

ENGINEERING EXHIBIT

Application for Modification of Flash-Cut Construction Permit

prepared for

CBS Operations Inc.
W61AK Inverness, FL
Facility ID 74116
Ch. 26 (digital) 5.2 kW

CBS Operations Inc. (“*CBS*”) is the licensee of Television Translator station W61AK, Channel 61, Inverness, FL, Facility ID 74116 (BLTT-19820429IV). The W61AK licensed operation on Channel 61 is displaced pursuant to §73.3572(a)(4)(ii), and a Construction Permit (“CP”, BDISDTT-20081006ABY) authorizes W61AK to change to Channel 26 and flash-cut to digital. *CBS* proposes herein to reduce the digital Channel 26 effective radiated power (“ERP”) and employ a different directional antenna pattern. No change in site location is specified.

The proposed facility will operate on Channel 26 using a “simple” out of channel emission mask. The proposed antenna is an RFS model PHP10B. **Figure 1** depicts the 51 dB μ coverage contour of the authorized and proposed Channel 26 digital facilities as well as the 74 dB μ contour of the licensed analog Channel 61. The use of the same transmitter site and the service area overlap shown demonstrates compliance with §73.3572 for a minor change.

The Channel 26 antenna system will be top-mounted on the existing W61AK antenna support structure, in place of the current Channel 61 antenna (FCC Antenna Structure Registration number 1030954). No change to the overall structure height will result from this proposal.

A detailed interference study per OET Bulletin 69¹ shows that the proposal complies with the Commission’s interference protection requirements toward all NTSC, DTV, television translator,

¹FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 (“OET-69”). The implementation of OET-69 for this study followed the

LPTV, and Class A stations. The results, summarized in **Tables 1** and **2** (for pre-transition and post-transition scenarios, respectively), show that any new interference does not exceed the Commission's interference limits (0.5 percent to full power and Class A stations, and 2.0 percent to secondary stations).

The nearest FCC monitoring station is 223 km distant at Vero Beach, FL. This exceeds by a large margin the threshold minimum distance specified in §73.1030(c)(3) that would suggest consideration of the monitoring station. The site is not located within the areas requiring coordination with "quiet" zones specified in §73.1030(a) and (b). There are no AM stations within 3.2 kilometers of the site, based on information contained within the Commission's database. The site location is beyond the border areas requiring international coordination.

Human Exposure to Radiofrequency Electromagnetic Field (Environmental)

The proposed transmitting antenna will be installed on an existing antenna support structure. The use of existing transmitting locations has been characterized as being environmentally preferable by the Commission, according to Note 1 of §1.1306 of the FCC Rules. Therefore, it is believed that this application may be categorically excluded from environmental processing pursuant to §1.1306 of the Commission's rules.

The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the Commission's OET Bulletin Number 65. Based on OET-65 equation (10), and considering 15 percent antenna relative field in downward elevations, the calculated signal density near the tower at two meters above ground level attributable to the proposed facility is $0.25 \mu\text{W}/\text{cm}^2$, which is 0.1 percent of the general population/uncontrolled maximum permitted exposure limit. This is well below the five percent threshold limit described in §1.1307(b) regarding sites with multiple emitters, categorically excluding the applicant from responsibility for taking any corrective action in the areas where the proposal's contribution is less than five percent.

guidelines of OET-69 as specified therein. A cell size of 1 km was employed. Comparisons of various results of this computer program (run on a Sun Sparc processor) to the Commission's implementation of OET-69 show excellent correlation

The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, the applicant will coordinate exposure procedures with all pertinent stations and will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from RF electromagnetic field exposure in excess of FCC guidelines.

Certification

The undersigned hereby certifies that the foregoing statement and associated attachments were prepared by him or under his direction, and that they are true and correct to the best of his knowledge and belief.



Joseph M. Davis, P.E.

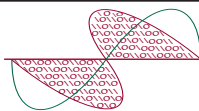
June 9, 2009

Chesapeake RF Consultants, LLC
11993 Kahns Road
Manassas, VA 20112
703-650-9600

List of Attachments

Figure 1	Coverage Contour Comparison
Table 1	Interference Analysis Results Summary Pre-Transition
Table 2	Interference Analysis Results Summary Post-Transition
Form 346	Saved Version of Engineering Sections from FCC Form at Time of Upload

This material was entered June 9, 2009 for filing electronically. Since the FCC's electronic filing system may be accessed by anyone with the applicant's name and password, and electronic data may otherwise be altered in an unauthorized fashion, we cannot be responsible for changes made subsequent to our entry of this data and related attachments.



Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Figure 1
Coverage Contour Comparison
W61AK Inverness, FL
Facility ID 74116
Ch. 26 (digital) 5.2 kW

prepared for
CBS Operations Inc.

June, 2009

Licensed W61AK
Analog Ch. 61
BLTT-19820429IV
74 dBu Contour

Authorized W61AK
Digital Ch. 26
BDISDTT-20081006ABY
51 dBu Contour

Proposed W61AK
Digital Ch. 26
51 dBu Contour

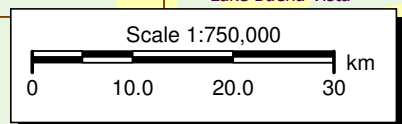


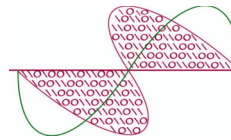
Table 1

Interference Analysis Results Summary Pre-Transition

prepared for

CBS Operations Inc.

W61AK Inverness, FL

**Chesapeake RF Consultants, LLC**Radiofrequency Consulting Engineers
Digital Television and Radio

Ch.	Call	City/State	Dist	Status	Application Ref. No.	---Population (1990 Census)---	
			(km)			Baseline	New Interference
18	WKCF	CLERMONT FL	131.1	LIC	BLCT-20020327ABF	---	none
18	W18DB	PORT RICHEY, ETC. FL	70.3	LIC	BLTT-20050110AAX	---	none
18	WSVT-CA	TAMPA FL	105.0	LIC	BLTTA-20040303ABP	---	none
18	W63DB	WILLISTON FL	72.0	CP	BDISTTL-20071205ABG	---	none
22	DW50DW	GAINESVILLE FL	67.9	CP MOD	BMPPTL-20050804ACI	---	none
22	W22DI	REDDICK FL	52.6	CP	BNPTTL-20000831ASD	---	none
23	W23DG	GAINESVILLE FL	67.9	CP	BNPTTL-20000830BSD	---	none
25	WJXX	ORANGE PARK FL	143.1	LIC	BLCT-19971016KF	---	none
25	WVEA-TV	VENICE FL	119.5	LIC	BLCDT-20060627ABX	669,095	805 (0.12%)
26	WXAX-LP	CLEARWATER FL	116.4	APP	BPTTA-20080804ACE	---	none
26	WGVT-LD	GAINESVILLE FL	94.5	LIC	BLDTL-20080605AAQ	---	none
26	WGVT-LD	LIVE OAK FL	139.6	CP	BPTTL-20070905ABC	---	none
26	W26BN	MELBOURNE FL	184.1	LIC	BLTTL-19980123JB	---	none
26	WPXM	MIAMI FL	388.3	LIC	BLCDT-20031029ADP	---	none
26	WPCY-LP	PANAMA CITY FL	333.0	LIC	BLTTL-20030617AAB	---	none
26	W26DM-D	TALLAHASSEE FL	255.8	CP	BDCCDTL-20061019ADT	---	none
26	WXAX-LP	TAMPA FL	116.3	LIC	BLTTA-20040729AEH	---	none
26	W26BM	COLQUITT GA	346.7	LIC	BLTTL-20001214AJG	---	none
26	WPDW-LP	PEARSON GA	274.9	LIC	BLTTL-20060421ACL	---	none
27	WOCD-LP	DUNNELLON FL	33.7	LIC	BLTTL-20090331AEX	---	none
27	W08DM	GAINESVILLE FL	83.5	APP	BPTTL-20021003ABC	---	none
27	WWRJ-LP	JACKSONVILLE FL	173.5	CP	BPTTL-20060403AOM	---	none
27	WWRJ-LP	JACKSONVILLE FL	174.4	LIC	BLTTL-20011213ABF	---	none
27	WTAM-LD	TAMPA FL	119.5	CP	BDCCDTL-20070425AFK	---	none
28	WDYB-LP	DAYTONA BEACH FL	136.2	CP	BDISTTA-20060922ACY	---	none
28	WFTS-TV	TAMPA FL	116.9	LIC	BLCT-19880303KE	---	none
29	WTBZ-LP	GAINESVILLE FL	61.0	LIC	BLTTL-20050907ABX	---	none
29	NEW	GAINESVILLE FL	84.4	ADD	BPRM-20000717ACS	---	none
29	W29AB	OCALA FL	46.4	LIC	BLTT-19820713IG	---	none
29	WRCF-LP	ORLANDO FL	105.3	LIC	BLTTL-20001020AAD	---	none
30	WTAM-LP	TAMPA FL	119.5	LIC	BLTTL-20041210ABC	---	none
33	W33BL	CHIEFLAND FL	76.5	LIC	BLTTL-19960415IC	---	none
33	WBXG-CA	GAINESVILLE FL	84.0	LIC	BLTTA-20030911AAZ	---	none
33	WBXG-CA	GAINESVILLE FL	82.7	APP	BMPPTA-20020510AAK	---	none
33	W33CC	ST. PETERSBURG FL	121.5	LIC	BLTTL-20021011ABH	---	none
34	W56EJ	WILLISTON FL	52.5	CP	BDISTTL-20071205ABE	---	none

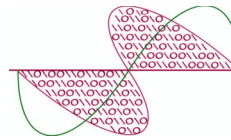
Table 1

Interference Analysis Results Summary Post-Transition

prepared for

CBS Operations Inc.

W61AK Inverness, FL

**Chesapeake RF Consultants, LLC**Radiofrequency Consulting Engineers
Digital Television and Radio

Ch.	Call	City/State	Dist	Status	Application Ref. No.	---Population (2000 Census)---	
			(km)			Baseline	New Interference
25	WVEA-TV	VENICE FL	119.5	LIC	BLCDT-20060627ABX	3,784,556	2,381 (0.06%)
26	WXAX-LP	CLEARWATER FL	116.4	APP	BPTTA-20080804ACE	---	none
26	WGVY-LD	GAINESVILLE FL	94.5	LIC	BLDTL-20080605AAQ	---	none
26	WGVY-LD	LIVE OAK FL	139.6	CP	BPTTL-20070905ABC	---	none
26	W26BN	MELBOURNE FL	184.1	LIC	BLTTL-19980123JB	---	none
26	WKMG-TV	ORLANDO FL	132.7	CP MOD	BMPCDT-20080620AJM	2,991,070	14,513 (0.49%)
26	WPCY-LP	PANAMA CITY FL	333.0	LIC	BLTTL-20030617AAB	---	none
26	W26DM-D	TALLAHASSEE FL	255.8	CP	BDCCDTL-20061019ADT	---	none
26	WXAX-LP	TAMPA FL	116.3	LIC	BLTTA-20040729AEH	---	none
26	W26BM	COLQUITT GA	346.7	LIC	BLTTL-20001214AJG	---	none
26	WPDW-LP	PEARSON GA	274.9	LIC	BLTTL-20060421ACL	---	none
27	WOCD-LP	DUNNELLON FL	33.7	LIC	BLTTL-20090331AEX	---	none
27	W08DM	GAINESVILLE FL	83.5	APP	BPTTL-20021003ABC	---	none
27	WWRJ-LP	JACKSONVILLE FL	173.5	CP	BPTTL-20060403AOM	---	none
27	WWRJ-LP	JACKSONVILLE FL	174.4	LIC	BLTTL-20011213ABF	---	none
27	WRDQ	ORLANDO FL	134.3	CP MOD	BMPCDT-20080619AGB	3,255,880	1,924 (0.06%)
27	WTAM-LD	TAMPA FL	119.5	CP	BDCCDTL-20070425AFK	---	none
28	WDYB-LP	DAYTONA BEACH FL	136.2	CP	BDISTTA-20060922ACY	---	none
28	WQXT-CA	ST. AUGUSTINE FL	148.8	CP	BDISTTA-20070625AAL	---	none
29	WTBZ-LP	GAINESVILLE FL	61.0	LIC	BLTTL-20050907ABX	---	none
29	WMVJ-CA	MELBOURNE FL	184.1	LIC	BLTTL-20010711ACI	---	none
29	W29AB	OCALA FL	46.4	LIC	BLTT-19820713IG	---	none
29	WRCF-LP	ORLANDO FL	105.3	LIC	BLTTL-20001020AAD	---	none
30	WTAM-LP	TAMPA FL	119.5	LIC	BLTTL-20041210ABC	---	none
33	W33BL	CHIEFLAND FL	76.5	LIC	BLTTL-19960415IC	---	none
33	WBXG-CA	GAINESVILLE FL	84.0	LIC	BLTTA-20030911AAZ	---	none
33	WBXG-CA	GAINESVILLE FL	82.7	APP	BMPPTA-20020510AAK	---	none
33	WUJF-LP	LAKE CITY FL	173.5	APP	BSTA-20061113AFW	---	none
33	WUJF-LP	MAXVILLE FL	173.5	LIC	BLTTL-20070119ADT	---	none
33	W33CC	ST. PETERSBURG FL	121.5	LIC	BLTTL-20021011ABH	---	none
34	W56EJ	WILLISTON FL	52.5	CP	BDISTTL-20071205ABE	---	none

SECTION III - ENGINEERING DATA (Digital)												
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: 26											
2.	Translator Input Channel No. : 44											
3.	Primary station proposed to be rebroadcast:											
	Facility Identifier	Call Sign	City	State	Channel							
	74112	WTOG	ST. PETERSBURG	FL	44							
4.	Antenna Location Coordinates: (NAD 27) Latitude: Degrees 28 Minutes 53 Seconds 20 <input checked="" type="radio"/> North <input type="radio"/> South Longitude: Degrees 82 Minutes 23 Seconds 0 <input checked="" type="radio"/> West <input type="radio"/> East											
5.	Antenna Structure Registration Number: 1030954 <input type="checkbox"/> Not Applicable [Exhibit 10] <input type="checkbox"/> Notification filed with FAA											
6.	Antenna Location Site Elevation Above Mean Sea Level: 20.8 meters											
7.	Overall Tower Height Above Ground Level: 129.3 meters											
8.	Height of Radiation Center Above Ground Level: 125.4 meters											
9.	Maximum Effective Radiated Power (ERP): 5.2 kW											
10.	Transmitter Output Power: 0.232 kW											
11.	a. Transmitting Antenna: Before selecting Directional "Off-the-Shelf", refer to "Search for Antenna Information" under CDBS Public Access (http://fjallfoss.fcc.gov/prod/cdbs/pubacc/prod/cdbs_pa.htm). Make sure that the Standard Pattern is marked Yes and that the relative field values shown match your values. Enter the Manufacturer (Make) and Model exactly as displayed in the Antenna Search. <input type="radio"/> Nondirectional <input type="radio"/> Directional "Off-the-shelf" <input checked="" type="radio"/> Directional composite Manufacturer RFS Model PHP10B b. Electrical Beam Tilt: 1 degrees <input type="checkbox"/> Not Applicable											
	c. Directional Antenna Relative Field Values: <input type="checkbox"/> N/A (Nondirectional or Directional "Off-the-shelf") Rotation (Degrees): <input checked="" type="checkbox"/> No Rotation											
	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value
	0	0.032	10	0.032	20	0.032	30	0.032	40	0.032	50	0.032
	60	0.032	70	0.032	80	0.032	90	0.032	100	0.032	110	0.099
	120	0.212	130	0.343	140	0.485	150	0.635	160	0.784	170	0.915
	180	0.991	190	0.913	200	0.793	210	0.849	220	0.978	230	0.978
	240	0.849	250	0.793	260	0.913	270	0.991	280	0.915	290	0.784
	300	0.635	310	0.485	320	0.343	330	0.212	340	0.099	350	0.032
	Additional Azimuths	225	1									

Relative Field Polar Plot

NOTE: In addition to the information called for in this section, an explanatory exhibit providing full particulars must be submitted for each question for which a "No" response is provided.	
12.	Out-of-channel Emission Mask: <input checked="" type="radio"/> Simple <input type="radio"/> Stringent
CERTIFICATION	
13.	Interference : The proposed facility complies with all of the following applicable rule sections. 47.C.F.R Sections 74.709, 74.793(e), 74.793(f), 74.793(g), 74.793(h), 74.794(b) and 73.1030. <input checked="" type="radio"/> Yes <input type="radio"/> No <div>See Explanation in [Exhibit 11]</div>
14.	Environmental Protection Act. The proposed facility is excluded from environmental processing under 47. C.F.R. Section 1.1306 (i.e., The facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments). Unless the applicant can determine RF compliance, an Exhibit is required. <input checked="" type="radio"/> Yes <input type="radio"/> No <div>See Explanation in [Exhibit 12]</div> By checking "Yes" above, 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.
15.	Channels 52-59. If the proposed channel is within channels 52-59, the applicant certifies compliance with the following requirements, as applicable: <input type="checkbox"/> The applicant is applying for a digital companion channel for which no suitable channel from channel 2-51 is available. <input type="checkbox"/> Pursuant to Section 74.786(d), the applicant has notified, within 30 days of filing this application, all commercial wireless licenses of the spectrum comprising the proposed TV channel and the first adjacent channels thereto, for which the proposed digital LPTV or TV translator antenna site lies inside the licensed geographic boundaries of the wireless licensees or within 75 miles and 50 miles, respectively, of the geographic boundaries of co-channel and adjacent-channel wireless licensees.
16.	Channels 60-69. If the proposed channel is within channels 60-69, the applicant certifies compliance with the following requirements, as applicable: <input type="checkbox"/> Pursuant to Section 74.786(e), the applicant has notified, within 30 days of filing this application, all commercial wireless licenses of the spectrum comprising the proposed TV channel and the first adjacent channels thereto, for which the proposed digital LPTV or TV translator antenna site lies inside the licensed geographic boundaries of the wireless licensees or within 75 miles and 50 miles, respectively, of the geographic boundaries of co-channel and adjacent-channel wireless licensees. <input type="checkbox"/> Pursuant to Section 74.786(e), the applicant proposing operation on channel 63, 64, 68 and 69 ("public safety channels") has secured a coordinated spectrum use agreements(s) with 700 MHz public safety regional planning committee(s) and state administrator(s) of the region(s) and state(s) within which the antenna site of the digital LPTV or TV translator station is proposed to locate, and those adjoining regions and states with boundaries within 75 miles of the proposed station location. <input type="checkbox"/> Pursuant to Section 74.786(e), the applicant for a channel adjacent to channel 63, 64, 68 or 69 has notified, within 30 days of filing this application, the 700 MHz public safety regional planning committee(s) and state administrator(s) of the region and state containing the proposed digital LPTV or TV translator antenna site and regions and states whose geographic boundaries lie within 50 miles of the proposed LPTV or TV translator antenna site.
PREPARERS CERTIFICATION ON PAGE 3 MUST BE COMPLETED AND SIGNED.	

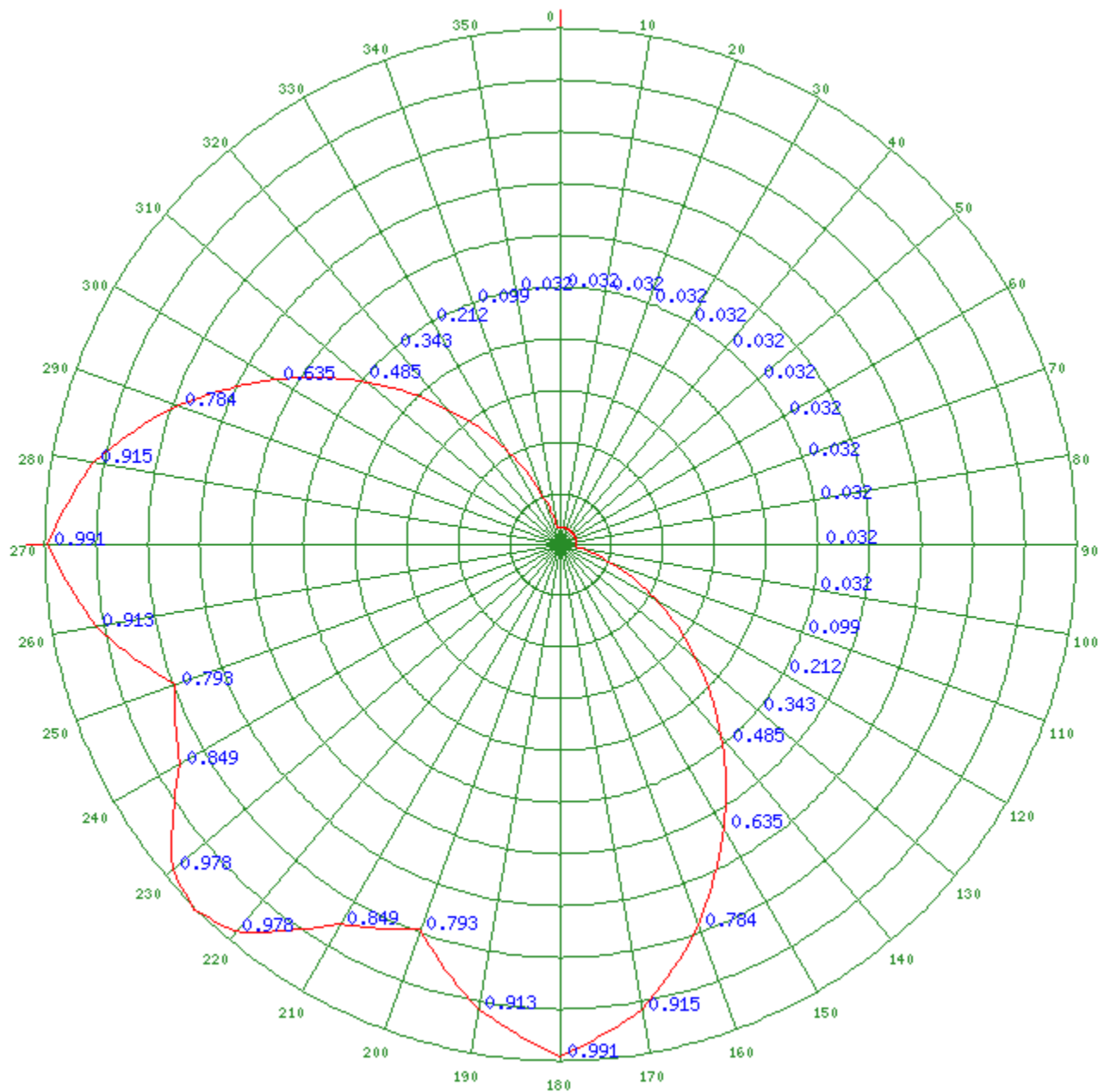
SECTION III PREPARER'S CERTIFICATION

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 JOSEPH M. DAVIS, P.E.		Relationship to Applicant (e.g., Consulting Engineer) CONSULTING ENGINEER	
Signature		Date 6/9/2009	
Mailing Address CHESAPEAKE RF CONSULTANTS, LLC 11993 KAHNS ROAD			
City MANASSAS		State or Country (if foreign address) VA	Zip Code 20112 -
Telephone Number (include area code) 7036509600		E-Mail Address (if available) JOSEPH.DAVIS@RF-CONSULTANTS.COM	

Any specified rotation has already been applied to the plotted pattern.

Field strength values shown on a rotated pattern may differ from the listed values because intermediate azimuths are interpolated between entered azimuths.

[Close Window](#)

[FM Query](#) [FCC](#) [TV Query](#)