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Technical Statement for Digital Television Construction Permit Application:

**WTVE License Company, LLC
WTVE-DT
Channel 25
Reading, PA**

Introduction

This Technical Statement provides the supplemental technical data and information required for the FCC Form 301 “Application for Construction Permit for Commercial Broadcast Station” of WTVE License Company, LLC (“WTVE”), for modified Digital Television (DTV) facilities on Channel 25 in Reading, PA. In particular, it addresses the additional information required by Section III-D of Form 301 – DTV Engineering Data – applicable to facilities proposed for WTVE’s station WTVE-DT.

The site specified in this application is located at the reference coordinates for WTVE provided in Appendix B of the 7th and 8th Reconsideration Order¹ in the DTV proceeding. The site is known as Fancy Hill North. The reference coordinates were established in a construction permit² issued to WTVE-DT at a site within 5 km of its original FCC DTV Plan location at Fancy Hill. The Fancy Hill allotment, in turn, had been based upon the

¹ “Memorandum Opinion and Order on Reconsideration of the Seventh Report and Order and Eight Report and Order” in the Matter of Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, MB Docket No. 87-268, released March 6, 2008 (herein, the “7th and 8th Reconsideration Order”).

² In File Number BPCDT-20040518AAZ.

location of the station's most current analog construction permit³ at the time of preparation of the original DTV Table of Allotments by the FCC in 1997.⁴ At the time of creation of the Post-Transition Table of Allotments by the 7th and 8th Reconsideration Order in 2008, the coordinates of the then-current construction permit became the new reference coordinates for the station.

The instant application proposes to locate WTVE-DT at the Fancy Hill North reference site assumed in the Post Transition Table of Allotments, approximately 20 km (12½ miles) east of the center of Reading. This application proposes to locate the DTV station's center of radiation at an elevation of 222 meters above ground level, 533 meters above mean sea level, and 395 meters above average terrain, respectively. A moderately directional antenna and operating power of 900 kW are proposed. The section below on Facilities describes in detail the characteristics of the requested facilities. Full specifications for the proposed facility are included in Figure 1.

Transmitter Site and Tower

Both the proposed Fancy Hill North (current reference) site and the (original reference) site at Fancy Hill are located in Earl Township, PA. The Fancy Hill North site was selected as the closest site to the original reference location included in the Commission's first DTV Allotment Plan at which obtaining zoning approval and other government clearances was believed to be possible. WTVE tried for a number of years to obtain approval for operation at the Fancy Hill location but was unable to overcome community opposition to construction of a tower in that area. Local government authorities suggested to the station the Fancy Hill North location as an alternative because there already are a number of large communications facilities and several moderate size towers situated there.

The tallest structure currently at the Fancy Hill North site is part of a microwave relay facility and stands 67 meters tall overall. Other towers at the site support various cellular

³ In File Number BPCT-19960320KF.

⁴ In Appendix B of the "Sixth Report and Order" in MM Docket No. 87-268, 12 FCC Rcd 14588 (1997) ("Sixth Report and Order").

telephone, 2-way radio base station, and repeater operations. The buildings generally are prefabricated communications equipment shelters. Unlike the original reference Fancy Hill location, there are few residential properties nearby. Station management believed that the specific location chosen was available for lease on a relatively long-term basis and that local zoning and planning approval could be obtained.

The plan underlying this proposal is to build a new tower at the Fancy Hill North site. The location specified for the new tower is approximately 50 meters west-southwest of the largest tower currently at the site. The site location detail is shown in Figure 2. The ground elevation at the site is 310.9 meters above mean sea level. The new tower structure itself is planned to be 217.6 meters tall. The antenna mounted on the top of the tower will raise the overall height above ground to 227.6 meters including lightning rods and obstruction lighting mounted on top of the antenna. The overall tower height above mean sea level will be 538.5 meters. The tower layout is shown in Figure 3.

Facilities

The facilities requested in this application include operation at 900 kW ERP (average) using a highly directional antenna at a height above average terrain of 395 meters. The 900 kW ERP value is the limit specified for maximum power at the proposed height above average terrain according to §73.622(f)(8)(i) of the FCC Rules.

The antenna proposed for use by WTVE-DT is a moderately directional cavity slot design having 1.3 degrees of electrical beam tilt. The antenna directional characteristics are those associated with the reference facilities for WTVE provided in the Appendix B Table of Allotments in the 7th and 8th Reconsideration Order. Elevation power gain of the antenna is 14.89 (11.73 dBd) at the vertical beam maximum (1.3 degrees below horizontal) and 13.15 (11.19 dBd) at 0.551 degree below horizontal, the average depression angle to the radio horizon (computed at 1-degree azimuth intervals). The azimuth power gain is 4.03 (6.05 dB), yielding a total power gain in the main beam of 59.98 (17.78 dB).

A plot of the horizontal radiation pattern in relative field values is included as Figure 4; the horizontal power pattern expressed in decibels relative to 1 kW (dBk) is plotted in Figure 5. The tabulated horizontal field and power values are given in Figure 6. The vertical plane radiation pattern in relative field values is included as Figure 7; the vertical plane power pattern expressed in decibels relative to 1 kW (dBk) is plotted in Figure 8. The tabulated vertical plane field and power values are given in Figure 9. Figure 10 gives the tabulated values of average elevations and contour distances for the eight required radial directions, calculated as prescribed in §73.625(b)(2), (3), (4), and (5), and Figure 11 shows the 41 and 48 dBu contours on a map of the coverage area as prescribed by §73.625(b)(3).

Principal Community Coverage

As required by Section 73.625(a)(1), the DTV transmitter location must be chosen so as to put a minimum F(50,90) field strength of 48 dBu over the entire principal community to be served. Section 73.625(a)(2) further requires that “the location of the antenna must be so chosen that there is not a major obstruction in the path over the principal community to be served.” In adopting these rules, the Commission held that:

“The analog TV line-of-sight rule indicates that the transmitter location ‘should be so chosen that line-of-sight can be obtained...’ This is not mandatory language. For either NTSC or DTV, there are situations where line-of-sight coverage over the entire community is not possible. In such situations, licensees should avoid obstruction to the extent possible. This should be clear from the ‘major obstruction’ rule we adopted, and we believe it would not be reinforced by the requested additional admonitory language.”⁵

The Form 301 Section III-D Certification Checklist includes item 3, which seeks a yes or no response to the statement, “Pursuant to 47 C.F.R. Section 73.625, the DTV coverage contour of the proposed facility will encompass the allotted principal community.” In this instance, as demonstrated by the 48 dBu contour on the coverage map of Figure 11, the transmitter location chosen for WTVE-DT, combined with the other characteristics of the proposed transmission system, does result in the DTV coverage contour of the proposed facility encompassing the allotted principal community. There is, however, a

major obstruction in the path over part of the city of Reading caused by Mt Penn. Therefore, in an abundance of caution, the corresponding response on the Form 301 Certification Checklist has been answered “no,” when, in fact, the literal answer to the item is “yes,” the DTV coverage contour of the proposed facility will encompass the allotted principal community.

There are several factors at work with respect to possible locations for the WTVE-DT transmitter. First, the reference facilities built into the Commission’s DTV Table of Allotments assume a location at the currently proposed site, with an antenna pattern that is identical to that currently proposed. The locations of many neighboring stations in the highly congested region in the northeast have been determined on the basis of the reference facilities for WTVE-DT. Any location that might serve the city of Reading without major obstruction would have to be at least approximately 11 miles generally to the west of the current proposal, which would necessitate either the use of a much more severely directional antenna pattern or a very significant reduction in power relative to the antenna pattern and power provided in the Commission’s reference facilities for the station. Since the antenna pattern assumed in the Commission’s reference facilities is already close to the limit of what can be achieved in an economically practicable antenna at the power levels involved, the only feasible alternative would be to significantly reduce the station’s power, a result that would be contrary to the Commission’s oft-stated interest in having DTV stations maximize their services.

A second factor is the signal level predicted to be delivered to the principal community despite the major obstruction in the path. As shown by the Longley-Rice plot in Figure 12, the obstruction causes a reduction in the level of signal delivered to parts of the city. Nevertheless, the field strength predicted to be delivered throughout the entirety of Reading exceeds the minimum required value for City Grade service. The plot in Figure 12 was created using the Longley-Rice version 1.2.2 implementation of EDX Engineering with 50 percent location and 90 percent time availability. A highly detailed model of the proposed antenna pattern was used, with 360 azimuth values and 72

⁵ *Memorandum Opinion and Order on Reconsideration of the Fifth Report and Order* in MM Docket No. 87-268, 13 FCC Rcd 6860, 6892 (1998) (“*Fifth R&O Recon*”)

elevation slices, each having 50 points between 0 and 18 degrees depression angle. A study grid having 50 meter study point spacing and terrain evaluations every 100 meters along 0.1-degree-spaced radials from the transmitter assure precision in the calculations. As can be seen, there are no areas within the city boundary that are blue or white in color, which would indicate signal levels below 48 dBu.

Given the preceding considerations, WTVE respectfully requests a waiver of the major obstruction requirement of §73.625(a)(2). It has been demonstrated that the policy issues underlying the requirement, i.e., the delivery of adequate signal level to the principal community, will be met. Under these circumstances, it is submitted that the requested waiver is amply justified.

Interference to U.S. Stations

Despite the fact that the instant application involves no change in antenna pattern from the reference facilities provided by the FCC in Appendix B and includes a power level that does not exceed the reference effective radiated power, new studies according to OET Bulletin No. 69 were conducted. A version of the Commission's TV_Process program was used to perform those studies. A summary of the studies is shown in Table 1. In the table, the channel, call sign, city of license, and application record number of each station studied are given in the left four columns. These are followed by the DTV baseline or Grade B contour population in the fifth column, the total population predicted to be impacted by additional ATV (DTV) interference with WTVE-DT assumed to be located at the Fancy Hill North reference site included in the Commission's Table of Allotments in the sixth column, and the number of scenarios studied for each station in the seventh column. In the two columns on the right, the populations predicted to be impacted by additional ATV (DTV) interference with use of the planned facilities at Fancy Hill North are shown alongside the percent changes in total population from the Appendix B facilities. The dashes shown on some rows indicate instances in which the TV_Process program reported that the "proposal causes no interference," meaning that there were no cells in its initial culling study that indicated interference. The plus signs on one row indicate an instance in which the TV_Process

Table 1 – WTVE-DT Interference Studies to Neighboring Stations Using FCC TV_Process Program

Chnl	Station	City	ARN	DTV Baseline / Grade B	Baseline Interference Population	Scen- arios	Fancy HI North Interference Population	% Change
24	WPSJ-LP	Hammonton, etc., NJ	BLTTA-20060720ADQ	—	—	—	—	—
24	WNYE-TV	New York, NY	DTVPLN-DTVP0880	18,221,319	241,322	24	241,322	0
24	WNYE-TV	New York, NY	BMPEDT-20070124AAX	18,221,319	241,322	24	241,322	0
24	WNYE-TV	New York, NY	BLEDT-20071228ABM	18,221,319	241,322	24	241,322	0
24	W24DB	Clarks Summit, PA	BLTTA-20041202ADB	+	+	+	+	+
24	W24BB	East Stroudsburg, PA	BLTTL-19911219JM	—	—	—	—	—
24	WNVC	Fairfax, VA	DTVPLN-DTVP0894	—	—	—	—	—
24	WNVC	Fairfax, VA	BMPEDT-20080609ACI	—	—	—	—	—
25	WZDC-CA	Washington, DC	BLTTL-20070309ADR	—	—	—	—	—
25	WZDC-CA	Washington, DC	BDFCDTA-20080804ACV	2,982,831	273,326	4	273,326	0
25	W25AW	Trenton, NJ	BLTTA-20030512ABW	223,645	35,477	1	35,477	0
25	WGCE-CA	Greece, etc., NY	BDISDTA-20080804AEV	—	—	—	—	—
25	WONS-LP	Olean, NY	BLTTL-19890608IB	—	—	—	—	—
25	WCNY-TV	Syracuse, NY	DTVPLN-DTVP0917	1,272,446	1,237	4	1,237	0
25	WCNY-TV	Syracuse, NY	BMLEDT-20040916ABJ	1,272,446	1,237	4	1,237	0
25	KDKA-TV	Pittsburgh, PA	DTVPLN-DTVP0918	3,587,730	3,147	2	3,147	0
25	KDKA-TV	Pittsburgh, PA	BLCDDT-20041004ACS	3,587,730	3,147	2	3,147	0
25	WTVR-TV	Richmond, VA	DTVPLN-DTVP0923	1,530,995	1,190	2	1,190	0
25	WTVR-TV	Richmond, VA	BLCDDT-20021204ABA	1,530,995	1,190	2	1,190	0
25	WAZM-CA	Staunton, etc., VA	BLTTL-20011107ABW	—	—	—	—	—

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Chnl	Station	City	ARN	DTV Baseline / Grade B	Baseline Interference Population	Scen- arios	Fancy HI North Interference Population	% Change
26	WHAG-TV	Hagerstown, MD	DTVPLN-DTVP0942	—	—	—	—	—
26	WHAG-TV	Hagerstown, MD	BMPCDT-20080619AJL	—	—	—	—	—
26	KYW-TV	Philadelphia, PA	DTVPLN-DTVP0957	10,061,528	177,315	48	177,315	0
26	KYW-TV	Philadelphia, PA	BPCDT-20080620ABO	10,085,277	167,676	48	167,676	0
28	WFPA-CA	Philadelphia, PA	BLTTL-20000428ABK	—	—	—	—	—

program reported that the “proposed station is beyond the site to nearest cell evaluation distance.” Thus, in these cases, no further examination was required, and the number of scenarios studied was zero. When multiple scenarios existed and TV_Process studied them, the worst-case population increase (if one existed) was selected for presentation in the table.

Table 1 summarizes 25 cases, involving a total of 16 stations of all types, identified for study in connection with the proposed WTVE facility. Fifteen of the cases involve a total of seven full service DTV stations. Twelve of the case total show that analysis beyond the initial culling study was unnecessary. Of the remaining thirteen cases, all show no predicted change in interference. All of the full service DTV stations fall into one of these two categories. These circumstances are due to the proposed use of the operating parameters included in the Table of Allotments and the consequent matching of signal levels throughout the WTVE service area and apply to the full-service, Class A, and low power stations included in the list.

Interference to Class A Stations

The Commission’s TV_Process program also was used to locate and evaluate predicted interference to Class A stations. The primary method for interference protection to Class A stations provided in the FCC rules is the requirement that there be no overlap of the interference contour of the station to be evaluated with the protected contour of the station to be protected, as prescribed in §73.623(c)(5) and determined using the desired-to-undesired (D/U) signal ratios enumerated in §73.623(c)(2). Alternatively, §73.623(c)(5)(iii) provides that the terrain-based methods of OET Bulletin No. 69, using the Longley-Rice methodology, may be used to support a request for waiver of the interference protection requirements that are based on contour overlap methods.

In this instance, the Commission’s TV_Process program found two cases of contour overlap – one each for WZDC-CA (in File Number BLTTL-20070309ADR) and for W25AW (in File Number BLTTA-20030512ABW). With respect to the first of these, (WZDC-CA) the Longley-Rice study conducted by the TV_Process program determined in the initial culling study that the “proposal causes no interference,” meaning that no

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interference was found with respect to any study cell of the desired station and that there was no need for further study. With respect to the second Class A station (W25AW) for which contour overlap was found, the Longley-Rice study conducted by TV_Process determined that there was no change in interference between the facility included in the Appendix B Table of Allotments and facility included in this proposal, as would be expected since the proposed facility is identical to the Appendix B facility.

For completeness, the Longley-Rice analysis conducted by the TV_Process program identified and examined a total of ten records for nine Class A stations, even though there was no contour overlap to eight of these records. Of the ten records, seven (including the one for WZDC-CA discussed above) produced notations that the “proposal causes no interference,” indicating that the initial culling study done by TV_Process found no cells with interference from the proposal. One produced a notation that the “proposed station is beyond the site to nearest cell evaluation distance,” indicating that there is no need to evaluate further because of the spacing between the stations. Two (including the one for W25AW discussed above) produced studies of scenarios all of which found no change in the interference to the desired stations studied.

To summarize, contour overlap was found with respect to two Class A stations, but the Longley-Rice methodology found no interference to one and no change in interference to the other. Moreover, the level of interference found is built into the Appendix B Table of Allotments and is not exceeded by the proposal. Thus, it is believed that the interference protection required to the Class A stations is provided by the proposal by virtue of its not exceeding the level of interference provided by the WTVE Appendix B Table of Allotments facility. Nevertheless, should the Commission determine that a waiver of §73.623(c)(5) is necessary, under the provisions of §73.623(c)(5)(iii), WTVE respectfully requests such a waiver based upon the fact that the Longley-Rice study conducted by the TV_Process program demonstrates that no new interference is predicted to be caused to either station by the proposed WTVE-DT facilities.

Cross-Border Considerations

In accordance with the Exchange of Letters (“EOL”) regarding DTV coordination between the United States and Canada,⁶ stations within 360 km⁷ of the Canadian border require coordination between the U.S. and Canadian governments as part of the authorization process. At 378.3 km to the nearest point on the Canadian border, the Fancy Hill North site falls outside the coordination distance; therefore coordination with Canada should not be required in the case of this WTVE-DT application.

Environmental Impact / Radio Frequency Radiation

None of the conditions specified in Section 1.1307 that would require the preparation of an Environmental Assessment pertain with respect to the proposed facility at Fancy Hill North. In particular, because it will be mounted on a tower at an existing site, the new operation does not implicate many of the causes for further investigation and preparation of further reports.

With respect to Radio Frequency Radiation exposure, OET Bulletin 65 provides methods for evaluating the level of exposure for both employees (occupational/controlled situations) and non-employees (general population/uncontrolled situations). The combination of the antenna radiation pattern, as provided in the manufacturer’s technical specifications, with the antenna height above ground level and the operating power level indicate that the potential exposure would be less than 5 percent of the Maximum Permissible Exposure (MPE) limit for general population / uncontrolled situations. Specifically, application of the formulas provided in OET-65 yields a value of less than one percent (actually 0.8 percent) of the MPE. Thus the proposed operation is categorically excluded from having to submit a detailed RF exposure analysis of the site.

⁶ Exchange of Letters between the Federal Communications Commission and Industry Canada: (1) Letter to Mr. Kevin Lindsey, Acting Assistant Deputy Minister, Spectrum, Information Technologies and Telecommunications, Industry Canada, from Kevin J. Martin, Chairman, Federal Communications Commission, dated August 5, 2008. (2) Letter to Kevin J. Martin, Chairman, Federal Communications Commission, from Helen McDonald, Assistant Deputy Minister, Spectrum, Information Technologies and Telecommunications, Industry Canada, dated December 15, 2008. (3) Attached Tables A, B, C, and D.

⁷ Letter of response from Helen McDonald, Assistant Deputy Minister, Spectrum, Information Technologies and Telecommunications, Industry Canada, to Kevin J. Martin, Chairman, FCC, dated December 15, 2008, noting that Tables A, B, C, and D “list all agreed assignments and allotments within 360 km of our common border.”

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Notwithstanding the foregoing, WTVE recognizes its responsibility for the safety and health of employees and contractors when exposed to RF radiation conditions. It will take the steps necessary to assure that personnel working in its facilities, on the tower and antenna, and in adjoining facilities are protected from exposure to RF radiation levels exceeding those specified in the Commission's rules. The steps to be taken will include measurements and monitoring as well as power reductions or turning off the transmitter if necessary to ensure a safe working environment.

Notifications

The proposed site at Fancy Hill North is not in proximity to any of the government radio astronomy installations named in Section 73.1030, nor is it proximate to any of the named radio receiving locations. Furthermore, the nearest FCC monitoring station is over 160 km distant. Thus, none of the notifications mandated or recommended by Section 73.1030 is required in this instance.

**Figure 1 — Technical Specifications — Proposed WTVE-DT Facility
Channel 25 — Reading, PA**

Frequency

Channel	25
Frequency Band	536 - 542 MHz
Center Frequency	539 MHz

Location

Site	1¾ km (1.09 miles) North of Worman, PA
Geographic Coordinates (NAD27)	40° 19' 52.2" N 75° 41' 41.3" W
Antenna Structure Registration Number	1247166

Elevation

Elevation of site above mean sea level	310.9 m
Overall height of tower above site elevation	227.6 m
Overall height of tower above mean sea level	538.5 m
Height of antenna radiation center above site elevation	222.1 m
Elevation of average terrain (45-degree spaced radials, 3.2-16.1 km)	137.7 m
Height of antenna radiation center above mean sea level	533.0 m
Height of antenna radiation center above average terrain (HAAT)	395.3 m

Antenna

Manufacturer	Radio Frequency Systems
Model	RD16C-1736H6T
Description	Top-Mounted UHF Cavity-Slot
Orientation (rotation around vertical axis)	162.5 degrees true
Electrical beamtilt	1.3°
Mechanical beamtilt	None
Polarization	Horizontal
Gain (in horizontal plane – 0° depression)	39.9 (16.01 dB)
Gain (peak of beam – 1.3° depression)	59.98 (17.78 dB)

Power

Effective radiated power (ERP) (main beam – 1.3° depression)	900 kW
Effective radiated power (ERP) (toward avg. radio horizon – 0.551° dn.)	794.8 kW
Effective radiated power (ERP) (horizontal plane)	598.8 kW

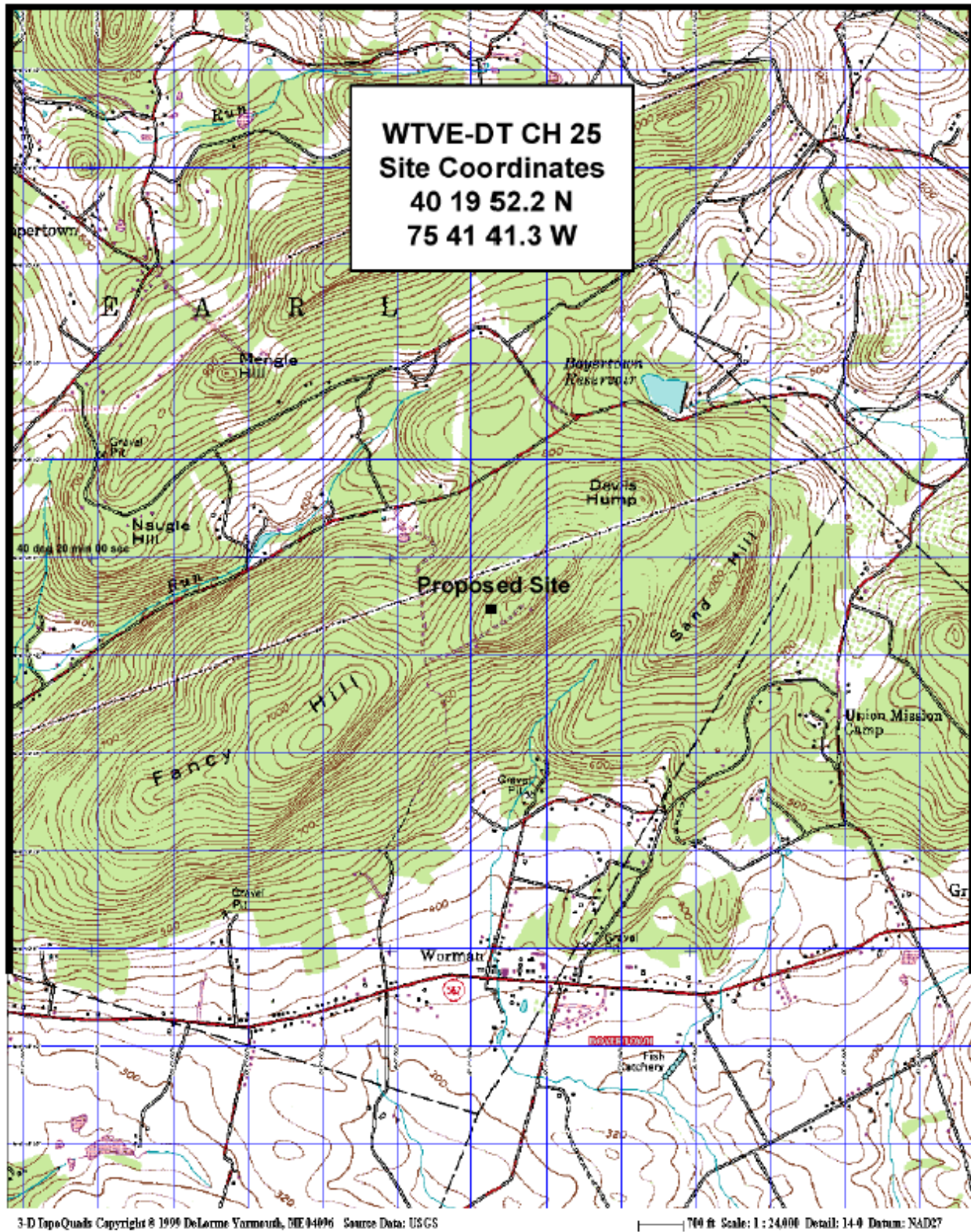


Figure 2

WTVE-DT Channel 25 Reading, PA

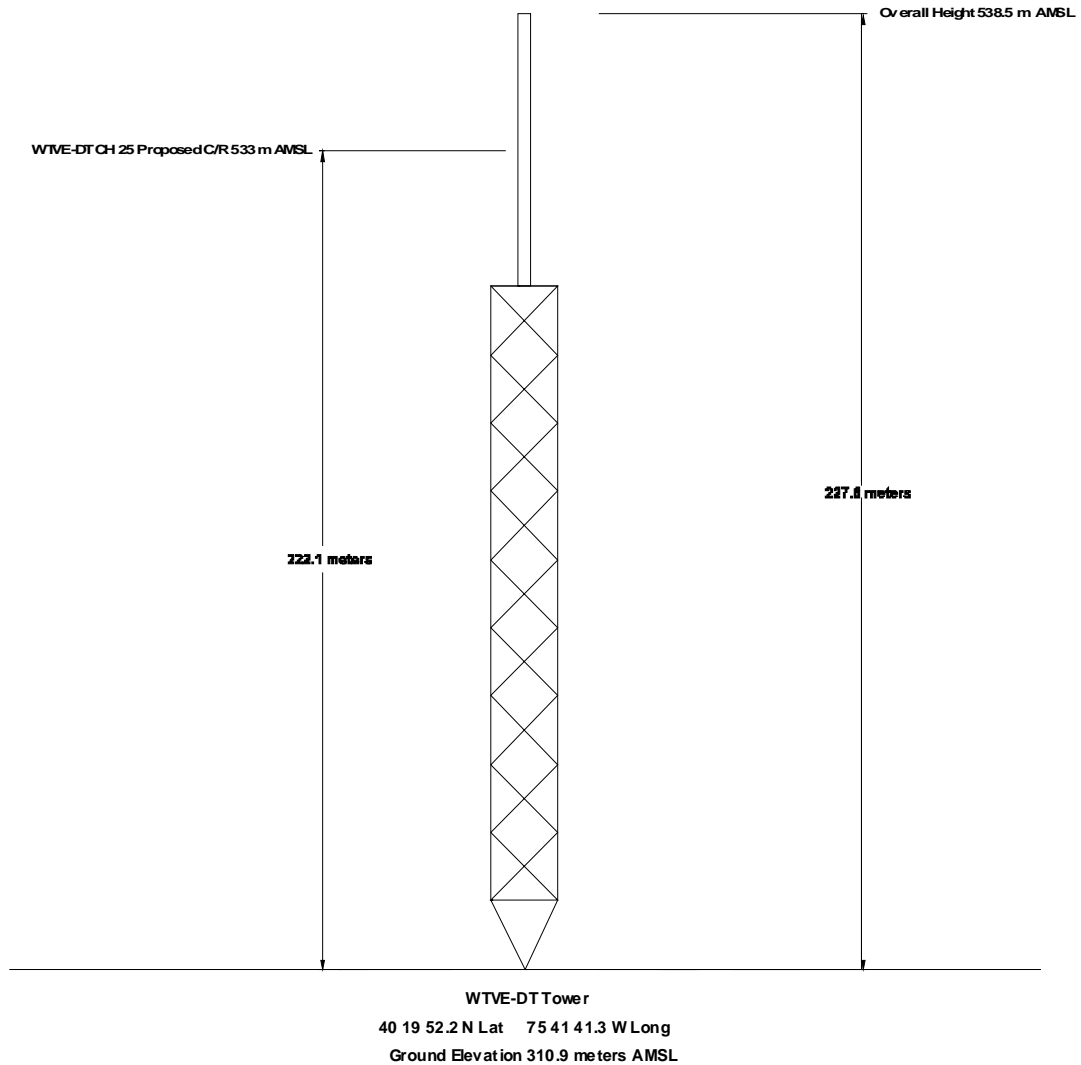


Figure 3
Not to Scale

Merrill Weiss Group – Technical Consultants

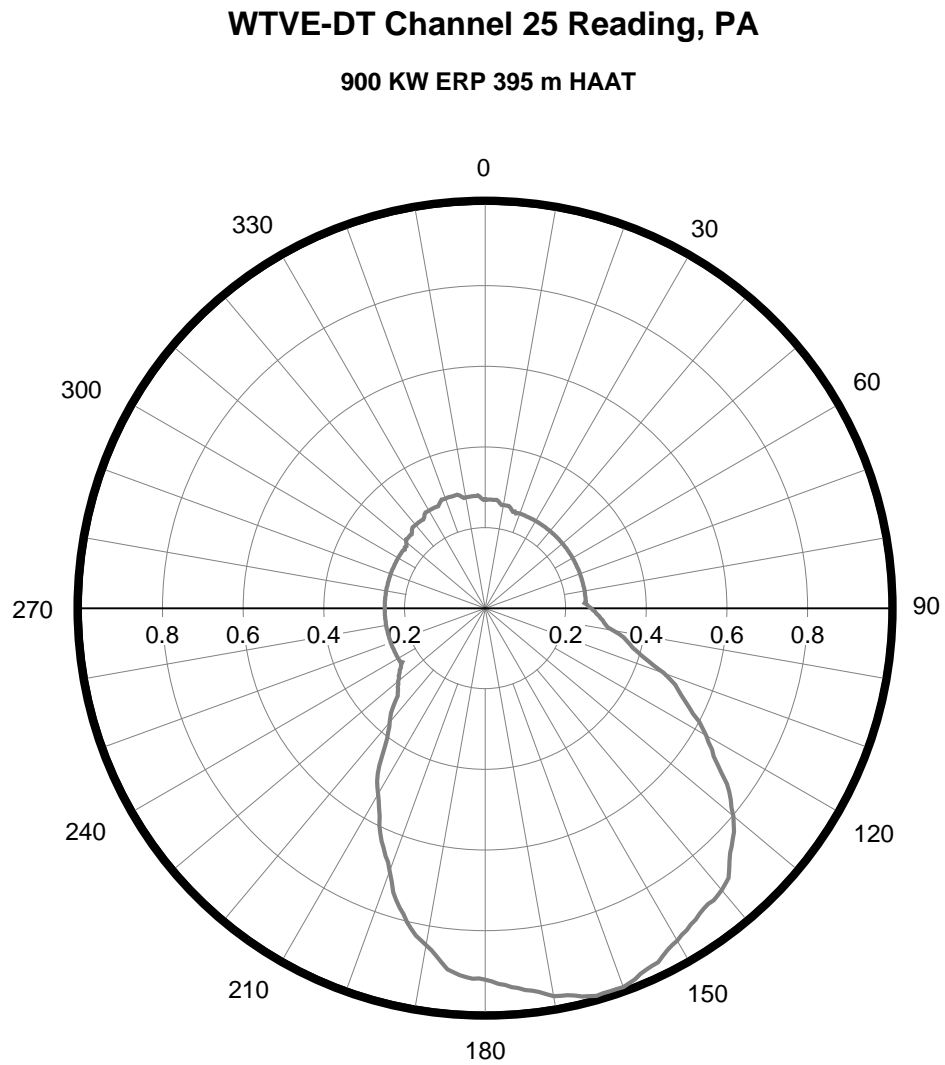
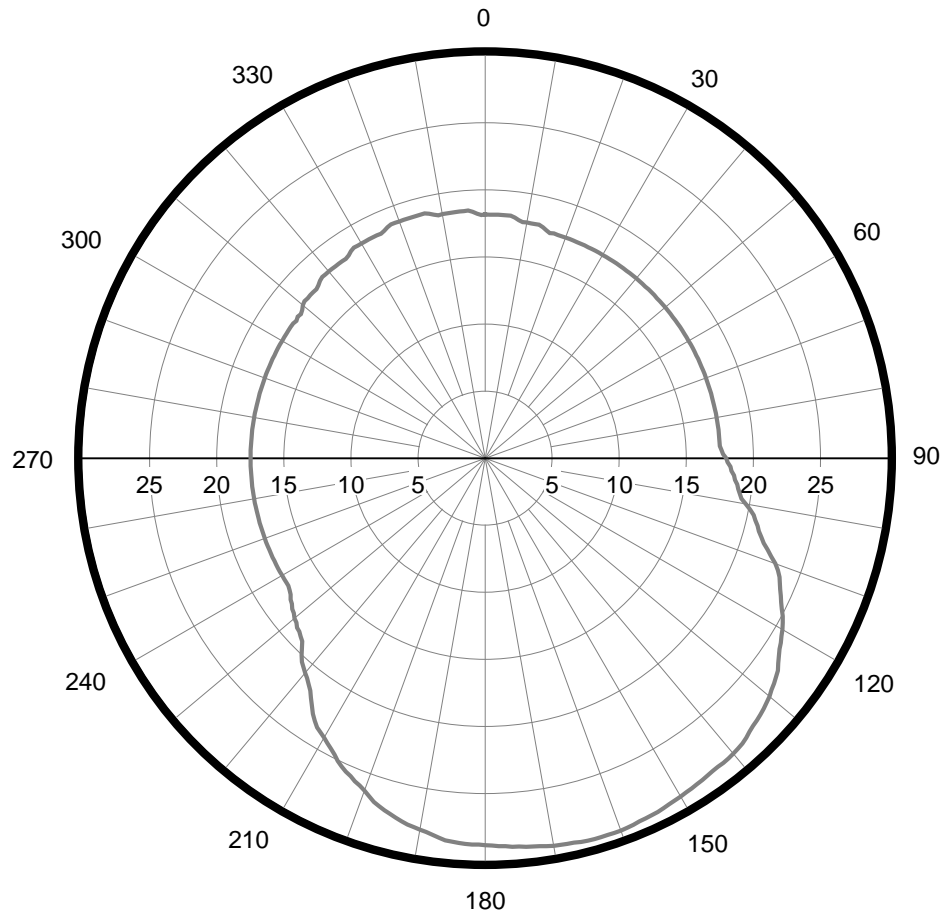


Figure 4

WTVE-DT Channel 25 Reading, PA

29.54 dBk at 163 Degrees



Horizontal Plane Effective Radiated Power (dBk)

Based on data supplied by manufacturer

RFS RD16C

Figure 5

**Figure 6 — Tabulation of Horizontal Plane Radiation Pattern
RFS Model RD16C-1736H6T Antenna — Channel 25
Including Rotation to 162.5 Degrees True**

Azimuth	Relative Field	Effective Radiated Power (dBk)	Azimuth	Relative Field	Effective Radiated Power (dBk)
0	0.270	18.16	180	0.922	28.83
10	0.260	17.83	190	0.849	28.12
20	0.250	17.50	200	0.695	26.38
30	0.250	17.50	210	0.532	24.06
40	0.250	17.50	220	0.370	20.90
50	0.250	17.50	230	0.283	18.58
60	0.250	17.50	237	0.250	17.50
70	0.250	17.50	240	0.250	17.50
80	0.250	17.50	250	0.250	17.50
89	0.250	17.50	260	0.250	17.50
90	0.263	17.95	270	0.250	17.50
100	0.322	19.71	280	0.250	17.50
110	0.470	22.99	290	0.250	17.50
120	0.633	25.57	300	0.250	17.50
130	0.803	27.63	310	0.257	17.75
140	0.913	28.75	320	0.270	18.16
150	0.953	29.12	330	0.280	18.48
160	1.000	29.54	340	0.290	18.78
166	1.000	29.54	350	0.280	18.48
170	0.977	29.34			

Derived from data supplied by manufacturer

WTVE-DT CH 25
Relative Field Elevation Pattern
Based on data supplied by manufacturer
RFS RD16C

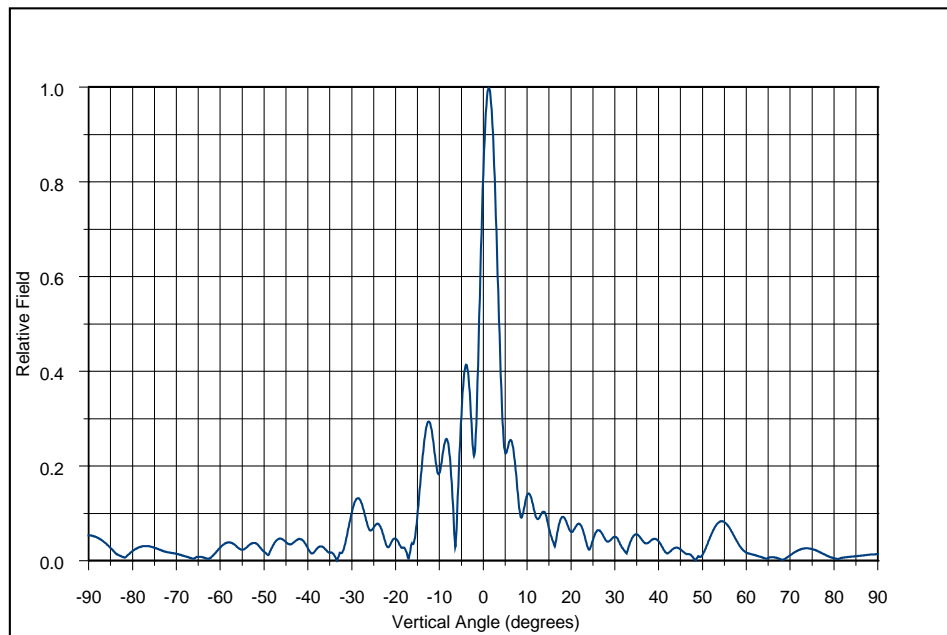
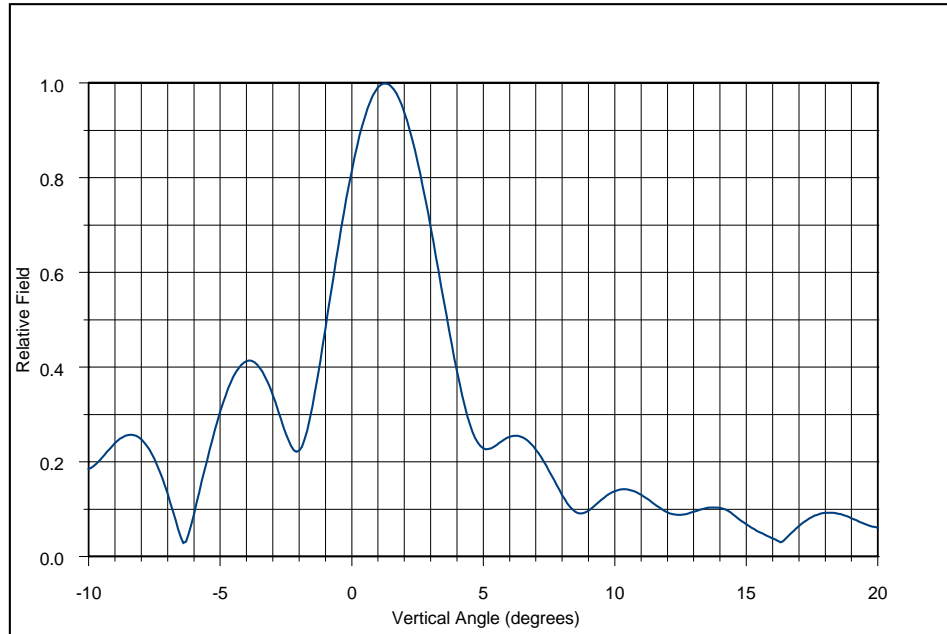


Figure 7

WTVE-DT CH 25

Radiated Power vs Elevation Angle
Based on data supplied by manufacturer
RFS RD16C

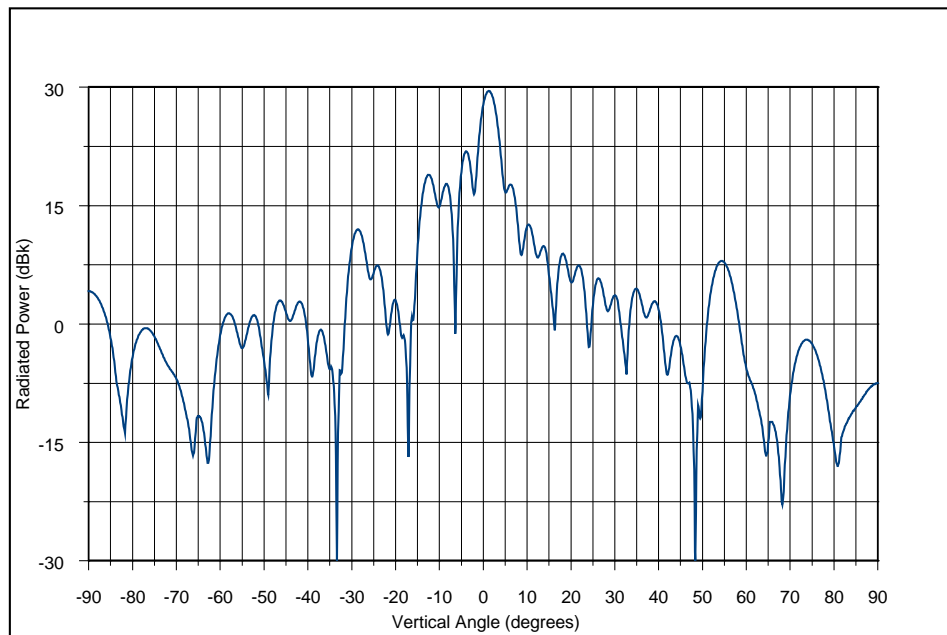
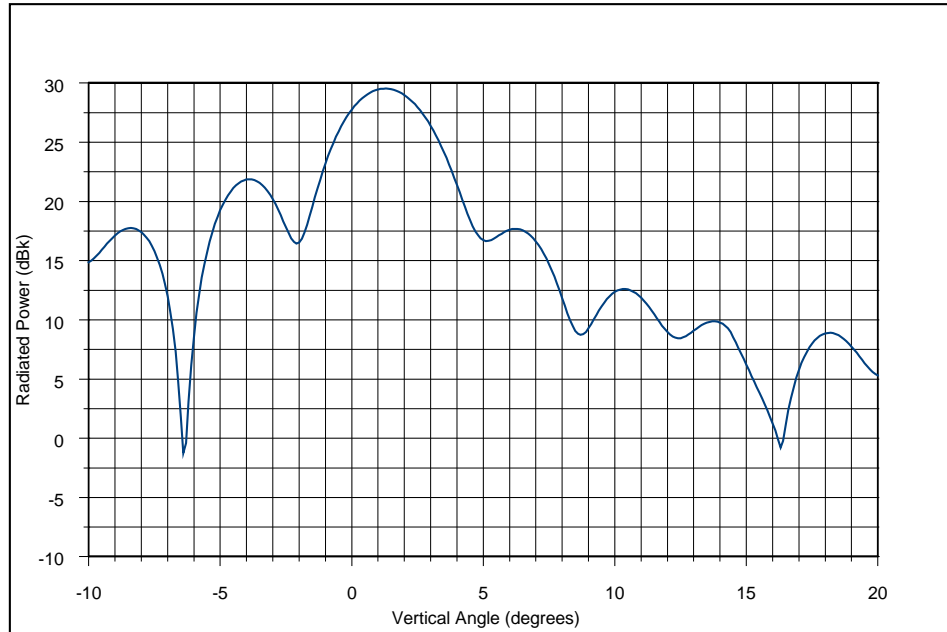


Figure 8

**Figure 9 — Tabulation of Vertical Plane Radiation Data
RFS Model RD16C-1736H6T Antenna — Channel 25**

Elevation Angle	Relative Field	Effective Radiated Power (dBk)	Elevation Angle	Relative Field	Effective Radiated Power (dBk)
-5	0.3065	19.27	6.5	0.2522	17.57
-4.5	0.3801	21.14	7	0.2265	16.64
-4	0.4133	21.87	7.5	0.1816	14.72
-3.5	0.3996	21.57	8	0.1304	11.85
-3	0.3414	20.21	8.5	0.0949	9.09
-2.5	0.2594	17.82	9	0.0972	9.29
-2	0.2240	16.54	9.5	0.1205	11.16
-1.5	0.3167	19.55	10	0.1385	12.37
-1	0.4831	23.22	10.5	0.1418	12.57
-0.5	0.6601	25.93	11	0.1308	11.87
0	0.8158	27.77	11.5	0.1113	10.47
0.5	0.9303	28.91	12	0.0938	8.98
1	0.9915	29.47	12.5	0.0884	8.47
1.3	1.0000	29.54	13	0.0950	9.09
1.5	0.9938	29.49	13.5	0.1028	9.78
2	0.9390	28.99	14	0.1029	9.79
2.5	0.8352	27.98	14.5	0.0892	8.55
3	0.6963	26.40	15	0.0683	6.23
3.5	0.5408	24.20	15.5	0.0519	3.84
4	0.3918	21.40	16	0.0386	1.27
4.5	0.2782	18.43	16.5	0.0382	1.18
5	0.2290	16.74	17	0.0649	5.78
5.5	0.2360	17.00	17.5	0.0839	8.02
6	0.2533	17.61			

Derived from data supplied by manufacturer

**Figure 10 — Tabulation of 41 dBu Contour Derivation
WTVE-DT Channel 25 at 900 kW from Fancy Hill North
with RFS RD16C-1736H6T Antenna at 162.5 degrees**

Azimuth	Average Terrain Elevation (meters)	Antenna Height Above Average Terrain (meters)	Effective Radiated Power (kW)	Distance to 41 dBu Contour F(50,90) (km)
0°	239.2	293.8	66.8	75.5
45°	167.0	366.0	31.6	77.2
90°	108.8	424.2	61.0	85.3
135°	97.2	435.8	654.0	105.1
180°	105.4	427.6	779.2	106.1
225°	114.3	418.7	98.9	88.3
* 270°	111.3	421.7	29.2	80.3
315°	158.4	374.6	62.0	82.4

* Heading to Principal Community — Reading, PA

Technical Statement — WTVE-DT Construction Permit Application



Figure 11

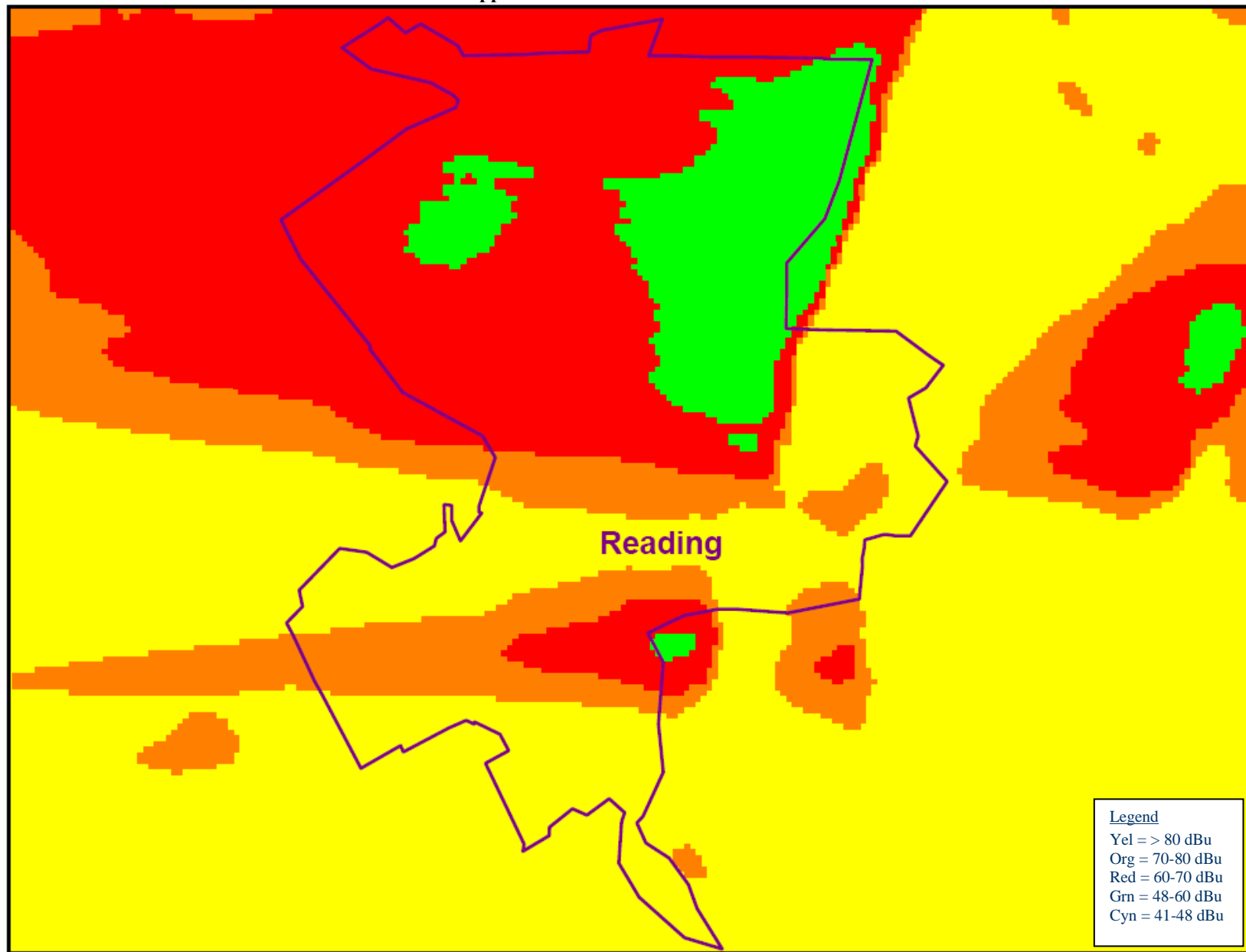


Figure 12 — Field Strength Map of Reading, PA from Proposed WTVE-DT Facilities at Fancy Hill North