

ENGINEERING STATEMENT

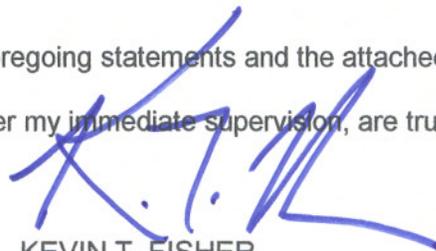
The engineering data contained herein have been prepared on behalf of TRINITY BROADCASTING NETWORK, licensee of WPGD-DT, Channel 51 in Hendersonville, Tennessee, in support of this Application for Construction Permit for a post-transition maximization facility.

It is proposed to utilize the present Andrew directional antenna mounted at the 364-meter level of an existing 393-meter tower. Exhibit B provides elevation and azimuth data for the licensed antenna, and operating parameters for the licensed facility are tabulated in Exhibit C. Exhibit D 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. An interference study is provided in Exhibit E and a power density calculation appears in Exhibit F.

It is important to note that, while the proposed effective radiated power of 1000 kw exceeds that allowable in Section 73.622(f)(8)(i) of the Commission's Rules, the coverage of the proposed facility does not exceed that of the largest station in the market (WSMV-DT, Channel 10 in Nashville, Tennessee), as allowed in Section 73.622(f)(5) of the Rules.

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. The FCC issued Antenna Structure Registration Number 1233975 to this tower.

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


KEVIN T. FISHER

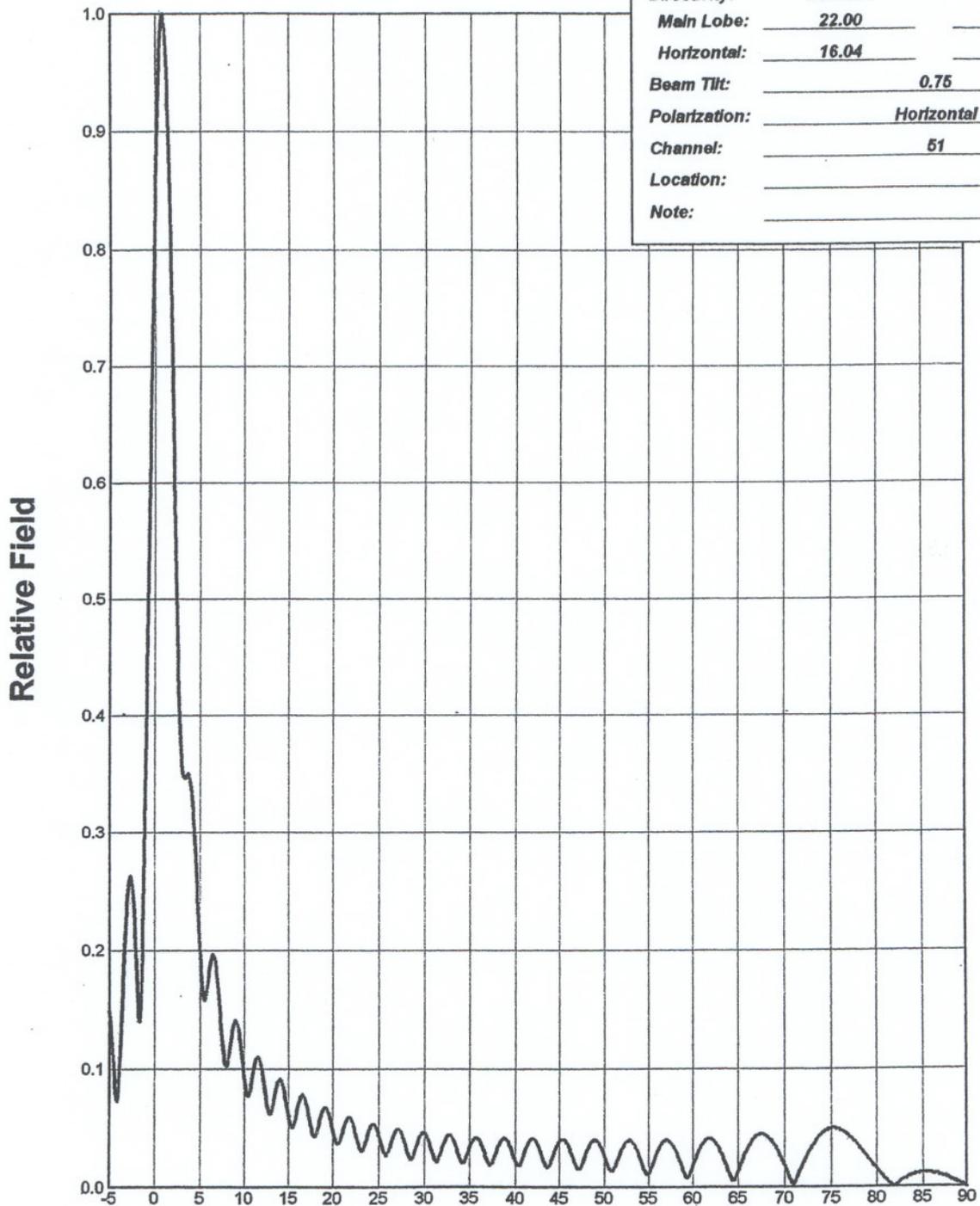
June 4, 2008



ANDREW.

ELEVATION PATTERN

Type:	ATL22H3H	
Directivity:	Numeric	dBd
Main Lobe:	22.00	13.42
Horizontal:	16.04	12.05
Beam Tilt:	0.75	
Polarization:	Horizontal	
Channel:	51	
Location:		
Note:		



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

EXHIBIT B-1

ANTENNA ELEVATION PATTERN

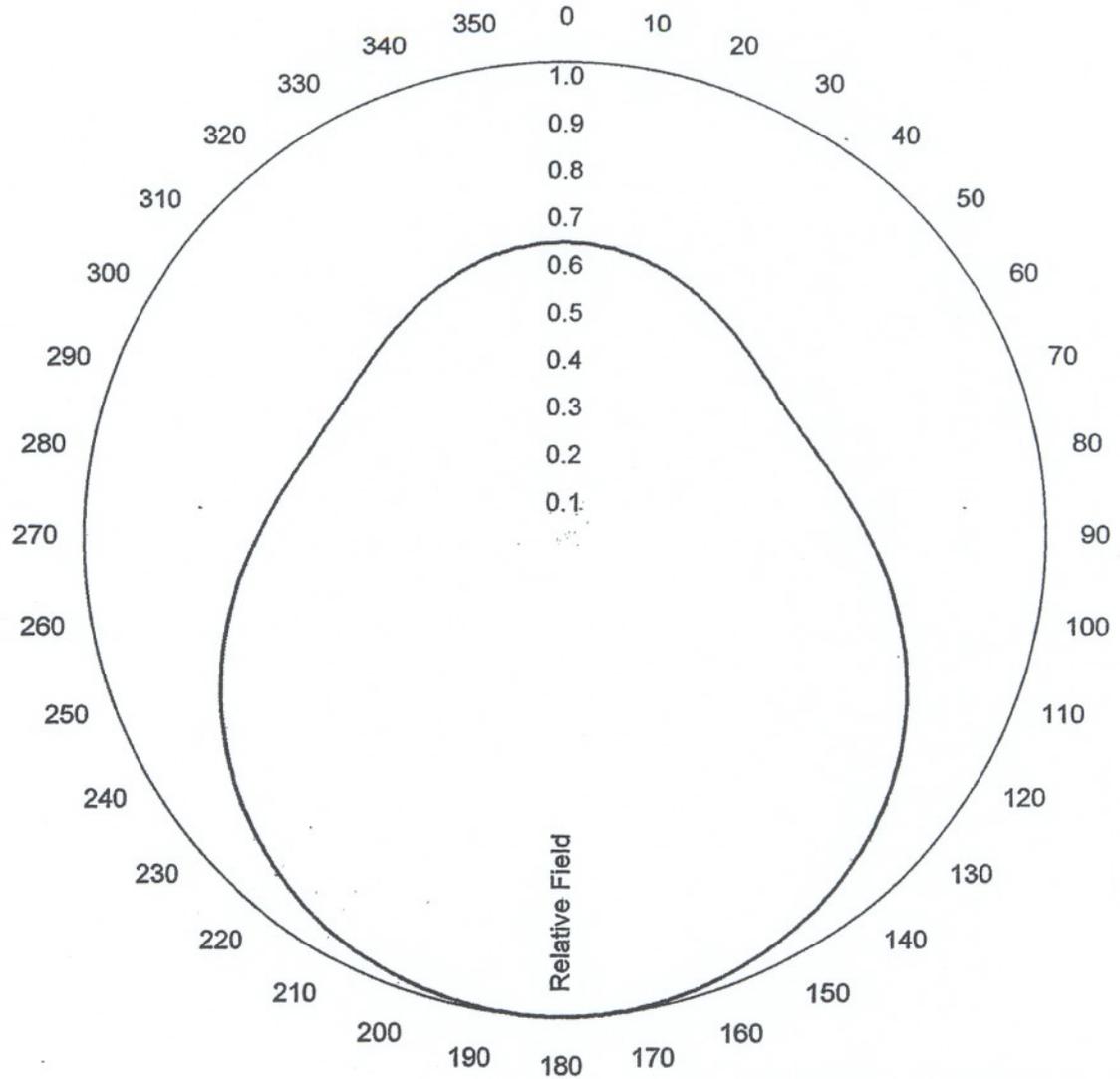
**PROPOSED WPGD-DT
 CHANNEL 51 - HENDERSONVILLE, TENNESSEE**

SMITH AND FISHER



AZIMUTH PATTERN

Type:	ATL-S	
	Numeric	dBd
Directivity:	1.83	2.62
Peak(s) at:		
Polarization:	Horizontal	
Channel:	51	
Location:		
Note:		



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EXHIBIT B-2

ANTENNA AZIMUTH PATTERN

PROPOSED WPGD-DT
CHANNEL 51 - HENDERSONVILLE, TENNESSEE

SMITH AND FISHER

ANTENNA AZIMUTH PATTERN DATA
PROPOSED WPGD-DT
CHANNEL 51 – HENDERSONVILLE, TENNESSEE

<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	0.619	25.8	180	1.00	30.0
10	0.614	25.8	190	0.995	30.0
20	0.599	25.5	200	0.979	29.8
30	0.578	25.2	210	0.952	29.6
40	0.556	24.9	220	0.915	29.2
50	0.539	24.6	230	0.868	28.8
60	0.536	24.6	240	0.813	28.2
70	0.550	24.8	250	0.753	27.5
80	0.583	25.3	260	0.691	26.8
90	0.632	26.0	270	0.632	26.0
100	0.691	26.8	280	0.583	25.3
110	0.753	27.5	290	0.550	24.8
120	0.813	28.2	300	0.536	24.6
130	0.868	28.8	310	0.539	24.6
140	0.915	29.2	320	0.556	24.9
150	0.952	29.6	330	0.578	25.2
160	0.979	29.8	340	0.599	25.5
170	0.995	30.0	350	0.614	25.8

PROPOSED OPERATING PARAMETERS

PROPOSED WPGD-DT
CHANNEL 51 – HENDERSONVILLE, TENNESSEE

Transmitter Power Output:	37.9 kw
Transmission Line Efficiency:	65.5%
Antenna Power Gain – Toward Horizon:	29.37
Antenna Power Gain – Main Lobe:	40.26
Effective Radiated Power – Toward Horizon:	729 kw
Effective Radiated Power – Main Lobe:	1000 kw
Transmitter Make and Model:	Type-accepted
Transmission Line Make and Model:	Andrew MACX650
Size and Type:	6-1/8" rigid
Length:	1,400 feet
Antenna Make and Model:	Andrew ATL22H3-HSS-51
Orientation	180 degrees true
Beam Tilt	0.75 degrees
Radiation Center Above Ground:	364 meters
Radiation Center Above Mean Sea Level:	596 meters

CONTOUR POPULATION

48 DBU : 1,717,498

41 DBU : 1,896,891

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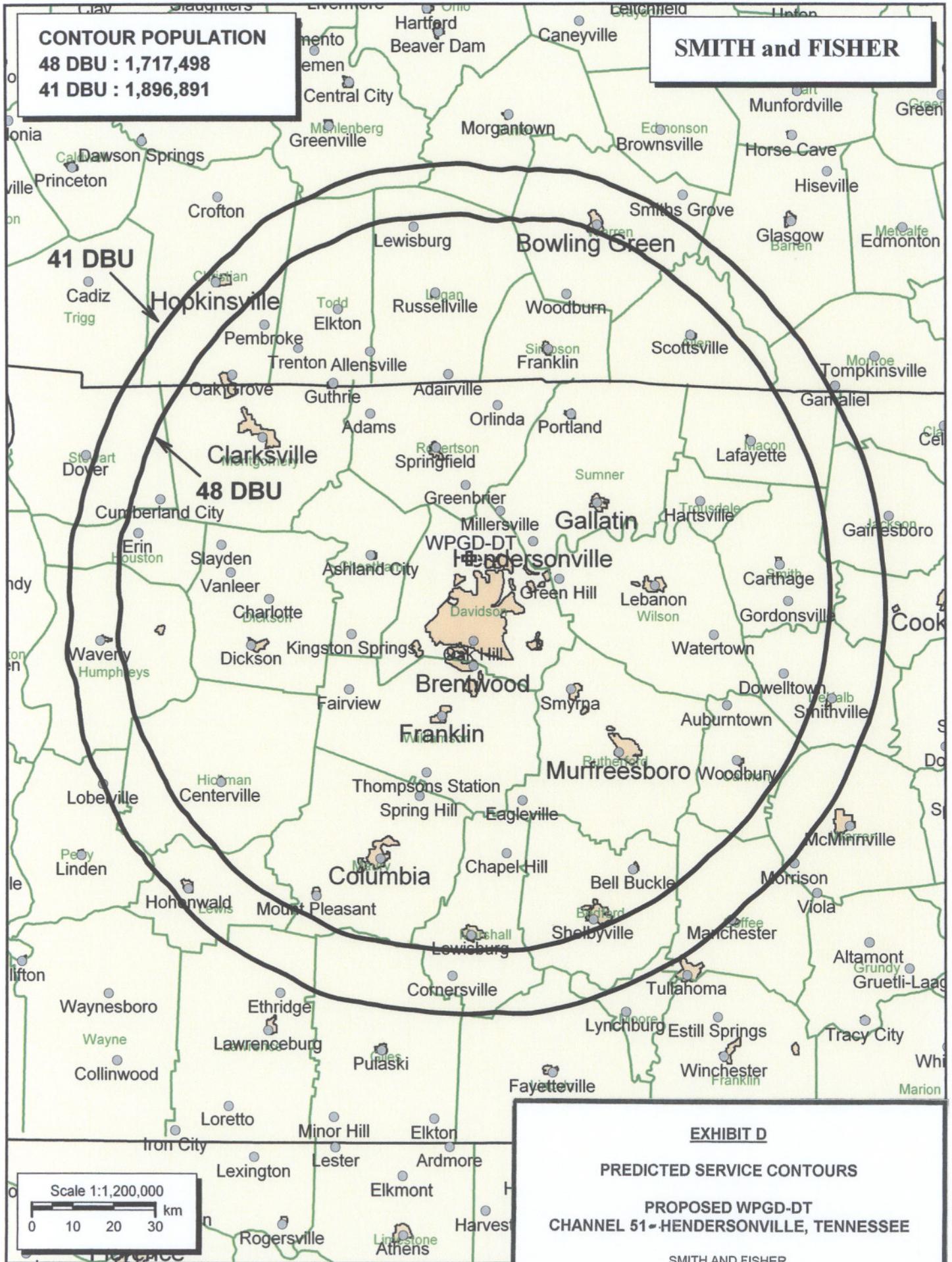


EXHIBIT D

PREDICTED SERVICE CONTOURS

**PROPOSED WPGD-DT
CHANNEL 51 - HENDERSONVILLE, TENNESSEE**

SMITH AND FISHER

INTERFERENCE STUDY
PROPOSED WPGD-DT
CHANNEL 51 – HENDERSONVILLE, TENNESSEE

The instant application specifies an ERP of 1000 kw (directional) at 412 meters above average terrain, which we have determined to be allowable under the FCC's recently approved interference standards with respect to various post-transition digital television facilities as they will exist on or before February 17, 2009, the date by which all stations must operate with the parameters recently adopted in the Commission's DTV Table of Allotments.

In evaluating the interference effect of this proposal, we have relied upon the V-Soft Communications "Probe III" computer program, which has been found generally to mimic the FCC's program. In conducting our studies, we employed a cell size of 2.0 kilometers and an increment spacing of 1.0 kilometer along each radial. In addition, we utilized the 2000 U.S. Census. Changes in interference caused by proposed WPGD-DT to other pertinent stations are tabulated in Exhibit E-2.

As shown, the proposed WPGD-DT facility would not contribute more than 0.5% interference (beyond that which is caused by the allotted WPGD-DT facility) to the service population of any potentially affected post-transition DTV station.

A Longley-Rice interference study also reveals that the proposed WPGD-DT facility does not cause significant (0.5%) interference within the protected service contour of any potentially affected Class A low power television station.

Therefore, this proposal meets the FCC's *de minimis* interference standards for DTV operations.

EXHIBIT E-2

INTERFERENCE STUDY SUMMARY*

PROPOSED WPGD-DT
CHANNEL 51 – HENDERSONVILLE, TENNESSEE

<u>Call Sign</u>	<u>City, State</u>	<u>CH.</u>	<u>Coverage Population</u>	<u>Interference Population From WPGD-DT*</u>	<u>%</u>
WPXA-DT	Rome, GA	51	5,212,478	11,792	0.2
WMYO-DT	Salem, IN	51	1,766,578	5,231	0.3
WAGV-DT	Harlan, KY	51	1,236,692	1,456	0.1
WPXX-DT	Memphis, TN	51	1,459,156	1,840	0.1

*Above that caused by the allotment facility.

EXHIBIT F

POWER DENSITY CALCULATION

PROPOSED WPGD-DT
CHANNEL 51 – HENDERSONVILLE, TENNESSEE

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Hendersonville facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 1000 kw, an effective antenna height of 364 meters above ground, and the vertical pattern of the Andrew antenna, maximum power density two meters above ground of 0.00057 mw/cm^2 is calculated to occur 97 meters south of the base of the tower. Since this is only 0.1 percent of the 0.46 mw/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 51 (692-698 MHz), a grant of this proposal may be considered a minor environmental action with respect to public 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.