

EXHIBIT A

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of the permittee of WDRL-DT, Channel 41 in Danville, Virginia, in support of this amendment to its pending application for modification of Construction Permit BMPCDT-20040702AEO. The purpose of this amendment is to specify a new site.

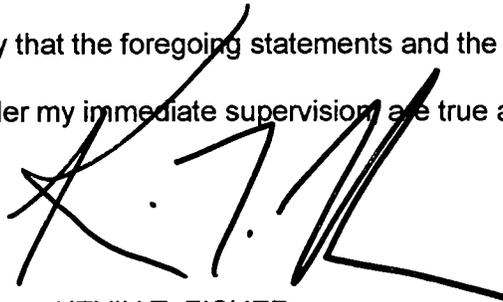
It is now proposed to mount the proposed Dielectric omnidirectional antenna at the 24-meter level of an existing 50-meter communications tower. Exhibit B provides antenna elevation pattern data, and proposed operating parameters are tabulated in Exhibit C. Exhibit D is a map upon which the predicted service contours are plotted. As shown, the city of license is completely contained within the proposed 48 dBu service contour. Since the proposed ERP is greater than that specified in the allotment in certain directions, and since the proposed site is not within 5 kilometers of the allotment site, an interference study is included in Exhibit E. A power density calculation is provided in Exhibit F.

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 new WDRL-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 the overall height or location of the existing tower is proposed herein, the FAA has not been notified of this application. There is no FCC Antenna Structure

Registration Number for this tower due to its diminutive height and its proximity to the nearest airport. This conclusion is supported by the Commission's TOWAIR program.

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.

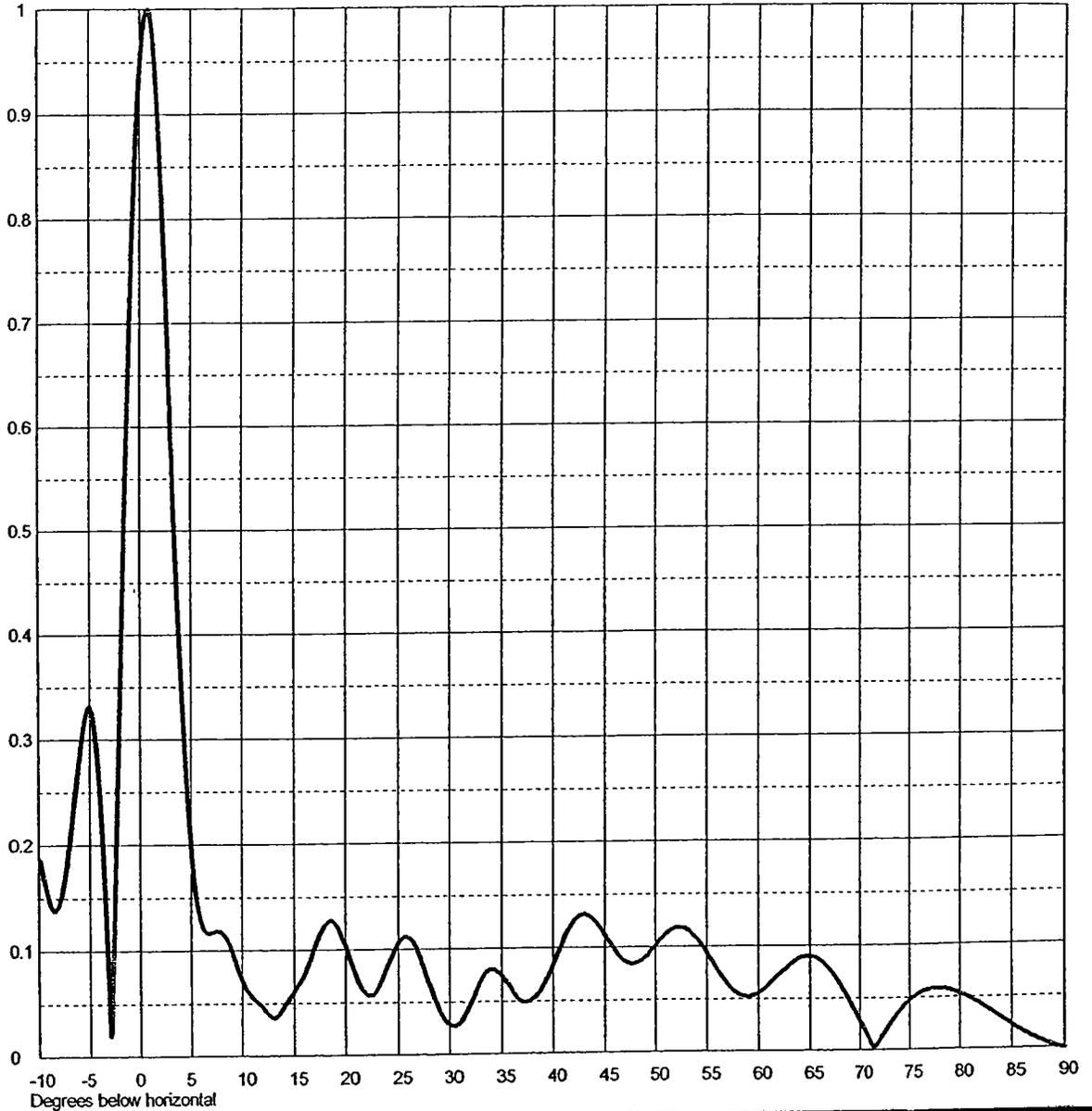
A handwritten signature in black ink, appearing to read 'K. T. Fisher', written over the text of the declaration.

KEVIN T. FISHER

July 22, 2004

## ELEVATION PATTERN

RMS Gain at Main Lobe	13.0 (11.14 dB)	Beam Tilt	0.75 Degrees
RMS Gain at Horizontal	11.5 (10.61 dB)	Frequency	635.00 MHz
Calculated / Measured	Calculated	Drawing #	16Q130075-90



Remarks:

**EXHIBIT B**  
**ANTENNA ELEVATION PATTERN**  
**PROPOSED WDRD-DT**  
**CHANNEL 41 – DANVILLE, VIRGINIA**  
**[AMENDMENT TO BMPCDT-20040702AEO]**  
**SMITH AND FISHER**

EXHIBIT C

PROPOSED OPERATING PARAMETERS

PROPOSED WDRL-DT  
CHANNEL 41 – DANVILLE, VIRGINIA  
[AMENDMENT TO BMPCDT-20040702AEO]

Transmitter Power Output:	16.4 kw
Transmission Line Efficiency:	93.9%
Antenna Power Gain – Main Lobe:	13.0
Effective Radiated Power – Main Lobe:	200 kw
Transmitter Make and Model:	Type-accepted
Rated Output	20 kw
Transmission Line Make and Model:	Dielectric FLEXLine
Size and Type:	4-1/8" flexible
Length:	105 feet*
Antenna Make and Model:	TFU-16DS CO3
Orientation	Omnidirectional
Beam Tilt	0.75 degrees
Effective Height Above Ground:	24 meters
Effective Height Above Mean Sea Level:	591 meters

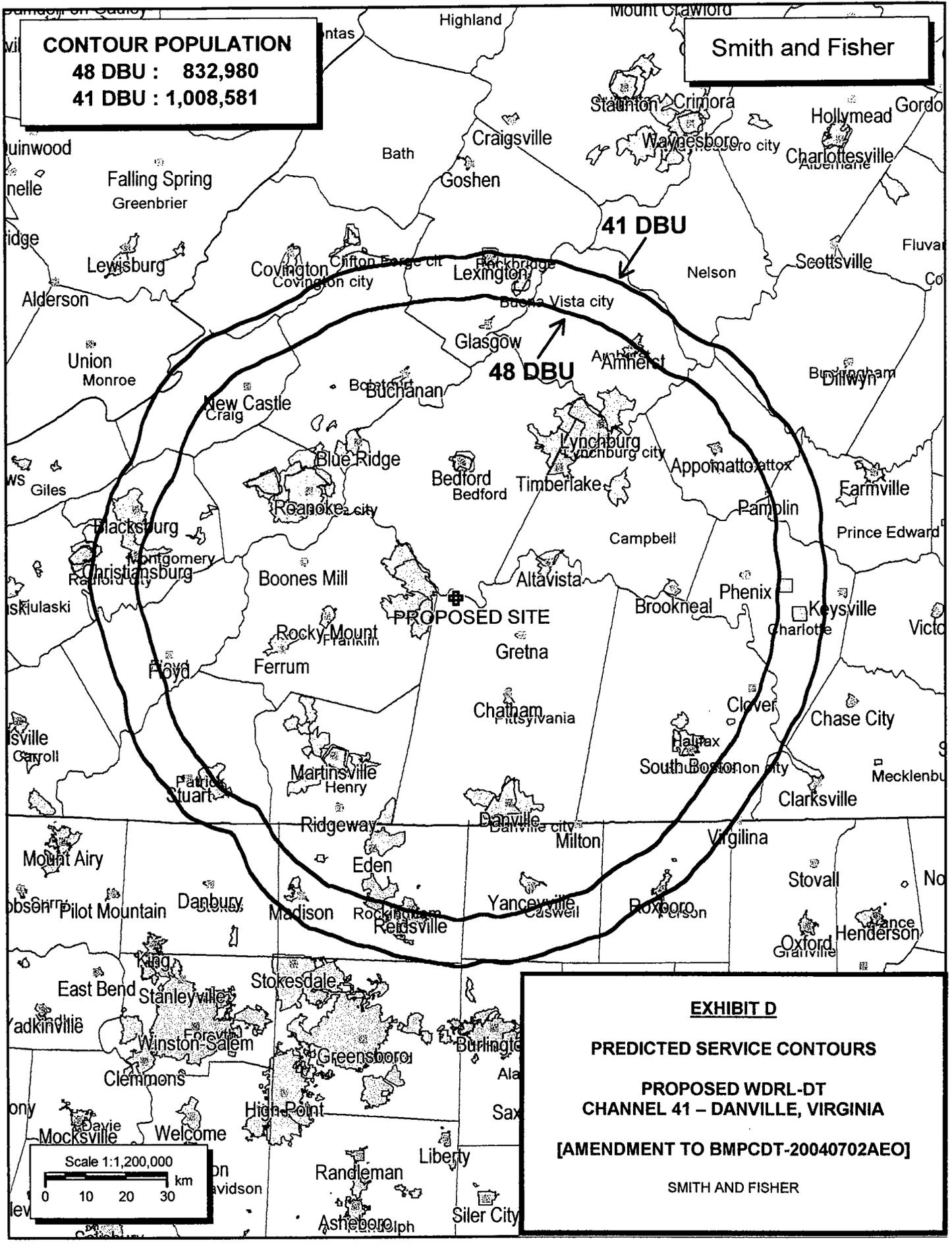
\*estimated

**CONTOUR POPULATION**

**48 DBU : 832,980**

**41 DBU : 1,008,581**

**Smith and Fisher**



**EXHIBIT D**

**PREDICTED SERVICE CONTOURS**

**PROPOSED WDRL-DT  
CHANNEL 41 - DANVILLE, VIRGINIA  
[AMENDMENT TO BMPCDT-20040702AEO]**

SMITH AND FISHER

Scale 1:1,200,000

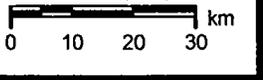


EXHIBIT E-1

INTERFERENCE STUDY  
PROPOSED WDRL-DT  
CHANNEL 41 – DANVILLE, VIRGINIA  
[AMENDMENT TO BMPCDT-20040702AEO]

The instant application specifies an ERP of 200 kw at 332 meters above average terrain, which we have determined to be allowable under the FCC's *de minimis* standards with respect to various NTSC and DTV facilities.

In evaluating the interference effect of this proposal, we have relied upon the V-Soft Communications "Probe II" computer program, which has been found generally to mimic the FCC's program. In conducting our studies, we employed a signal resolution of 2 kilometers and an increment spacing of 1.0 kilometer along each radial, unless otherwise noted. In addition, we utilized the 1990 U.S. Census. Changes in interference caused by proposed WDRL-DT to other pertinent stations are tabulated in Exhibit E-2.

As shown, the proposed WDRL-DT facility would not contribute more than two percent DTV interference to the service population of any affected NTSC or DTV station. In addition, this proposal does not result in any NTSC or DTV station receiving more than ten percent total DTV interference to viewers living within its authorized service area.

A Longley-Rice interference study also reveals that the proposed WDRL-DT facility does not cause interference within the protected 74 dBu contour of any potentially affected Class A low power television station, including WKPZ-LP, Channel 41 in Wytheville, Virginia.

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

## INTERFERENCE STUDY SUMMARY

PROPOSED WDRL-DT  
CHANNEL 41 – DANVILLE, VIRGINIA

[AMENDMENT TO BMPCDT-20040702AEO]

<u>Call Sign</u>	<u>City, State</u>	<u>CH.</u>	<u>Coverage Population</u>	<u>Interference Population From WDRL-DT</u>	<u>%</u>	<u>Total DTV Interference</u>	<u>%</u>
WIS-DT BLCDDT-20030210AAV	Columbia, SC	41	1,301,823	122	<0.1	19,760	1.5
*WHTJ(TV) BLET-19890421KE	Charlottesville, VA	41	205,892	3,165	1.5	5,307	2.6
WETP-DT BPEDT-20000426ABS	Sneedsville, TN	41	1,435,573	612	<0.1	13,201	0.9
WFXR-TV BMLCT-19940217KE	Roanoke, VA	41	873,595	1,947	0.2	54,540	6.2
WPXR(TV) BLCT-19860110KN	Roanoke, VA	41	647,216	1,472	0.2	23,243	3.6
WPXR(TV) BMPCT-20001024ABF	Roanoke, VA	41	638,722	1,750	0.3	20,133	3.2
WKPZ-LP BLTTA-20021210ACE	Wytheville, VA	41	16,977	0	0	0	0
WHSW-DT Allotment	Baltimore, MD	41	5,953,668	267	<0.1	74,924	1.3
WIS-DT Allotment	Columbia, SC	41	1,503,809	993	<0.1	26,081	1.7

\*Study utilized a 1-kilometer cell size and 0.1-kilometer increment spacing.

EXHIBIT F

POWER DENSITY CALCULATION

PROPOSED WDRL-DT  
CHANNEL 41 – DANVILLE, VIRGINIA

[AMENDMENT TO BMPCDT-20040702AEO]

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Danville facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 200 kw, an effective antenna height of 24 meters above ground, and the elevation pattern of the Dielectric antenna, maximum power density two meters above ground of  $0.13 \text{ mw/cm}^2$  is calculated to occur 17 meters from the base of the tower. Since this is only 31 percent of the  $0.42 \text{ mw/cm}^2$  reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 41 (632-638 MHz), and since there are no other broadcast contributors to the RF environment in the vicinity of this site, 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.

### SECTION III-D - DTV Engineering

Complete Questions 1-5 of the Certification Checklist and provide all data and information for the proposed facility, as requested in Technical Specifications, Items 1-13.

**Certification Checklist:** A correct answer of “Yes” to all of the questions below will ensure an expeditious grant of a construction permit. However, if the proposed facility is located within the Canadian or Mexican borders, coordination of the proposal under the appropriate treaties may be required prior to grant of the application. An answer of “No” will require additional evaluation of the applicable information in this form before a construction permit can be granted.

1. The proposed DTV facility complies with 47 C.F.R. Section 73.622 in the following respects:
  - (a) It will operate on the DTV channel for this station as established in 47 C.F.R. Section 73.622.  Yes  No
  - (b) It will operate from a transmitting antenna located within 5.0 km (3.1 miles) of the DTV reference site for this station as established in 47 C.F.R. Section 73.622.  Yes  No
  - (c) It will operate with an effective radiated power (ERP) and antenna height above average terrain (HAAT) that do not exceed the DTV reference ERP and HAAT for this station as established in 47 C.F.R. Section 73.622.  Yes  No
2. The proposed facility will not have a significant environmental impact, including exposure of workers or the general public to levels of RF radiation exceeding the applicable health and safety guidelines, and therefore will not come within 47 C.F.R. Section 1.1307.  Yes  No  

Applicant must **submit the Exhibit** called for in Item 13.
3. Pursuant to 47 C.F.R. Section 73.625, the DTV coverage contour of the proposed facility will encompass the allotted principal community.  Yes  No
4. The requirements of 47 C.F.R. Section 73.1030 regarding notification to radio astronomy installations, radio receiving installations and FCC monitoring stations have either been satisfied or are not applicable.  Yes  No
5. The antenna structure to be used by this facility has been registered by the Commission and will not require reregistration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely effect safety in air navigation and this structure qualifies for later registration under the Commission’s phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7.  Yes  No

**SECTION III-D DTV Engineering**

**TECHNICAL SPECIFICATIONS**

Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

**TECH BOX**

1. Channel Number: DTV 41 Analog TV, if any 24

2. Zone:  I  II  III

3. Antenna Location Coordinates: (NAD 27)  
37 ° 02 ' 10 "  N  S Latitude  
79 ° 32 ' 30 "  E  W Longitude

4. Antenna Structure Registration Number: \_\_\_\_\_  
 Not applicable  FAA Notification Filed with FAA

5. Antenna Location Site Elevation Above Mean Sea Level: 566.9 meters

6. Overall Tower Height Above Ground Level: 47.9 meters

7. Height of Radiation Center Above Ground Level: 24.4 meters

8. Height of Radiation Center Above Average Terrain: 331.7 meters

9. Maximum Effective Radiated Power (average power): 200 kW

10. Antenna Specifications:

Manufacturer	Model
Dielectric	TFU-16DSCO3

a.  Not Applicable

b. Electrical Beam Tilt: 0.75 degrees  Not Applicable

c. Mechanical Beam Tilt: \_\_\_\_\_ degrees toward azimuth \_\_\_\_\_ degrees True  Not Applicable

Attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(c). 

Exhibit No.
B

d. Polarization:  Horizontal  Circular  Elliptical

**TECH BOX**

e. Directional Antenna Relative Field Values:  Not applicable (Nondirectional)  
 Rotation: \_\_\_\_\_ °  No rotation

Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value
0		60		120		180		240		300	
10		70		130		190		250		310	
20		80		140		200		260		320	
30		90		150		210		270		330	
40		100		160		220		280		340	
50		110		170		230		290		350	
Additional Azimuths											

If a directional antenna is proposed, the requirements of 47 C.F.R. Section 73.625(c) must be satisfied. **Exhibit required.**

Exhibit No.  
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11. Does the proposed facility satisfy the interference protection provisions of 47 C.F.R. Section 73.623(a)? (Applicable only if **Certification Checklist** Items 1(a), (b), or (c) are answered "No.")  Yes  No

If "No," attach as an Exhibit justification therefor, including a summary of any related previously granted waivers.

Exhibit No.  
E

12. If the proposed facility will not satisfy the coverage requirement of 47 C.F.R. Section 73.625, attach as an Exhibit justification therefor. (Applicable only if **Certification Checklist** Item 3 is answered "No.")

Exhibit No.  
D

13. **Environmental Protection Act. Submit in an Exhibit** the following:

Exhibit No.  
F

a. If **Certification Checklist** Item 2 is answered "Yes," a brief explanation of why an Environmental Assessment is not required. Also describe in the Exhibit the steps that will be taken to limit RF radiation exposure to the public and to persons authorized access to the tower site.

By checking "Yes" to **Certification Checklist** Item 2, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic exposure in excess of FCC guidelines.

If **Certification Checklist** Item 2 is answered "No," an Environmental Assessment as required by 47 C.F.R. Section 1.1311.

**PREPARER'S CERTIFICATION IN SECTION III MUST BE COMPLETED AND SIGNED.**

I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith. I acknowledge that all certifications and attached Exhibits are considered material representations. I hereby waive any claim to the use of any particular frequency as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and request an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)

Typed or Printed Name of Person Signing	Typed or Printed Title of Person Signing
Signature	Date

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT  
(U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT  
(U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

### SECTION III PREPARER'S CERTIFICATION

I certify that I have prepared Section III (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name KEVIN T. FISHER	Relationship to Applicant (e.g., Consulting Engineer) Broadcast Consultant	
Signature	Date July 22, 2004	
Mailing Address SMITH and FISHER, 2237 Tackett's Mill Drive, Suite A		
City Lake Ridge	State or Country (if foreign address) Virginia	ZIP Code 22192
Telephone Number (include area code) (703) 494-2101	E-Mail Address (if available) kevin@smithandfisher.com	

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