

ENGINEERING STATEMENT
RE DTV BROADCAST ENGINEERING DATA
ON BEHALF OF
WEST VIRGINIA MEDIA HOLDINGS, LLC
WVNS-DT, LEWISBURG, WEST VIRGINIA
CHANNEL 8 3.68 KW ERP 577 METERS HAAT

JUNE 2004

COHEN, DIPPELL AND EVERIST, P.C.
CONSULTING ENGINEERS
RADIO AND TELEVISION
WASHINGTON, D.C.

This engineering statement has been prepared on behalf of West Virginia Media Holdings, LLC, permittee of WVNS-DT, Lewisburg, West Virginia. The purpose of this engineering statement is to accompany its application to construct non-directional digital television ("DTV") facilities, specifically to modify the construction permit BMPCDT-20030107AAO.

WVNS-TV is licensed to operate on NTSC television Channel 59 with a maximum visual effective radiated power ("ERP") of 1910 kW (horizontal polarization) and height above average terrain ("HAAT") of 568 meters. WVNS-DT had petitioned and was granted DTV Channel 8 with facilities of 3.8 kW ERP (maximum directional) and HAAT of 568 meters. The engineering statement in response to the Report and Order in MB Docket 03-118 requested facilities for Channel 8 with an ERP of 3.68 kW maximum DA and a HAAT of 577 meters. WVNS-DT now proposes to construct DTV facilities for Channel 8 of 3.68 kW (non-directional, horizontal polarization) with an HAAT of 577 meters at the existing site.

The existing tower currently supports the licensed operation of WVNS-TV, Channel 59, Lewisburg, West Virginia. The WVNS-DT antenna will be top-mounted on the existing tower (see Exhibit E-1). The tower registration number is 1034390. The existing transmitter site is located at the top of Keeney Knob.

The geographic coordinates of the site are:

North Latitude: 37° 46' 22"

West Longitude: 80° 42' 25"

NAD-27

Equipment Data

Antenna: Dielectric, Model No. TF-2HT (See Exhibits E-2a and E-2b)

Transmission Line: 90 meters (295 ft) of Dielectric, Type EIA Style Rigid TL, 3" 50 ohm or equivalent

Power Data

Transmitter output	1.92 kW	2.83 dBk
Transmission line efficiency/loss	91.3%	0.39 dB
Antenna input	1.75 kW	2.44 dBk
Antenna gain, horizontal plane	2.1	3.22 dB
Max. ERP, horizontal plane	3.68 kW	5.66 dBk

Elevation Data

Vertical dimension of Channel 8 top-mounted antenna	4.9 meters 16.0 feet
Overall height above ground of the existing antenna structure (including beacon)	81.0 meters 265.7 feet
Center of radiation of Channel 8 antenna above ground	78.0 meters 255.9 feet
Elevation of site above mean sea level	1181.1 meters 3875.0 feet
Center of radiation of Channel 8 antenna above mean sea level	1259.0 meters 4130.6 feet
Overall height above mean sea level of proposed tower (including beacon)	1262.1 meters 4140.7 feet
Antenna height above average terrain	577 meters

Note: Slight height differences result due to conversion to metric.

Coverage

The average elevation data for 3.2 to 16.1 km along each radial is based on the NGDC 3-second computerized terrain database. The F(50,90) DTV coverage contour has been computed from reference to the propagation data for Channels 7-13, as published by the FCC in Figure 10 and Figure 10a, Section 73.699 of the FCC Rules and Regulations.

Utilizing the formula in Section 73.625(b)(2) of the Rules for the effective heights, it is found that the depression angle, A_h , varies from 0.593 to 0.723 degrees. Since the relative vertical field is greater than 90% of the maximum at these depression angles, the maximum power was used in determining the distance to the DTV contour.

Table II includes the distances to the 35 and 28 dBu F(50,90) coverage contours, the depression angle at each radial, and the effective antenna height. Exhibit E-3 shows the contours and the city of license within these contours.

Interference Analysis

A study of predicted interference caused by the proposed WVNS-DT service has been performed using a version of the Longley-Rice program as described in OET Bulletin No. 69 (July 2, 1997) and the Public Notice, "Additional Application Processing Guidelines for Digital Television (DTV)" (August 1998). The FCC's FORTRAN-77 code was modified only to the extent necessary (primarily input/output handling) for the program to run on a Windows98/Intel platform. Comparison of service/interference areas and populations indicates that this model closely matches the FCC's evaluation program. Best efforts have been made to use data and calculations identical to the FCC's program. Any slight differences are attributable to compiler, operating system and/or

processor characteristics. The effect of any variance in calculated population values versus the FCC's program is minimized when differencing a given model's results, e.g., new interference equals total interference less baseline interference. The effect is further reduced for ratios of calculated population values, e.g., incremental population affected as a percent of total population \leq served. The model employs the Longley-Rice propagation methodology and evaluates in grid cells of approximately 1 km² using 3-second terrain data sampled approximately every 0.5 km at one degree azimuth intervals with 1990 census centroids.

Table I lists the potential interferees which are to be considered according to the processing guidelines cited above. The last column of Table I shows the predicted new interference caused by the proposed WVNS-DT operation. None of the affected stations suffer more than 2% new interference from WVNS-DT.

Other Licensed and Broadcast Facilities

No adverse technical effect is anticipated by the proposed DTV operation to any other FCC licensed facility. If required, the permittee will install filters or take other measures as necessary to resolve the problem.

FCC Rule, Section 1.1307

The proposed 3.68 kW non-directional operation will utilize the Dielectric TF-2HT antenna (or equivalent) described above with a center of radiation above ground of 78 meters. The proposed antenna will be top-mounted on a steel lattice tower with an overall height of 81 meters above ground.

According to the FCC database, there are no AM stations located within 3.2 km and no FM stations located within 100 meters of the WVNS-TV tower. The only authorized facility within 100 meters of the proposed site is WVNS-TV.

The proposed operation based upon the current OET Bulletin No. 65, Edition 97-01 dated August 1997 and Supplement A meets the provisions of the FCC radio frequency field ("RFF") guidelines, and thus, complies with Section 1.1307 of the FCC Rules. The elevation pattern for the antenna shows a maximum relative field of less than 0.43 toward the ground (10° to 90° below the horizontal). Calculation according to OET Bulletin 65 predicts a maximum RFF power density of less than 4.0 $\mu\text{W}/\text{cm}^2$, 2 meters above ground or less than 2% of the uncontrolled Maximum Permissible Exposure ("MPE") guideline.

For completeness, the contribution by facilities located within 100 meters to the RF electromagnetic field environment is considered herein, as there are multiple emitters in the area. The RFF study will consider the following stations:

Station

WVNS-TV	Channel 59	licensed/same tower
WVNS-DT	Channel 8	proposed

The RFF contribution of each station will be calculated using the following basic formula:

$$S = \frac{33.4(F^2) \text{ Total ERP}}{R^2}$$

where:

S = power density in $\mu\text{W}/\text{cm}^2$

F = relative field factor

Total ERP = ERP Horizontal Polarization + ERP Vertical Polarization

R = RCAGL - 2 meters

ERP = RMS ERP in watts for DTV Stations

ERP = $[0.4 \text{ ERP}_V + \text{ERP}_A]$ for NTSC Stations

ERP_V = peak visual ERP in watts

ERP_A = RMS aural ERP in watts

WVNS-TV NTSC Facility

Channel 59	Freq:	740-746 MHz range
	ERP =	$(0.4)[1910 \text{ kilowatts (visual)}] + [191 \text{ kilowatts (aural)}]$
	Polarization =	Horizontal
	RCAGL -2 meters =	65 meters

$$S = \frac{33.4 (F^2) \text{ Tot ERP}}{R^2}$$

Tot ERP = 955,000 watts (Horizontal Only)
 $R = 65 \text{ meters}$
 $F = 0.1 \text{ (assumed)}$

$$S = < 75.5 \mu\text{W}/\text{cm}^2$$

Therefore, WVNS-TV contributes less than $75.5 \mu\text{W}/\text{cm}^2$ at 2 meters above ground.

The limit for an uncontrolled environment for this frequency is $495.33 \mu\text{W}/\text{cm}^2$.

WVNS-TV contributes less than 16.0% RFF level for an uncontrolled environment two meters above the ground.

WVNS-DT DTV Facility (proposed)

Channel 8	Freq:	180-186 MHz range
	ERP =	3.68 kW
	Polarization =	Horizontal
	RCAGL -2 meters =	76 meters

$$S = \frac{33.4 (F^2) \text{ Tot ERP}}{R^2}$$

Tot ERP = 3.68 kW (Horizontal Only)
 $R = 76 \text{ meters}$
 $F = 0.43 \text{ (from manufacturer's data)}$

$$S = < 4.0 \mu\text{W}/\text{cm}^2$$

Therefore, WVNS-DT contributes less than $4.0 \mu\text{W}/\text{cm}^2$ at 2 meters above ground.

The limit for an uncontrolled environment for this frequency is 200 $\mu\text{W}/\text{cm}^2$.

WVNS-DT contributes less than 2.0% RFF level for an uncontrolled environment two meters above the ground.

Therefore, the total RFF percentage will be less than 18% of the limit for an uncontrolled environment at two meters above ground when WVNS-DT and WVNS-TV are operational. Based on this analysis, RFF levels will not exceed current FCC guidelines.

Authorized personnel and rigging contractors will be alerted to the potential zone of high radiation on the tower, and if necessary, the station will operate with reduced power or terminate the operation of the transmitter as appropriate when it is necessary for authorized personnel or contractors to perform work on or near the tower. Workers and the general public, therefore, will not be subjected to RFF levels in excess of the current FCC guidelines.

An environmental assessment ("EA") is categorically excluded under Section 1.1306 of the FCC Rules and Regulations since the permittee indicates that:

- (a)(1) The existing facilities are not located in an officially designated wilderness area.
- (a)(2) The existing facilities are not located in an officially designated wildlife preserve.
- (a)(3) The existing facilities will not affect any listed threatened or endangered species or habitats.
- (a)(3)(ii) The existing facilities will not jeopardize the continued existence of any proposed endangered or threatened species and are not likely to result in the destruction or adverse modification of proposed critical habitats.
- (a)(4) The existing facilities will not affect any known districts, sites, buildings, structures, or objects significant in American history, architecture, archaeology, engineering, or culture.

- (a)(5) The existing facilities are not located near any known Indian religious sites.
- (a)(6) The existing facilities are not located in a flood plain.
- (a)(7) The installation of the DTV facilities on a modified tower at an existing site will not involve a significant change in surface features of the ground in the vicinity of the tower.
- (a)(8) It is not proposed to equip the tower with high intensity white lights unless required by the FAA.
- (b) Workers and the general public will not be subjected to RFF levels in excess of the current FCC guidelines. Authorized personnel will be alerted to areas unauthorized on the tower where potential radiation levels are in excess of the FCC guidelines. A security fence with a locked gate prevents unauthorized access to the tower site.

TABLE I
STATIONS POTENTIALLY AFFECTED
BY THE DTV OPERATION OF
WVNS-DT, LEWISBURG, WEST VIRGINIA
CHANNEL 8 3.68 KW ERP 577 METERS HAAT
JUNE 2004

<u>Channel</u>	<u>Call</u>	<u>City/State</u>	<u>Distance</u> km	<u>File No.</u>	<u>Percent of</u> <u>New Interference</u>
7	W07BL Lic	Bergton-Criders, VA	182.2	BLTTV- 19841024ID	none
7	NEW App	Charlottesville, VA	210.3	BNPTVL- 20000831ANF	none
7	WKTP-LP Lic	Gate City, etc., VA	205.6	BLTTV- 19830502IJ	none
7	W07DA Lic	Grundy, VA	135.0	BLTVL 19951030ID	none
7	WDBJ Lic	Roanoke, VA	80.5	BLCT-2428	0.2
8	W08BN Lic	Flintstone, MD	284.4	BLTTV-3868	none
8	W08BH Lic	Andrews, etc., NC	392.7	BLTT-3301	none
8	W08BP Lic	Beaver Dam, NC	296.2	BLTTV- 20011001AKM	none
8	W08AN Lic	Bryson City, etc., NC	361.8	BLTTV- 19800725IC	none
8	W08AO Lic	Canton, etc., NC	313.2	BLTTV-1158	none
8	W08AT Lic	Cherokee, etc., NC	346.1	BLTTV-4878	none
8	WGHP Lic	High Point, NC	231.0	BLCT-1313	0

TABLE I
STATIONS POTENTIALLY AFFECTED
BY THE DTV OPERATION OF
WVNS-DT, LEWISBURG, WEST VIRGINIA
CHANNEL 8 3.68 KW ERP 577 METERS HAAT
JUNE 2004
(continued)

<u>Channel</u>	<u>Call</u>	<u>City/State</u>	<u>Distance</u> km	<u>File No.</u>	<u>Percent of</u> <u>New Interference</u>
8	W08BJ Lic	Marion, etc., NC	260.7	BLTTV- 19791211IC	none
8	W08AX Lic	Marshall, NC	281.6	BLTTV-1737	none
8	W08BF Lic	Spruce Pine, etc., NC	244.4	BLTTV- 19820512IG	none
8	WJW Lic	Cleveland, OH	408.3	BLCT- 20030625AAR	none
8	WJW CP mod	Cleveland, OH	408.3	BMPCT- 20020514AAH	none
8	WGCT-CA Lic	Columbus, OH	316.3	BLCT- 19880601IW	none
8	WWCP-TV Lic	Johnstown, PA	299.6	BLCT- 19861023KJ	none
8	WOLO-TV Lic	Columbia, SC	406.5	BLCDT- 20021106AAU	0
8	WOLO-DT PLN	Columbia, SC	413.8	DTVPLN- DTVP0043	none
8	WVLT-TV Lic	Knoxville, TN	347.2	BLCT- 19881223KE	none
8	WVLT-TV CP	Knoxville, TN	349.9	BPCT- 20030203ABW	none
8	NEW App	Harrisonburg, VA	162.9	BNPTVL- 20000831BDJ	none

TABLE I
STATIONS POTENTIALLY AFFECTED
BY THE DTV OPERATION OF
WVNS-DT, LEWISBURG, WEST VIRGINIA
CHANNEL 8 3.68 KW ERP 577 METERS HAAT
JUNE 2004
(continued)

<u>Channel</u>	<u>Call</u>	<u>City/State</u>	<u>Distance</u> km	<u>File No.</u>	<u>Percent of</u> <u>New Interference</u>
8	W08CW Lic	Monterey, etc., VA	116.1	BLTTV- 19910830JG	none
8	WRIC-TV Lic	Petersburg, VA	274.8	BMLCT- 20021218ABE	0
8	WCHS-TV Lic	Charleston, WV	126.3	BLCT-2473	1.1
9	WCHS-TV App	Charleston, WV	126.3	BPCT- 20030715ACN	1.1
9	WAPM-CA Lic	Lynch/Benham, KY	215.6	BLTVL- 19970829JB	none
9	WOPI-CA App	Kingsport, TN	195.7	BPTVA- 20030910ACT	none
9	WOPI-CA Lic	Bristol, VA	195.7	BLTVA- 20021211AAB	none
9	W09CP CP	Charlottesville, VA	204.5	BNPTVL- 20000831BZX	none
9	WSWP-TV Lic	Grandview, WV	28.3	BLET- 19830831KF	0.8

TABLE II
COMPUTED COVERAGE DATA
FOR THE PROPOSED DTV OPERATION OF
WVNS-DT, LEWISBURG, WEST VIRGINIA
CHANNEL 8 3.68 KW ERP 577 METERS HAAT
JUNE 2004

<u>Azimuth</u> N ° E, T	Effective Antenna <u>Height</u> meters	Depression <u>Angle</u> degrees	<u>ERP</u> kW	<u>Contour Levels</u>	
				<u>35 dBu</u> km	<u>28 dBu</u> km
0	493	0.615	3.68	99.7	113.9
45	644	0.703	3.68	107.3	122.5
90	658	0.711	3.68	107.7	123.2
135	630	0.695	3.68	106.8	121.8
180	681	0.723	3.68	108.4	124.3
225	475	0.604	3.68	98.4	112.9
270	569	0.660	3.68	104.6	118.0
315	458	0.593	3.68	97.1	111.6

Channel 8 (180-186 MHz)
 Center of Radiation 1259 meters AMSL
 Antenna Height Above Average Terrain 577 meters

North Latitude: 37° 46' 22"
 West Longitude: 80° 42' 25"

NAD-27

ABOVE MEAN SEA LEVEL

ABOVE GROUND

1262.1 METERS (4140.7')

81 METERS (265.7')

1259.0 METERS (4130.6') C/R

78 METERS (255.9') C/R

1254.4 METERS (4115.5') C/R

73.3 METERS (240.5') C/R

*PAINTING AND LIGHTING
WILL BE ACCORDANCE WITH
F.A.A. RULES AND REGULATIONS*

**PROPOSED WVNS-DT
ANTENNA**

**EXISTING WVNS ANTENNA
(ANDREW ALP32-M4-HSM-59)**

*TOWER REGISTRATION
No. 1034390*

EXISTING TOWER

NOT TO SCALE

1181.1 METERS (3875')

0.0 METERS

EXHIBIT E - 1
VERTICAL SKETCH
FOR THE PROPOSED DTV OPERATION OF
WVNS-DT, LEWISBURG, WEST VIRGINIA
JUNE 2004



Proposal Number

Revision

Date

JUNE 2004

Call Letters

WVNS-DT

Channel

8

Location

Lewisburg, WV

Customer

Antenna Type

TF-2HT**ELEVATION PATTERN**

RMS Gain at Main Lobe

2.1 (3.22 dB)

Beam Tilt

0.00 Degrees

RMS Gain at Horizontal

2.1 (3.22 dB)

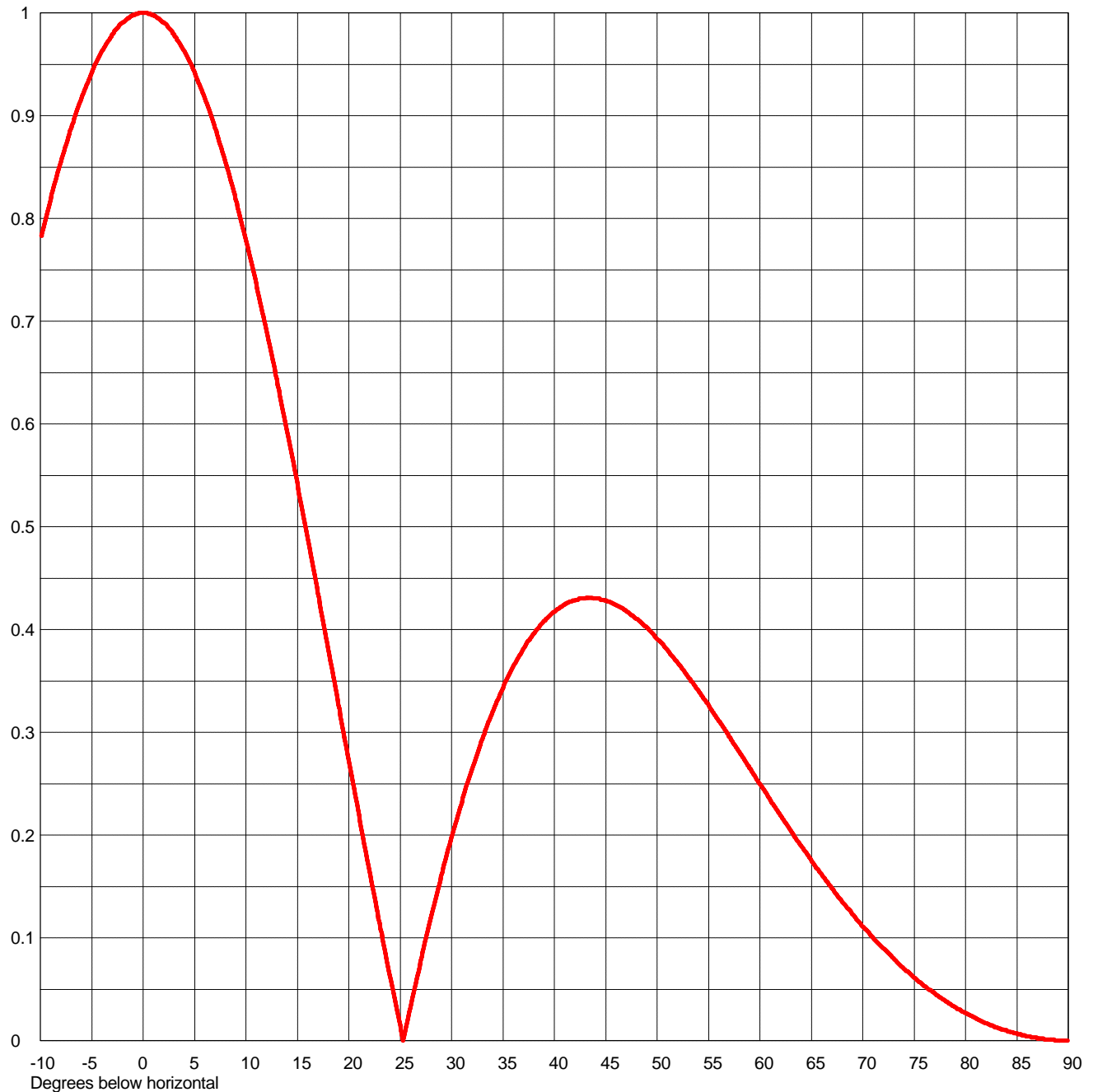
Frequency

183.00 MHz

Calculated / Measured

Calculated

Drawing #

02S021000-90

Remarks:



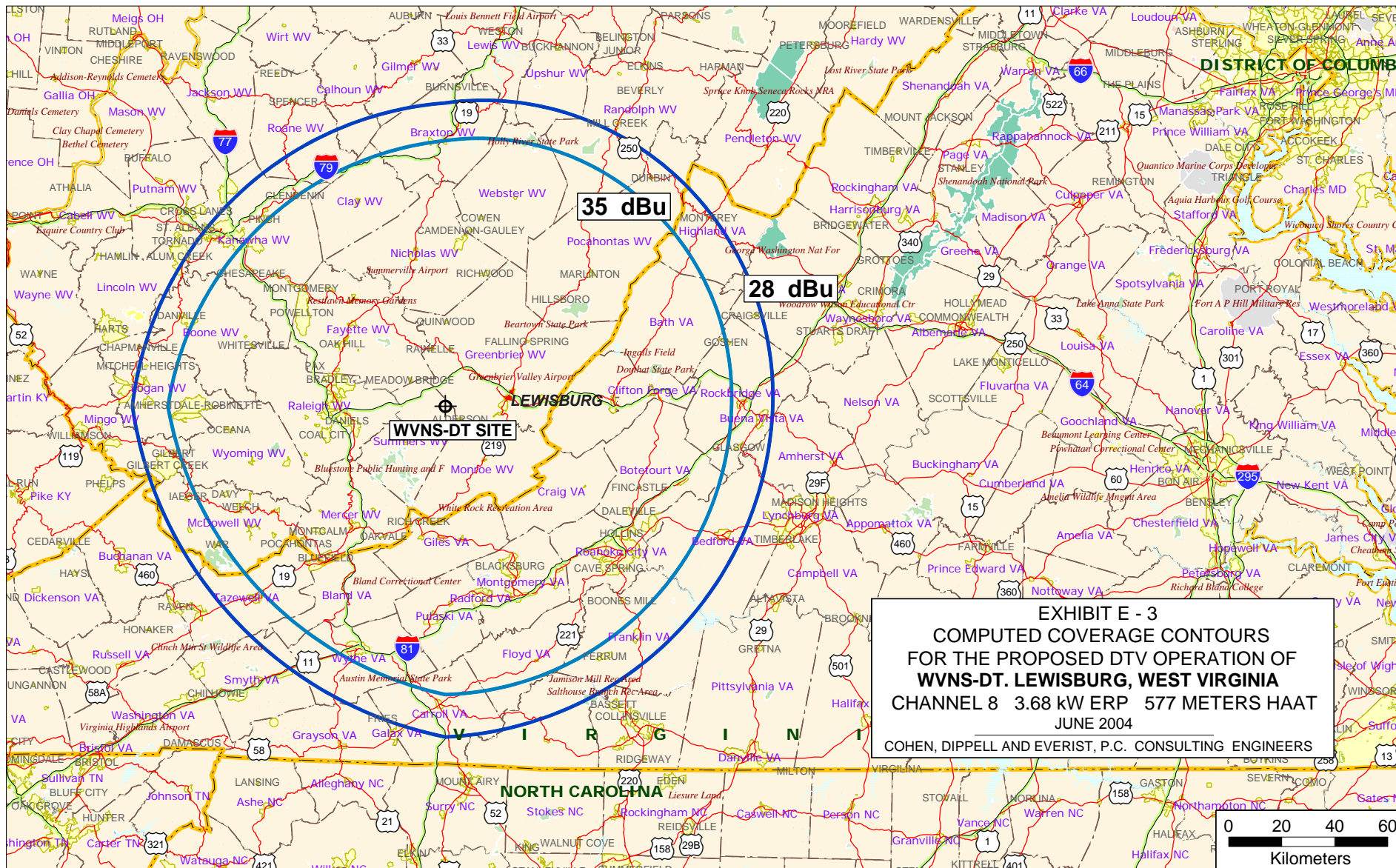
Proposal Number
 Date **JUNE 2004**
 Call Letters **WVNS-DT** Channel **8**
 Location **Lewisburg, WV**
 Customer
 Antenna Type **TF-2HT**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing # **02S021000-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.779	2.4	0.986	10.6	0.754	30.5	0.215	51.0	0.380	71.5	0.095
-9.5	0.799	2.6	0.984	10.8	0.745	31.0	0.232	51.5	0.374	72.0	0.090
-9.0	0.819	2.8	0.982	11.0	0.736	31.5	0.249	52.0	0.368	72.5	0.085
-8.5	0.837	3.0	0.979	11.5	0.714	32.0	0.264	52.5	0.361	73.0	0.080
-8.0	0.855	3.2	0.976	12.0	0.691	32.5	0.279	53.0	0.354	73.5	0.075
-7.5	0.872	3.4	0.973	12.5	0.667	33.0	0.294	53.5	0.348	74.0	0.070
-7.0	0.888	3.6	0.970	13.0	0.643	33.5	0.307	54.0	0.341	74.5	0.066
-6.5	0.903	3.8	0.966	13.5	0.618	34.0	0.320	54.5	0.333	75.0	0.061
-6.0	0.917	4.0	0.963	14.0	0.593	34.5	0.332	55.0	0.326	75.5	0.057
-5.5	0.930	4.2	0.959	14.5	0.568	35.0	0.343	55.5	0.319	76.0	0.053
-5.0	0.942	4.4	0.955	15.0	0.542	35.5	0.354	56.0	0.311	76.5	0.049
-4.5	0.953	4.6	0.951	15.5	0.516	36.0	0.364	56.5	0.304	77.0	0.046
-4.0	0.963	4.8	0.946	16.0	0.489	36.5	0.373	57.0	0.296	77.5	0.042
-3.5	0.971	5.0	0.942	16.5	0.462	37.0	0.381	57.5	0.288	78.0	0.039
-3.0	0.979	5.2	0.937	17.0	0.436	37.5	0.389	58.0	0.281	78.5	0.036
-2.8	0.982	5.4	0.932	17.5	0.409	38.0	0.396	58.5	0.273	79.0	0.033
-2.6	0.984	5.6	0.927	18.0	0.381	38.5	0.402	59.0	0.265	79.5	0.030
-2.4	0.986	5.8	0.922	18.5	0.354	39.0	0.408	59.5	0.258	80.0	0.027
-2.2	0.989	6.0	0.917	19.0	0.327	39.5	0.413	60.0	0.250	80.5	0.024
-2.0	0.991	6.2	0.912	19.5	0.300	40.0	0.417	60.5	0.242	81.0	0.022
-1.8	0.992	6.4	0.906	20.0	0.273	40.5	0.421	61.0	0.234	81.5	0.019
-1.6	0.994	6.6	0.900	20.5	0.246	41.0	0.424	61.5	0.227	82.0	0.017
-1.4	0.995	6.8	0.894	21.0	0.219	41.5	0.427	62.0	0.219	82.5	0.015
-1.2	0.997	7.0	0.888	21.5	0.192	42.0	0.428	62.5	0.212	83.0	0.013
-1.0	0.998	7.2	0.882	22.0	0.166	42.5	0.430	63.0	0.204	83.5	0.011
-0.8	0.998	7.4	0.875	22.5	0.140	43.0	0.430	63.5	0.197	84.0	0.010
-0.6	0.999	7.6	0.869	23.0	0.114	43.5	0.431	64.0	0.190	84.5	0.008
-0.4	1.000	7.8	0.862	23.5	0.089	44.0	0.430	64.5	0.183	85.0	0.007
-0.2	1.000	8.0	0.855	24.0	0.063	44.5	0.429	65.0	0.175	85.5	0.005
0.0	1.000	8.2	0.848	24.5	0.039	45.0	0.428	65.5	0.168	86.0	0.004
0.2	1.000	8.4	0.841	25.0	0.015	45.5	0.426	66.0	0.162	86.5	0.003
0.4	1.000	8.6	0.834	25.5	0.009	46.0	0.424	66.5	0.155	87.0	0.002
0.6	0.999	8.8	0.826	26.0	0.032	46.5	0.421	67.0	0.148	87.5	0.002
0.8	0.998	9.0	0.819	26.5	0.055	47.0	0.418	67.5	0.142	88.0	0.001
1.0	0.998	9.2	0.811	27.0	0.077	47.5	0.414	68.0	0.135	88.5	0.001
1.2	0.997	9.4	0.803	27.5	0.099	48.0	0.410	68.5	0.129	89.0	0.000
1.4	0.995	9.6	0.795	28.0	0.120	48.5	0.406	69.0	0.123	89.5	0.000
1.6	0.994	9.8	0.787	28.5	0.140	49.0	0.402	69.5	0.117	90.0	0.000
1.8	0.992	10.0	0.779	29.0	0.160	49.5	0.397	70.0	0.111		
2.0	0.991	10.2	0.771	29.5	0.179	50.0	0.391	70.5	0.106		
2.2	0.989	10.4	0.762	30.0	0.198	50.5	0.386	71.0	0.100		

Remarks:



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 _____ Analog TV, if any _____
2. Zone: ☐ I ☐ II ☐ III
3. Antenna Location Coordinates: (NAD 27)
- _____° _____' _____" ☐ N ☐ S Latitude
_____° _____' _____" ☐ E ☐ W Longitude
4. Antenna Structure Registration Number: _____
- ☐ Not applicable ☐ FAA Notification Filed with FAA
5. Antenna Location Site Elevation Above Mean Sea Level: _____ meters
6. Overall Tower Height Above Ground Level: _____ meters
7. Height of Radiation Center Above Ground Level: _____ meters
8. Height of Radiation Center Above Average Terrain: _____ meters
9. Maximum Effective Radiated Power (average power): _____ kW
10. Antenna Specifications:
- a.

Manufacturer	Model
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- b. Electrical Beam Tilt: _____ 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.

- d. Polarization: ☐ Horizontal ☐ Circular ☐ Elliptical

TECHBOX

- 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.

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.

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.

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

Exhibit No.

- 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.