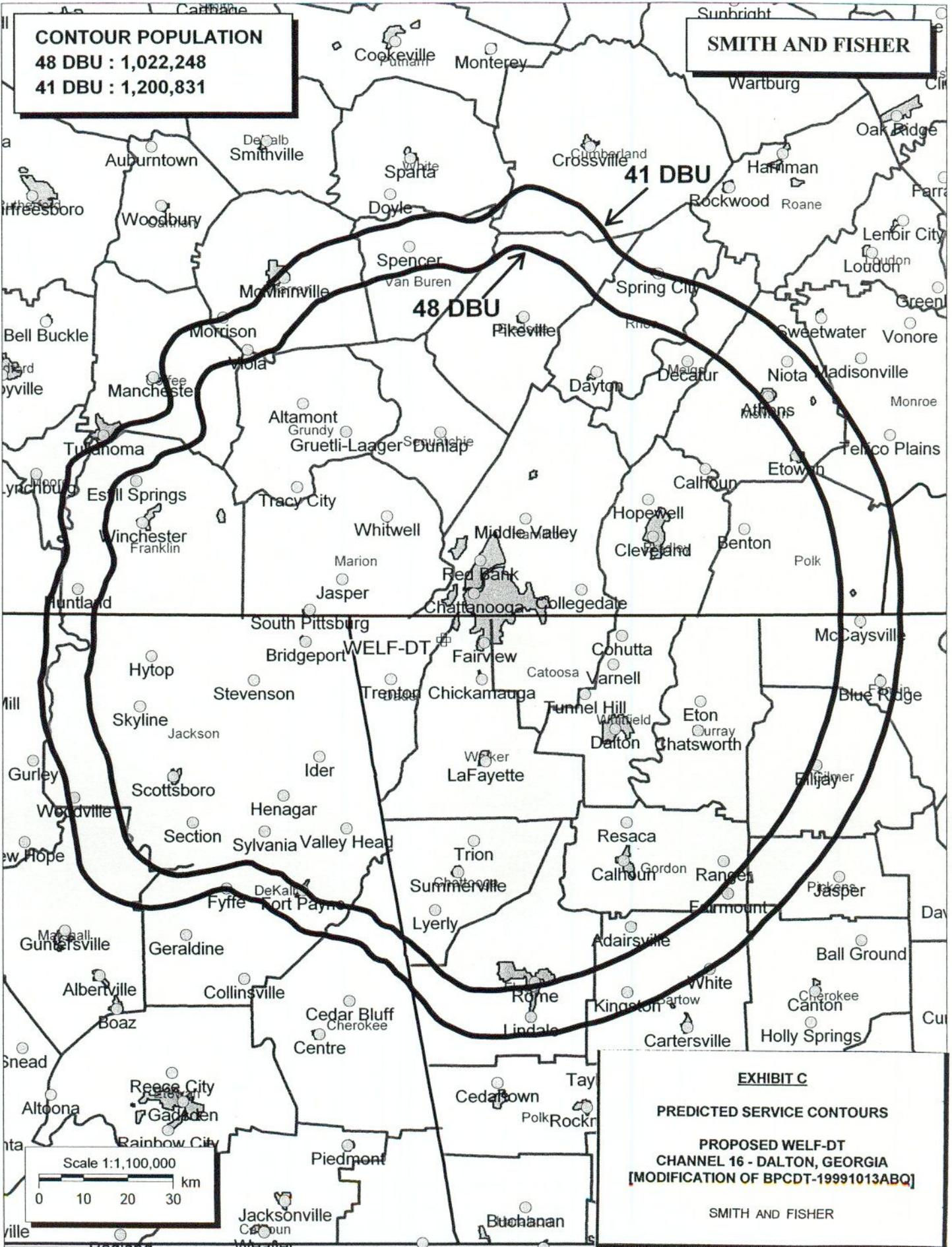
<u>Azimuth</u> (° T)	<u>Relative</u> <u>Field</u>	<u>ERP</u> (dbk)	<u>Azimuth</u> (° T)	<u>Relative</u> <u>Field</u>	<u>ERP</u> (dbk)
0	0.89	23.8	180	0.61	20.5
10	0.94	24.2	190	0.63	20.8
20	0.97	24.5	200	0.65	21.0
30	0.99	24.7	210	0.67	21.3
40	1.00	24.8	220	0.67	21.3
50	1.00	24.8	230	0.67	21.3
60	0.99	24.7	240	0.67	21.3
70	0.97	24.5	250	0.65	21.0
80	0.94	24.2	260	0.63	20.8
90	0.89	23.8	270	0.61	20.5
100	0.85	23.4	280	0.60	20.3
110	0.79	22.7	290	0.60	20.3
120	0.74	22.2	300	0.62	20.6
130	0.69	21.5	310	0.65	21.0
140	0.65	21.0	320	0.69	21.5
150	0.62	20.6	330	0.74	22.2
160	0.60	20.3	340	0.79	22.7
170	0.60	20.3	350	0.85	23.4

**CONTOUR POPULATION**

**48 DBU : 1,022,248**

**41 DBU : 1,200,831**

**SMITH AND FISHER**



POWER DENSITY CALCULATION

PROPOSED WELF-DT  
CHANNEL 16 – DALTON, GEORGIA

[MODIFICATION OF BPCDT-19991013ABQ]

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Dalton facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 300 kw, an effective antenna height of 122 meters above ground, and the elevation pattern of the Andrew antenna, maximum power density two meters above ground of  $0.0016 \text{ mw/cm}^2$  is calculated to occur 37 meters northeast of the base of the tower. Since this is only 0.5 percent of the  $0.32 \text{ mw/cm}^2$  reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 16 (482-488 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.