

ENGINEERING EXHIBIT

“Maximization” Application to Modify Digital Television Station Construction Permit

prepared for

Gray Television Licensee, Inc.

KAKE-DT Wichita, KS

Facility ID 65522

Ch. 10 60 kW 310 m

Gray Television Licensee, Inc. (“Gray”) is the licensee of television station KAKE-TV, analog Channel 10 and digital Channel 21, Wichita, KS. A Construction Permit (“CP”, BPCDT-20080312ABB) authorizes construction of the KAKE-DT post-transition digital facility on Channel 10, as established in Appendix B of the Seventh Report and Order in MB Docket 87-278. *Gray* herein seeks to modify the CP to expand the KAKE-DT post-transition Channel 10 digital facility. The instant application is intended to be filed by June 20, 2008 in response to the FCC’s lifting of the August 3, 2004 “freeze” concerning expansion in service area.¹

The current CP authorizes operation with an effective radiated power (“ERP”) of 20.3 kW at 310 meters antenna height above average terrain (“HAAT”), with a nondirectional antenna. An increase in ERP to 60 kW is proposed herein. No other changes are proposed.

The proposed digital Channel 10 operation will employ the existing non-directional shared antenna system licensed for KAKE-TV’s analog Channel 10 and digital Channel 21. The antenna is a horizontally polarized Dielectric model TUV-28GTH/10HV-R-06/03. The antenna is top-mounted on the existing KAKE-TV antenna supporting structure, having FCC Antenna Structure Registration number 1039959. No change to the overall structure height and no tower work is required to carry out this proposal.

¹Public Notice “*Commission Lifts the Freeze On the Filing of Maximization Applications and Petitions for Digital Channel Substitutions, Effective Immediately*” DA 08-1213, released May 30, 2008.

A map is supplied as **Figure 1**, which depicts the standard predicted coverage contours. This map includes the boundaries of Wichita, KAKE-DT's principal community. As demonstrated thereon, the proposed facility complies with §73.625(a)(1), as the entire principal community will be encompassed by the 43 dBμ contour.

The proposed KAKE-DT facility's predicted service population provides a 101.2 percent match of the Appendix B facility, as detailed in the table below.

Post-Transition Population Summary		
Population Summary (2000 Census)		
OET Bulletin 69 method	Appendix B	Proposed
Within Noise Limited Contour	746,031	759,554
Not affected by terrain losses	745,201	755,110
Lost to all interference	778	1,546
Net DTV Service	744,423	753,564
Match of Appendix B	---	101.23%

A detailed interference study per OET Bulletin 69² shows that the proposal complies with the 0.5 percent limit of new interference caused to the Appendix B facilities and current post-transition authorizations of pertinent nearby stations. **Pursuant to §73.616(e)(1), FCC processing of this proposal is requested on the basis of a 1.0 km cell size.** The interference study output report is provided as **Table 1**. Protection requirements towards authorized Class A stations are also satisfied.

The nearest FCC monitoring station is 357 km distant at Grand Island, NE. 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.

²FCC 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 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.

Human Exposure to Radiofrequency Electromagnetic Field (Environmental)

The proposal will involve use of an existing transmitting antenna. 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. No tower construction or change in structure height is proposed. 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 20 percent antenna relative field in downward elevations (pattern data shows less than 20 percent relative field at angles 10 to 90 degrees below the antenna), the calculated signal density near the tower at two meters above ground level attributable to the proposed facility is $0.8 \mu\text{W}/\text{cm}^2$, which is 0.4 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.

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 8, 2008

Chesapeake RF Consultants, LLC
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703-650-9600

List of Attachments

Figure 1	Proposed Coverage Contours
Table 1	OET Bulletin 69 Interference Study
Form 301	Saved Version of Engineering Sections from FCC Form at Time of Upload

This material was entered June 8, 2008 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.

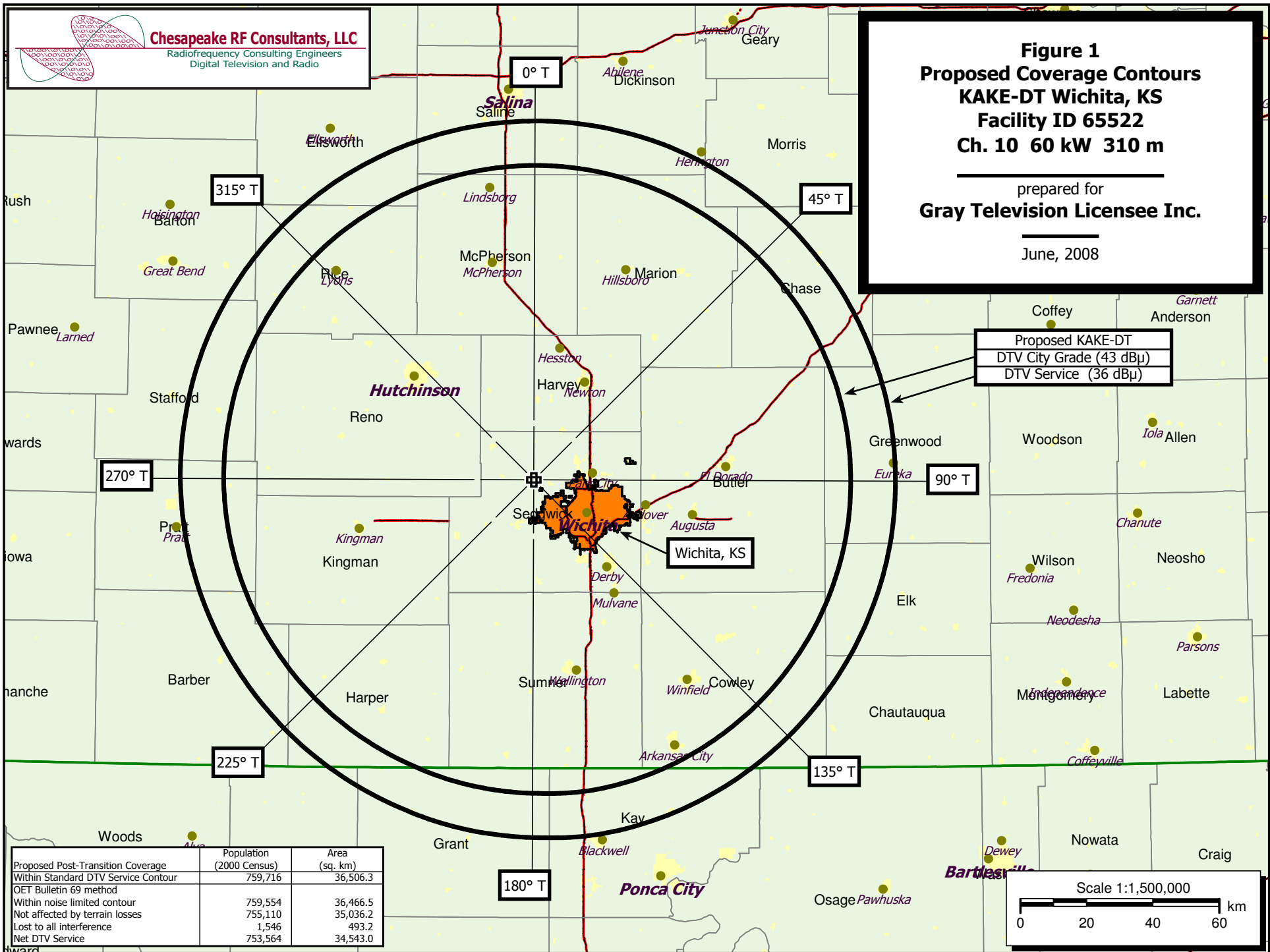


Table 1 KAKE-DT OET Bulletin 69 Interference Study
(worst-case scenarios shown page 1 of 11)

Cell Size = 1 km

TW Census data selected 2000
Post Transition Data Base Selected /space/software/cdbs/pt_tvdb.sff

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 06-08-2008 Time: 14:22:23

Record Selected for Analysis

KAKE-DT USERRECORD-01 WICHITA KS US
Channel 10 ERP 60. kW HAAT 310. m RCAMSL 00733 m
Latitude 037-46-53 Longitude 0097-31-08
Status APP Zone 2 Border
Last update Cutoff date Docket
Comments
Applicant

Cell Size for Service Analysis 1.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility meets maximum height/power limits

Azimuth (Deg)	ERP (kW)	HAAT (m)	36.0 dBu F(50,90) (km)
0.0	60.000	313.6	108.0
45.0	60.000	319.0	108.4
90.0	60.000	323.4	108.8
135.0	60.000	323.3	108.8
180.0	60.000	310.2	107.7
225.0	60.000	288.2	106.2
270.0	60.000	293.0	106.5
315.0	60.000	308.1	107.5

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain

Proposed facility is beyond the Canadian coordination distance

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

Table 1 KAKE-DT OET Bulletin 69 Interference Study
(worst-case scenarios shown page 2 of 11)

Cell Size = 1 km

Start of Interference Analysis

Channel	Proposed Station Call	City/State	ARN
10	KAKE-DT	WICHITA KS	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
10	KFDF-CA	FORT SMITH AR	382.7	LIC	BLTVA	-20011031ABC
10	KBSL-TV	GOODLAND KS	397.5	CP MOD	BMPCDT	-20080313ABS
10	KBSL-TV	GOODLAND KS	397.5	PLN	DTVPLN	-DTVP0258
10	KOLR	SPRINGFIELD MO	407.8	PLN	DTVPLN	-DTVP0272
10	KOLN	LINCOLN NE	337.0	PLN	DTVPLN	-DTVP0278
10	KOLN	LINCOLN NE	337.1	CP	BPCDT	-20080414AAT
10	KTUL	TULSA OK	263.1	LIC	BLCDT	-20030519ADL
10	KTUL	TULSA OK	263.1	PLN	DTVPLN	-DTVP0286
11	KTWU	TOPEKA KS	209.0	PLN	DTVPLN	-DTVP0317
11	KTWU	TOPEKA KS	209.0	CP	BPEDT	-20080317ADN

Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
10	KFDF-CA	FORT SMITH AR	BLTVA	-20011031ABC

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
09	KAFT	FAYETTEVILLE AR	50.9	LIC	BLEDT	-20041213ABJ
09	KAFT	FAYETTEVILLE AR	50.9	PLN	DTVPLN	-DTVP0178
09	KWNL-CA	WINSLOW AR	42.8	LIC	BLTVL	-20000703AEF
10	KTVE	EL DORADO AR	328.4	APP	BSTA	-20061025ADB
10	KETZ	EL DORADO AR	328.4	PLN	DTVPLN	-DTVP0239
10	KETZ	EL DORADO AR	328.4	CP	BPEDT	-20080318ACS
10	KTVE	EL DORADO AR	328.4	LIC	BLCT	-19870817KF
10	KAKE-TV	WICHITA KS	382.7	LIC	BMLCT	-20050623ABM
10	KAKE-TV	WICHITA KS	382.7	PLN	DTVPLN	-DTVP0259
10	KAKE-TV	WICHITA KS	382.7	CP	BPCDT	-20080312ABB
10	KOLR	SPRINGFIELD MO	234.2	LIC	BLCT	-2247
10	KOLR	SPRINGFIELD MO	234.2	PLN	DTVPLN	-DTVP0272
10	KTEN	ADA OK	233.7	LIC	BLCT	-19841022KI
10	KTUL	TULSA OK	126.9	LIC	BLCDT	-20030519ADL
10	KTUL	TULSA OK	126.9	PLN	DTVPLN	-DTVP0286
10	KAKE-DT	WICHITA KS	382.7	APP	USERRECORD-01	

Proposal causes no interference

Analysis of Interference to Affected Station 2

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
10	KBSL-TV	GOODLAND KS	BMPCDT	-20080313ABS

Table 1 KAKE-DT OET Bulletin 69 Interference Study
(worst-case scenarios shown page 3 of 11)

Cell Size = 1 km

Stations Potentially Affecting This Station						
Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
09	KPNE-TV	NORTH PLATTE NE	175.8	PLN	DTVPLN	-DTVP0209
09	KPNE-TV	NORTH PLATTE NE	176.0	CP	BPEDT	-20080317ACM
10	KKTU	COLORADO SPRINGS CO	296.3	LIC	BLCDT	-20030512ADQ
10	KKTU	COLORADO SPRINGS CO	296.3	PLN	DTVPLN	-DTVP0244
10	KAKE-TV	WICHITA KS	397.5	PLN	DTVPLN	-DTVP0259
10	KOLN	LINCOLN NE	400.2	PLN	DTVPLN	-DTVP0278
10	KOLN	LINCOLN NE	400.1	CP	BPEDT	-20080414AAT
11	KSNB	GARDEN CITY KS	197.2	PLN	DTVPLN	-DTVP0316
11	KSNB	GARDEN CITY KS	197.2	CP	BPEDT	-20080401ASQ
10	KAKE-DT	WICHITA KS	397.5	APP	USERRECORD-01	

Total scenarios = 2

Result key: 1
Scenario 1 Affected station 2
Before Analysis

Results for: 10A KS GOODLAND			BMPEDT	20080313ABS	CP
HAAT	299.0 m, ATV ERP	26.5 kW			
		POPULATION	AREA (sq km)		
within Noise Limited Contour		47499	31425.6		
not affected by terrain losses		46824	30989.5		
lost to NTSC IX		0	0.0		
lost to additional IX by ATV		6	60.3		
lost to ATV IX only		6	60.3		
lost to all IX		6	60.3		

Potential Interfering Stations Included in above Scenario 1

10A CO COLORADO SPRINGS BLCDT 20030512ADQ LIC

After Analysis

Results for: 10A KS GOODLAND			BMPEDT	20080313ABS	CP
HAAT	299.0 m, ATV ERP	26.5 kW			
		POPULATION	AREA (sq km)		
within Noise Limited Contour		47499	31425.6		
not affected by terrain losses		46824	30989.5		
lost to NTSC IX		0	0.0		
lost to additional IX by ATV		7	70.2		
lost to ATV IX only		7	70.2		
lost to all IX		7	70.2		

Potential Interfering Stations Included in above Scenario 1

10A CO COLORADO SPRINGS BLCDT 20030512ADQ LIC
10A KS WICHITA USERRECORD01 APP

Percent new IX = 0.0021%

Worst case new IX 0.0021% Scenario 1

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Analysis of Interference to Affected Station 3

Table 1 KAKE-DT OET Bulletin 69 Interference Study
(worst-case scenarios shown page 4 of 11)

Cell Size = 1 km

Analysis of current record				
Channel	Call	City/State	Application	Ref. No.
10	KBSL-TV	GOODLAND KS	DTVPLN	-DTVP0258

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
09	KPNE-TV	NORTH PLATTE NE	175.8	PLN	DTVPLN	-DTVP0209
09	KPNE-TV	NORTH PLATTE NE	176.0	CP	BPEDT	-20080317ACM
10	KKTU	COLORADO SPRINGS CO	296.3	LIC	BLCDT	-20030512ADQ
10	KKTU	COLORADO SPRINGS CO	296.3	PLN	DTVPLN	-DTVP0244
10	KAKE-TV	WICHITA KS	397.5	PLN	DTVPLN	-DTVP0259
10	KOLN	LINCOLN NE	400.2	PLN	DTVPLN	-DTVP0278
10	KOLN	LINCOLN NE	400.1	CP	BPEDT	-20080414AAT
11	KSNB	GARDEN CITY KS	197.2	PLN	DTVPLN	-DTVP0316
11	KSNB	GARDEN CITY KS	197.2	CP	BPEDT	-20080401ASQ
10	KAKE-DT	WICHITA KS	397.5	APP	USERRECORD-01	

Proposal causes no interference

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Analysis of Interference to Affected Station 4

Analysis of current record				
Channel	Call	City/State	Application	Ref. No.
10	KOLR	SPRINGFIELD MO	DTVPLN	-DTVP0272

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
09	KAFT	FAYETTEVILLE AR	183.4	LIC	BLEDT	-20041213ABJ
09	KAFT	FAYETTEVILLE AR	183.4	PLN	DTVPLN	-DTVP0178
10	WGEM-TV	QUINCY IL	334.6	PLN	DTVPLN	-DTVP0256
10	WGEM-TV	QUINCY IL	334.6	CP	BPEDT	-20080317ACL
10	KAKE-TV	WICHITA KS	407.8	PLN	DTVPLN	-DTVP0259
10	KTUL	TULSA OK	275.5	LIC	BLCDT	-20030519ADL
10	KTUL	TULSA OK	275.5	PLN	DTVPLN	-DTVP0286
10	NEW	MEMPHIS TN	362.4	CP MOD	BMEDT	-20080317ACF
10	NEW	MEMPHIS TN	362.4	PLN	DTVPLN	-DTVP0294
10	KAKE-DT	WICHITA KS	407.8	APP	USERRECORD-01	

Total scenarios = 16

Result key: 3
Scenario 1 Affected station 4
Before Analysis

Results for: 10A MO SPRINGFIELD			DTVPLN	DTVP0272	PLN
HAAT	573.0 m, ATV ERP	19.6 kW			
		POPULATION	AREA (sq km)		
within Noise Limited Contour		873906	42765.0		
not affected by terrain losses		844396	41324.9		
lost to NTSC IX		0	0.0		
lost to additional IX by ATV		3090	235.0		
lost to ATV IX only		3090	235.0		
lost to all IX		3090	235.0		

Potential Interfering Stations Included in above Scenario 1

Table 1 KAKE-DT OET Bulletin 69 Interference Study
(worst-case scenarios shown page 5 of 11)

Cell Size = 1 km

9A AR FAYETTEVILLE	BLEDT	20041213ABJ	LIC
10A IL QUINCY	DTVPLN	DTVP0256	PLN
10A OK TULSA	BLCDT	20030519ADL	LIC
10A TN MEMPHIS	BMPEDT	20080317ACF	CP

After Analysis

Results for: 10A MO SPRINGFIELD	DTVPLN	DTVP0272	PLN
HAAT 573.0 m, ATV ERP 19.6 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	873906	42765.0	
not affected by terrain losses	844396	41324.9	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	3090	238.0	
lost to ATV IX only	3090	238.0	
lost to all IX	3090	238.0	

Potential Interfering Stations Included in above Scenario 1

9A AR FAYETTEVILLE	BLEDT	20041213ABJ	LIC
10A IL QUINCY	DTVPLN	DTVP0256	PLN
10A OK TULSA	BLCDT	20030519ADL	LIC
10A TN MEMPHIS	BMPEDT	20080317ACF	CP
10A KS WICHITA	USERRECORD01		APP

Percent new IX = 0.0000%

Worst case new IX 0.0000% Scenario 1

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Analysis of Interference to Affected Station 5

Analysis of current record				
Channel	Call	City/State	Application	Ref. No.
10	KOLN	LINCOLN NE	DTVPLN	-DTVP0278

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
09	KCAU-TV	SIoux CITY IA	213.3	CP	BPCDT	-20080411AAC
09	KCAU-TV	SIoux CITY IA	213.3	PLN	DTVPLN	-DTVP0195
10	KBSL-TV	GOODLAND KS	400.2	CP MOD	BMPEDT	-20080313ABS
10	KBSL-TV	GOODLAND KS	400.2	PLN	DTVPLN	-DTVP0258
10	KAKE-TV	WICHITA KS	337.0	PLN	DTVPLN	-DTVP0259
10	KTSD-TV	PIERRE SD	403.8	CP	BPEDT	-20080214ACZ
10	KTSD-TV	PIERRE SD	403.8	PLN	DTVPLN	-DTVP0292
11	KTWU	TOPEKA KS	227.8	PLN	DTVPLN	-DTVP0317
11	KTWU	TOPEKA KS	227.8	CP	BPEDT	-20080317ADN
11	KGIN	GRAND ISLAND NE	138.9	CP	BPCDT	-20080414AAU
11	KGIN	GRAND ISLAND NE	138.8	PLN	DTVPLN	-DTVP0332
10	KAKE-DT	WICHITA KS	337.0	APP	USERRECORD-01	

Total scenarios = 2

Result key: 19
Scenario 1 Affected station 5
Before Analysis

Table 1 KAKE-DT OET Bulletin 69 Interference Study
(worst-case scenarios shown page 6 of 11)

Cell Size = 1 km

Results for: 10A NE LINCOLN	DTVPLN	DTVP0278	PLN
HAAT 454.0 m, ATV ERP 18.4 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	927342	37262.9	
not affected by terrain losses	883171	36737.6	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	8300	269.1	
lost to ATV IX only	8300	269.1	
lost to all IX	8300	269.1	

Potential Interfering Stations Included in above Scenario 1

11A NE GRAND ISLAND	BPCDT	20080414AAU	CP
10A KS WICHITA	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 10A NE LINCOLN	DTVPLN	DTVP0278	PLN
HAAT 454.0 m, ATV ERP 18.4 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	927342	37262.9	
not affected by terrain losses	883171	36737.6	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	8517	440.9	
lost to ATV IX only	8517	440.9	
lost to all IX	8517	440.9	

Potential Interfering Stations Included in above Scenario 1

11A NE GRAND ISLAND	BPCDT	20080414AAU	CP
10A KS WICHITA	USERRECORD01		APP

Percent new IX = 0.0248%

Worst case new IX 0.0248% Scenario 1

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Analysis of Interference to Affected Station 6

Analysis of current record				
Channel	Call	City/State	Application	Ref. No.
10	KOLN	LINCOLN NE	BPCDT	-20080414AAT

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
09	KCAU-TV	SIoux CITY IA	213.3	CP	BPCDT	-20080411AAC
09	KCAU-TV	SIoux CITY IA	213.3	PLN	DTVPLN	-DTVP0195
10	KBSL-TV	GOODLAND KS	400.1	CP MOD	BMPEDT	-20080313ABS
10	KBSL-TV	GOODLAND KS	400.1	PLN	DTVPLN	-DTVP0258
10	KAKE-TV	WICHITA KS	337.1	PLN	DTVPLN	-DTVP0259
10	KTSD-TV	PIERRE SD	403.7	CP	BPEDT	-20080214ACZ
10	KTSD-TV	PIERRE SD	403.6	PLN	DTVPLN	-DTVP0292
11	KTWU	TOPEKA KS	227.9	PLN	DTVPLN	-DTVP0317
11	KTWU	TOPEKA KS	227.9	CP	BPEDT	-20080317ADN
11	KGIN	GRAND ISLAND NE	138.8	CP	BPCDT	-20080414AAU
11	KGIN	GRAND ISLAND NE	138.7	PLN	DTVPLN	-DTVP0332
10	KAKE-DT	WICHITA KS	337.1	APP	USERRECORD-01	

Table 1 KAKE-DT OET Bulletin 69 Interference Study
(worst-case scenarios shown page 7 of 11)

Cell Size = 1 km

Total scenarios = 2

Result key: 21
Scenario 1 Affected station 6
Before Analysis

Results for: 10A NE LINCOLN BPCDT 20080414AAT CP
HAAT 454.0 m, ATV ERP 18.4 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	922333	37297.0
not affected by terrain losses	875956	36735.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	8393	265.1
lost to ATV IX only	8393	265.1
lost to all IX	8393	265.1

Potential Interfering Stations Included in above Scenario 1

11A NE GRAND ISLAND	BPCDT	20080414AAU	CP
10A KS WICHITA	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 10A NE LINCOLN BPCDT 20080414AAT CP
HAAT 454.0 m, ATV ERP 18.4 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	922333	37297.0
not affected by terrain losses	875956	36735.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	8610	441.9
lost to ATV IX only	8610	441.9
lost to all IX	8610	441.9

Potential Interfering Stations Included in above Scenario 1

11A NE GRAND ISLAND	BPCDT	20080414AAU	CP
10A KS WICHITA	USERRECORD01		APP

Percent new IX = 0.0250%

Worst case new IX 0.0250% Scenario 1

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Analysis of Interference to Affected Station 7

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
10	KTUL	TULSA OK	BLCDDT	-20030519ADL

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
09	KAFT	FAYETTEVILLE AR	143.9	LIC	BLEDT	-20041213ABJ
09	KAFT	FAYETTEVILLE AR	143.9	PLN	DTVPLN	-DTVP0178
09	KWTV	OKLAHOMA CITY OK	176.0	PLN	DTVPLN	-DTVP0215
09	KWTV	OKLAHOMA CITY OK	176.0	CP	BPCDDT	-20080317AFP
10	KAKE-TV	WICHITA KS	263.1	PLN	DTVPLN	-DTVP0259

Table 1 KAKE-DT OET Bulletin 69 Interference Study
(worst-case scenarios shown page 8 of 11)

Cell Size = 1 km

10	KOLR	SPRINGFIELD MO	275.5	PLN	DTVPLN	-DTVP0272
11	KOED-TV	TULSA OK	7.9	PLN	DTVPLN	-DTVP0338
11	KOED-TV	TULSA OK	7.9	CP	BPEDT	-20080318ADB
10	KAKE-DT	WICHITA KS	263.1	APP	USERRECORD-01	

Total scenarios = 4

Result key: 23
Scenario 1 Affected station 7
Before Analysis

Results for: 10A OK TULSA BLCDDT 20030519ADL LIC
HAAT 542.0 m, ATV ERP 6.9 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1202402	30701.6
not affected by terrain losses	1185389	29789.1
lost to NTSC IX	0	0.0
lost to additional IX by ATV	22902	1257.7
lost to ATV IX only	22902	1257.7
lost to all IX	22902	1257.7

Potential Interfering Stations Included in above Scenario 1

9A AR FAYETTEVILLE	BLEDT	20041213ABJ	LIC
10A MO SPRINGFIELD	DTVPLN	DTVP0272	PLN
11A OK TULSA	DTVPLN	DTVP0338	PLN
10A KS WICHITA	DTVPLN	DTVP0259	PLN

After Analysis

Results for: 10A OK TULSA BLCDDT 20030519ADL LIC
HAAT 542.0 m, ATV ERP 6.9 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1202402	30701.6
not affected by terrain losses	1185389	29789.1
lost to NTSC IX	0	0.0
lost to additional IX by ATV	28314	1741.0
lost to ATV IX only	28314	1741.0
lost to all IX	28314	1741.0

Potential Interfering Stations Included in above Scenario 1

9A AR FAYETTEVILLE	BLEDT	20041213ABJ	LIC
10A MO SPRINGFIELD	DTVPLN	DTVP0272	PLN
11A OK TULSA	DTVPLN	DTVP0338	PLN
10A KS WICHITA	USERRECORD01		APP

Percent new IX = 0.4656%

Worst case new IX 0.4656% Scenario 1

#####

Analysis of Interference to Affected Station 8

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
10	KTUL	TULSA OK	DTVPLN	-DTVP0286

Table 1 KAKE-DT OET Bulletin 69 Interference Study
(worst-case scenarios shown page 9 of 11)

Cell Size = 1 km

Stations Potentially Affecting This Station						
Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
09	KAPT	FAYETTEVILLE AR	143.9	LIC	BLEDT	-20041213ABJ
09	KAPT	FAYETTEVILLE AR	143.9	PLN	DTVPLN	-DTVPO178
09	KWTV	OKLAHOMA CITY OK	176.0	PLN	DTVPLN	-DTVPO215
09	KWTV	OKLAHOMA CITY OK	176.0	CP	BPCDT	-20080317AFP
10	KAKE-TV	WICHITA KS	263.1	PLN	DTVPLN	-DTVPO259
10	KOLR	SPRINGFIELD MO	275.5	PLN	DTVPLN	-DTVPO272
11	KOED-TV	TULSA OK	7.9	PLN	DTVPLN	-DTVPO338
11	KOED-TV	TULSA OK	7.9	CP	BPEDT	-20080318ADB
10	KAKE-DT	WICHITA KS	263.1	APP	USERRECORD-01	

Total scenarios = 4

Result key: 27
Scenario 1 Affected station 8
Before Analysis

Results for: 10A OK TULSA				DTVPLN	DTVPO286	PLN
HAAT	542.0 m,	ATV ERP	6.9 kW			
		POPULATION	AREA (sq km)			
within Noise Limited Contour		1202402	30701.6			
not affected by terrain losses		1185389	29789.1			
lost to NTSC IX		0	0.0			
lost to additional IX by ATV		22902	1257.7			
lost to ATV IX only		22902	1257.7			
lost to all IX		22902	1257.7			

Potential Interfering Stations Included in above Scenario 1

9A AR FAYETTEVILLE	BLEDT	20041213ABJ	LIC
10A MO SPRINGFIELD	DTVPLN	DTVPO272	PLN
11A OK TULSA	DTVPLN	DTVPO338	PLN
10A KS WICHITA	DTVPLN	DTVPO259	PLN

After Analysis

Results for: 10A OK TULSA				DTVPLN	DTVPO286	PLN
HAAT	542.0 m,	ATV ERP	6.9 kW			
		POPULATION	AREA (sq km)			
within Noise Limited Contour		1202402	30701.6			
not affected by terrain losses		1185389	29789.1			
lost to NTSC IX		0	0.0			
lost to additional IX by ATV		28314	1741.0			
lost to ATV IX only		28314	1741.0			
lost to all IX		28314	1741.0			

Potential Interfering Stations Included in above Scenario 1

9A AR FAYETTEVILLE	BLEDT	20041213ABJ	LIC
10A MO SPRINGFIELD	DTVPLN	DTVPO272	PLN
11A OK TULSA	DTVPLN	DTVPO338	PLN
10A KS WICHITA	USERRECORD01		APP

Percent new IX = 0.4656%

Worst case new IX 0.4656% Scenario 1

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Table 1 KAKE-DT OET Bulletin 69 Interference Study
(worst-case scenarios shown page 10 of 11)

Cell Size = 1 km

Analysis of Interference to Affected Station 9

Analysis of current record				
Channel	Call	City/State	Application	Ref. No.
11	KTWU	TOPEKA KS	DTVPLN	-DTVPO317

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
10	KAKE-TV	WICHITA KS	209.0	PLN	DTVPLN	-DTVPO259
10	KOLN	LINCOLN NE	227.8	PLN	DTVPLN	-DTVPO278
10	KOLN	LINCOLN NE	227.9	CP	BPCDT	-20080414AAT
11	KDIN-TV	DES MOINES IA	355.1	CP	BPEDT	-20080314ABP
11	KDIN-TV	DES MOINES IA	355.1	PLN	DTVPLN	-DTVPO313
11	KGIN	GRAND ISLAND NE	309.7	CP	BPCDT	-20080414AAU
11	KGIN	GRAND ISLAND NE	309.8	PLN	DTVPLN	-DTVPO332
11	KOED-TV	TULSA OK	338.4	PLN	DTVPLN	-DTVPO338
11	KOED-TV	TULSA OK	338.4	CP	BPEDT	-20080318ADB
12	KWCH-TV	HUTCHINSON KS	206.5	CP	BPCDT	-20080313ACP
12	KWCH-TV	HUTCHINSON KS	206.5	PLN	DTVPLN	-DTVPO377
12	KSQA	TOPEKA KS	0.0	PLN	DTVPLN	-DTVPO378
10	KAKE-DT	WICHITA KS	209.0	APP	USERRECORD-01	

Proposal causes no interference

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Analysis of Interference to Affected Station 10

Analysis of current record				
Channel	Call	City/State	Application	Ref. No.
11	KTWU	TOPEKA KS	BPEDT	-20080317ADN

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
10	KAKE-TV	WICHITA KS	209.0	PLN	DTVPLN	-DTVPO259
10	KOLN	LINCOLN NE	227.8	PLN	DTVPLN	-DTVPO278
10	KOLN	LINCOLN NE	227.9	CP	BPCDT	-20080414AAT
11	KDIN-TV	DES MOINES IA	355.2	CP	BPEDT	-20080314ABP
11	KDIN-TV	DES MOINES IA	355.2	PLN	DTVPLN	-DTVPO313
11	KGIN	GRAND ISLAND NE	309.8	CP	BPCDT	-20080414AAU
11	KGIN	GRAND ISLAND NE	309.9	PLN	DTVPLN	-DTVPO332
11	KOED-TV	TULSA OK	338.3	PLN	DTVPLN	-DTVPO338
11	KOED-TV	TULSA OK	338.3	CP	BPEDT	-20080318ADB
12	KWCH-TV	HUTCHINSON KS	206.5	CP	BPCDT	-20080313ACP
12	KWCH-TV	HUTCHINSON KS	206.5	PLN	DTVPLN	-DTVPO377
12	KSQA	TOPEKA KS	0.0	PLN	DTVPLN	-DTVPO378
10	KAKE-DT	WICHITA KS	209.0	APP	USERRECORD-01	

Proposal causes no interference

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Analysis of Interference to Affected Station 11

Analysis of current record			
Channel	Call	City/State	Application Ref. No.

Table 1 KAKE-DT OET Bulletin 69 Interference Study Cell Size = 1 km
(worst-case scenarios shown page 11 of 11)

10	KAKE-DT	WICHITA KS	USERRECORD-01
Stations Potentially Affecting This Station			
Chan	Call	City/State	Dist(km) Status Application Ref. No.
10	KBSL-TV	GOODLAND KS	397.5 CP MOD BMPCDT -20080313ABS
10	KBSL-TV	GOODLAND KS	397.5 PLN DTVPLN -DTVP0258
10	KOLR	SPRINGFIELD MO	407.8 PLN DTVPLN -DTVP0272
10	KOLN	LINCOLN NE	337.0 PLN DTVPLN -DTVP0278
10	KOLN	LINCOLN NE	337.1 CP BPCDT -20080414AAT
10	KTUL	TULSA OK	263.1 LIC BLCDT -20030519ADL
10	KTUL	TULSA OK	263.1 PLN DTVPLN -DTVP0286
11	KTWU	TOPEKA KS	209.0 PLN DTVPLN -DTVP0317
11	KTWU	TOPEKA KS	209.0 CP BPEDT -20080317ADN
Total scenarios = 4			
Result key: 32			
Scenario 2 Affected station 11			
Before Analysis			
Results for: 10A KS WICHITA USERRECORD01 APP			
HAAT 310.0 m, ATV ERP 60.0 kW			
POPULATION AREA (sq km)			
within Noise Limited Contour 759554 36466.5			
not affected by terrain losses 755110 35036.2			
lost to NTSC IX 0 0.0			
lost to additional IX by ATV 1546 493.2			
lost to ATV IX only 1546 493.2			
lost to all IX 1546 493.2			
Potential Interfering Stations Included in above Scenario 2			
10A NE LINCOLN DTVPLN DTVP0278 PLN			
10A OK TULSA DTVPLN DTVP0286 PLN			
#####			
FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED			

SECTION III-D - DTV Engineering**Complete Questions 1-5, and provide all data and information for the proposed facility, as requested in Technical Specifications, Items 1-13.**

Pre-Transition Certification Checklist: An application concerning a pre-transition channel must complete questions 1(a)-(c), and 2-5. A correct answer of "Yes" to all of the questions will ensure an expeditious grant of a construction permit application to change pre-transition facilities. 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.

Post-Transition Expedited Processing. An application concerning a post-transition channel must complete questions 1(a), (d)-(e), and 2-5. A station applying for a construction permit to build its post-transition channel will receive expedited processing if its application (1) does not seek to expand the noise-limited service contour in any direction beyond that established by Appendix B of the Seventh Report and Order in MB Docket No. 87-268 establishing the new DTV Table of Allotments in 47 C.F.R. § 73.622(i) ("new DTV Table Appendix B"); (2) specifies facilities that match or closely approximate those defined in the new DTV Table Appendix B facilities; and (3) is filed within 45 days of the effective date of Section 73.616 of the rules adopted in the Report and Order in the Third DTV Periodic Review proceeding, MB Docket No. 07-91.

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.	<input checked="" type="radio"/> Yes <input type="radio"/> No
(b) It will operate a pre-transition facility 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.	<input type="radio"/> Yes <input type="radio"/> No
(c) It will operate a pre-transition facility 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.	<input type="radio"/> Yes <input type="radio"/> No
(d) It will operate at post-transition facilities that do not expand the noise-limited service contour in any direction beyond that established by Appendix B of the Seventh Report and Order in MB Docket No. 87-268 establishing the new DTV Table of Allotments in 47 C.F.R. § 73.622(i) ("new DTV Table Appendix B").	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> N/A
(e) It will operate at post-transition facilities that match or reduce by no more than five percent with respect to predicted population from those defined in the new DTV Table Appendix B.	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A
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. Applicant must submit the Exhibit called for in Item 13.	<input checked="" type="radio"/> Yes <input type="radio"/> No
3. Pursuant to 47 C.F.R. Section 73.625, the DTV coverage contour of the proposed facility will encompass the allotted principal community.	<input checked="" type="radio"/> Yes <input type="radio"/> 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.	<input checked="" type="radio"/> Yes <input type="radio"/> No
5. The antenna structure to be used by this facility has been registered by the Commission and will not require registration 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.	<input checked="" type="radio"/> Yes <input type="radio"/> 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 10 Analog TV, if any 10
2.	Zone: <input type="radio"/> I <input checked="" type="radio"/> II <input type="radio"/> III
3.	Antenna Location Coordinates: (NAD 27) Latitude: Degrees 37 Minutes 46 Seconds 53 <input checked="" type="radio"/> North <input type="radio"/> South Longitude: Degrees 97 Minutes 31 Seconds 8 <input checked="" type="radio"/> West <input type="radio"/> East
4.	Antenna Structure Registration Number: 1039959 <input type="checkbox"/> Not Applicable <input type="checkbox"/> Notification filed with FAA
5.	Antenna Location Site Elevation Above Mean Sea Level: 417.6 meters
6.	Overall Tower Height Above Ground Level: 325.8 meters
7.	Height of Radiation Center Above Ground Level: 315.4 meters
8.	Height of Radiation Center Above Average Terrain : 309.8 meters
9.	Maximum Effective Radiated Power (average power): 60 kW
10.	Antenna Specifications:

a. Manufacturer DIE Model TUV-28GTH/10HV-R-06/03	
b. Electrical Beam Tilt: 0.75 degrees <input type="checkbox"/> Not Applicable	
c. Mechanical Beam Tilt: degrees toward azimuth degrees True <input checked="" type="checkbox"/> Not Applicable Attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(c).	[Exhibit 42]
d. Polarization: <input checked="" type="radio"/> Horizontal <input type="radio"/> Circular <input type="radio"/> Elliptical	
e. Directional Antenna Relative Field Values: <input checked="" type="checkbox"/> Not applicable (Nondirectional)	
[For a composite directional (not off-the-shelf) antenna, press the following button to fill in the relative field values subform.] [Relative Field Values]	
If a directional antenna is proposed, the requirements of 47 C.F.R. Sections 73.625(c) must be satisfied. Exhibit required.	
[Exhibit 43]	
11. Does the proposed facility satisfy the pre-transition 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.") and/or the post-transition interference protection provisions of 47 C.F.R. Section 73.616?	<input checked="" type="radio"/> Yes <input type="radio"/> No
If "No," attach as an Exhibit justification therefor, including a summary of any related previously granted waivers.	
[Exhibit 44]	
12. If the proposed facility will not satisfy the coverage requirement of 47 C.F.R. Section 73.625, attach as an Exhibit justification therefore. (Applicable only if Certification Checklist item 3 is answered "No.")	[Exhibit 45]
13. Environmental Protection Act. Submit in an Exhibit the following: 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.	[Exhibit 46]
PREPARERS CERTIFICATION ON SECTION III 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 6/8/2008	
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	

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).