

## **ENGINEERING EXHIBIT**

### **“Maximization” Application to Modify Post-Transition Digital Television Station Construction Permit**

prepared for

**CBS Broadcasting Inc.**  
KCCO-DT Alexandria, MN  
Facility ID 9632  
Ch. 7 32 kW 340 m

*CBS Broadcasting Inc.* (“*CBS*”) is the licensee of television station KCCO-TV, analog Channel 7, Alexandria, MN. The companion Channel 24 digital facility is currently operating pursuant to Special Temporary Authority. A Construction Permit (“CP”, BPCDT-20080527ABD) authorizes construction of the KCCO-DT post-transition digital facility on Channel 7, as established in Appendix B of the Seventh Report and Order in MB Docket 87-278. *CBS* herein seeks to modify the CP to expand the KCCO-DT post-transition Channel 7 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.<sup>1</sup>

The current CP authorizes operation with an effective radiated power (“ERP”) of 15.6 kW at 340 meters antenna height above average terrain (“HAAT”), with a nondirectional antenna. An increase in ERP to 32 kW is proposed herein. No other changes are proposed

The proposed digital Channel 7 operation will employ the existing non-directional antenna system licensed for KCCO-TV’s analog Channel 7. The antenna is a horizontally polarized RCA model TW-18A7. The Channel 7 antenna is top-mounted on the existing KCCO-TV antenna supporting structure, having FCC Antenna Structure Registration (“ASR”) number 1028993. No change to the overall structure height and no tower work are required to carry out this proposal.

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<sup>1</sup>Public 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.

The antenna height is reduced from licensed analog values to correspond to the ASR and as-built conditions. A geographic coordinate change of 7 seconds Latitude and 11 seconds Longitude from the Appendix B reference coordinates is specified to match ASR data.

A map is supplied as **Figure 1**, which depicts the standard predicted coverage contours. This map includes the location of Alexandria, KCCO-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 KCCO-DT facility’s predicted service population provides a 113.6 percent match of the Appendix B facility, as detailed in the table below.

<b>Post-Transition Population Summary</b>		
Population Summary (2000 Census) OET Bulletin 69 method	Appendix B	Proposed
Within Noise Limited Contour	442,155	505,046
Not affected by terrain losses	439,498	501,106
Lost to all interference	565	2,594
Net DTV Service	<b>438,933</b>	<b>498,512</b>
Match of Appendix B	---	<b>113.57%</b>

A detailed interference study per OET Bulletin 69<sup>2</sup> 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 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 593 km distant at Grand Island, NE. This exceeds 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

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<sup>2</sup>FCC 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.

on information contained within the Commission's database. The site location is within the Canadian coordination zone (331 km to the Canada border), thus further international coordination may be necessary beyond that to establish Appendix B parameters.

### **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 assuming 30% antenna relative field in downward elevations, the calculated power density attributable to the proposed facility at locations near the transmitter site at a height of two meters above ground level is  $0.9 \mu\text{W}/\text{cm}^2$ , which is 0.5 percent of the "uncontrolled / general public" maximum permissible exposure limit. This is 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.

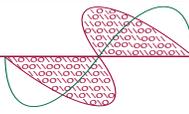
Joseph M. Davis, P.E.  
June 17, 2008

**Chesapeake RF Consultants, LLC**  
11993 Kahns Road  
Manassas, VA 20112  
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

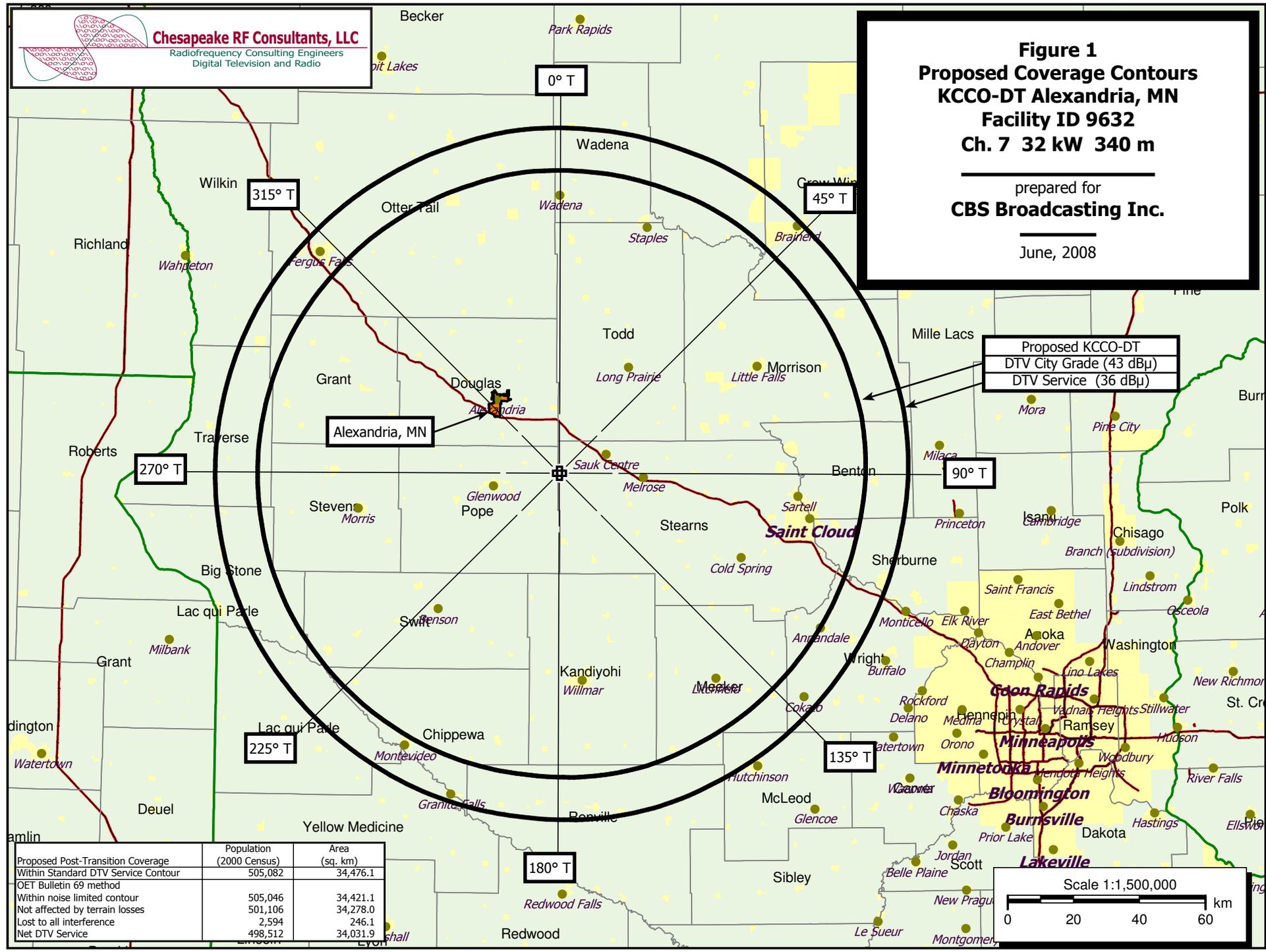
*This material was entered June 17, 2008 for filing electronically. Since the FCC's electronic filing system may be accessed by anyone with the applicant's name and password, and electronic data may otherwise be altered in an unauthorized fashion, we cannot be responsible for changes made subsequent to our entry of this data and related attachments.*



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

**Figure 1**  
**Proposed Coverage Contours**  
**KCCO-DT Alexandria, MN**  
**Facility ID 9632**  
**Ch. 7 32 kW 340 m**

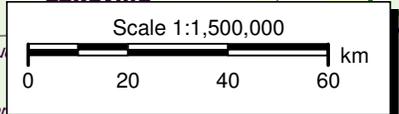
prepared for  
**CBS Broadcasting Inc.**  
 June, 2008



Proposed KCCO-DT  
 DTV City Grade (43 dBμ)  
 DTV Service (36 dBμ)

Alexandria, MN

Proposed Post-Transition Coverage	Population (2000 Census)	Area (sq. km)
Within Standard DTV Service Contour	505,082	34,476.1
OET Bulletin 69 method		
Within noise limited contour	505,046	34,421.1
Not affected by terrain losses	501,106	34,278.0
Lost to all interference	2,594	246.1
Net DTV Service	498,512	34,031.9



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

**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: 06-17-2008 Time: 12:28:17

Record Selected for Analysis

KCCO-DT USERRECORD-01 ALEXANDRIA MN US  
Channel 07 ERP 32. kW HAAT 340. m RCAMSL 00750 m  
Latitude 045-41-10 Longitude 0095-08-03  
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	32.000	337.5	104.5
45.0	32.000	345.6	105.1
90.0	32.000	351.7	105.6
135.0	32.000	340.3	104.7
180.0	32.000	342.2	104.8
225.0	32.000	339.0	104.6
270.0	32.000	333.8	104.1
315.0	32.000	331.0	103.9

Evaluation toward Class A Stations

Contour overlap to Class A station  
WTMS-CA 7 MINNEAPOLIS, ETC. MN BLTVL 19900302JH

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 within the Canadian coordination distance  
Distance to border = 330.7km

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

**Table 1 KCCO-DT OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 2 of 9)

**Cell Size = 1 km**

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Start of Interference Analysis

Channel	Proposed Station Call City/State	ARN
07	KCCO-DT ALEXANDRIA MN	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
07	WTMS-CA	MINNEAPOLIS, ETC. MN	165.5	LIC	BLTVL	-19900302JH
07	KJRR	JAMESTOWN ND	311.3	CP	BPCDT	-20080317AHR
07	KJRR	JAMESTOWN ND	311.4	PLN	DTVPLN	-DTVPO079
07	KTW	SIOUX FALLS SD	267.8	CP MOD	BMPCDT	-20080213ACH
07	KTW	SIOUX FALLS SD	276.1	PLN	DTVPLN	-DTVPO097
08	KESD-TV	BROOKINGS SD	222.6	CP	BPEDT	-20080214ADE
08	KESD-TV	BROOKINGS SD	222.6	PLN	DTVPLN	-DTVPO161

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Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
07	WTMS-CA	MINNEAPOLIS, ETC. MN	BLTVL	-19900302JH

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
07	KWWL	WATERLOO IA	308.4	CP	BPCDT	-20080314ADY
07	KWWL	WATERLOO IA	308.4	PLN	DTVPLN	-DTVPO059
07	KWWL	WATERLOO IA	308.4	LIC	BLCT	-20060524AEV
07	KCCO-TV	ALEXANDRIA MN	165.5	LIC	BLCT	-19980528KG
07	KCCO-TV	ALEXANDRIA MN	165.6	PLN	DTVPLN	-DTVPO072
07	KCCO-TV	ALEXANDRIA MN	165.5	CP	BPCDT	-20080527ABD
07	KTW	SIOUX FALLS SD	309.4	CP MOD	BMPCDT	-20080213ACH
07	KTW	SIOUX FALLS SD	323.3	PLN	DTVPLN	-DTVPO097
07	WSAW-TV	WAUSAU WI	281.8	LIC	BLCT	-20030930ANG
07	WSAW-TV	WAUSAU WI	281.7	PLN	DTVPLN	-DTVPO106
07	WSAW-TV	WAUSAU WI	281.8	CP	BPCDT	-20080501ACF
07	KCCO-DT	ALEXANDRIA MN	165.5	APP	USERRECORD-01	

Total scenarios = 1

Result key: 1

Scenario 1 Affected station 1  
Before Analysis

Results for: 7N MN MINNEAPOLIS, ETC. BLTVL 19900302JH LIC

	POPULATION	AREA (sq km)
within Noise Limited Contour	977881	633.3
not affected by terrain losses	977881	633.3
lost to NTSC IX	29252	25.8
lost to additional IX by ATV	0	0.0
lost to all IX	29252	25.8

Potential Interfering Stations Included in above Scenario 1

**Table 1 KCCO-DT OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 3 of 9)

**Cell Size = 1 km**

7N IA WATERLOO	BLCT	20060524AEV	LIC
7N MN ALEXANDRIA	BLCT	19980528KG	LIC
7A MN ALEXANDRIA	DTVPLN	DTVP0072	PLN

After Analysis

Results for: 7N MN MINNEAPOLIS, ETC. BLTVL 19900302JH LIC

	POPULATION	AREA (sq km)
within Noise Limited Contour	977881	633.3
not affected by terrain losses	977881	633.3
lost to NTSC IX	29252	25.8
lost to additional IX by ATV	0	0.0
lost to all IX	29252	25.8

Potential Interfering Stations Included in above Scenario 1

7N IA WATERLOO	BLCT	20060524AEV	LIC
7N MN ALEXANDRIA	BLCT	19980528KG	LIC
7A MN ALEXANDRIA	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 2

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
07	KJRR	JAMESTOWN ND	BPCDT	-20080317AHR

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
07	KCCO-TV	ALEXANDRIA MN	311.2	PLN	DTVPLN	-DTVP0072
07	KQCD-TV	DICKINSON ND	320.1	CP	BPCDT	-20080305AEL
07	KQCD-TV	DICKINSON ND	320.0	PLN	DTVPLN	-DTVP0078
07	KTTW	SIOUX FALLS SD	417.2	CP MOD	BMPCDT	-20080213ACH
07	KTTW	SIOUX FALLS SD	413.0	PLN	DTVPLN	-DTVP0097
08	WDAZ-TV	DEVIL'S LAKE ND	147.1	CP	BPCDT	-20080430AEC
08	WDAZ-TV	DEVILS LAKE ND	147.2	PLN	DTVPLN	-DTVP0144
07	KCCO-DT	ALEXANDRIA MN	311.3	APP	USERRECORD-01	

Total scenarios = 2

Result key: 2

Scenario 1 Affected station 2

Before Analysis

Results for: 7A ND JAMESTOWN BPCDT 20080317AHR CP

HAAT 135.0 m, ATV ERP 10.6 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	47303	19952.1
not affected by terrain losses	43472	18390.3
lost to NTSC IX	0	0.0
lost to additional IX by ATV	201	286.9
lost to ATV IX only	201	286.9

**Table 1 KCCO-DT OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 4 of 9)

**Cell Size = 1 km**

lost to all IX 201 286.9

Potential Interfering Stations Included in above Scenario 1

7A ND DICKINSON	BPCDT	20080305AEL	CP
8A ND DEVIL'S LAKE	BPCDT	20080430AEC	CP
7A MN ALEXANDRIA	DTVPLN	DTVP0072	PLN

After Analysis

Results for: 7A ND JAMESTOWN BPCDT 20080317AHR CP

HAAT 135.0 m, ATV ERP 10.6 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	47303	19952.1
not affected by terrain losses	43472	18390.3
lost to NTSC IX	0	0.0
lost to additional IX by ATV	379	396.6
lost to ATV IX only	379	396.6
lost to all IX	379	396.6

Potential Interfering Stations Included in above Scenario 1

7A ND DICKINSON	BPCDT	20080305AEL	CP
8A ND DEVIL'S LAKE	BPCDT	20080430AEC	CP
7A MN ALEXANDRIA	USERRECORD01		APP

Percent new IX = 0.4114%

Worst case new IX 0.4114% Scenario 1

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Analysis of Interference to Affected Station 3

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
07	KJRR	JAMESTOWN ND	DTVPLN	-DTVP0079

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
07	KCCO-TV	ALEXANDRIA MN	311.3	PLN	DTVPLN	-DTVP0072
07	KQCD-TV	DICKINSON ND	320.1	CP	BPCDT	-20080305AEL
07	KQCD-TV	DICKINSON ND	319.9	PLN	DTVPLN	-DTVP0078
07	KTTW	SIOUX FALLS SD	417.3	CP MOD	BMPCDT	-20080213ACH
07	KTTW	SIOUX FALLS SD	413.1	PLN	DTVPLN	-DTVP0097
08	WDAZ-TV	DEVIL'S LAKE ND	147.0	CP	BPCDT	-20080430AEC
08	WDAZ-TV	DEVILS LAKE ND	147.1	PLN	DTVPLN	-DTVP0144
07	KCCO-DT	ALEXANDRIA MN	311.4	APP	USERRECORD-01	

Total scenarios = 2

Result key: 4

Scenario 1 Affected station 3

Before Analysis

Results for: 7A ND JAMESTOWN DTVPLN DTVP0079 PLN

HAAT 135.0 m, ATV ERP 13.0 kW

	POPULATION	AREA (sq km)
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**Table 1 KCCO-DT OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 5 of 9)

**Cell Size = 1 km**

within Noise Limited Contour	47304	19984.0
not affected by terrain losses	44799	18477.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	249	285.9
lost to ATV IX only	249	285.9
lost to all IX	249	285.9

Potential Interfering Stations Included in above Scenario 1

7A ND DICKINSON	BPCDT	20080305AEL	CP
8A ND DEVIL'S LAKE	BPCDT	20080430AEC	CP
7A MN ALEXANDRIA	DTVPLN	DTVP0072	PLN

After Analysis

Results for: 7A ND JAMESTOWN DTVP0079 PLN  
HAAT 135.0 m, ATV ERP 13.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	47304	19984.0
not affected by terrain losses	44799	18477.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	413	381.9
lost to ATV IX only	413	381.9
lost to all IX	413	381.9

Potential Interfering Stations Included in above Scenario 1

7A ND DICKINSON	BPCDT	20080305AEL	CP
8A ND DEVIL'S LAKE	BPCDT	20080430AEC	CP
7A MN ALEXANDRIA	USERRECORD01		APP

Percent new IX = 0.3681%

Worst case new IX 0.3681% Scenario 1

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Analysis of Interference to Affected Station 4

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
07	KTTW	SIOUX FALLS SD	BMPCDT	-20080213ACH

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
07	KWWL	WATERLOO IA	403.7	CP	BPCDT	-20080314ADY
07	KWWL	WATERLOO IA	403.7	PLN	DTVPLN	-DTVP0059
07	KCCO-TV	ALEXANDRIA MN	267.5	PLN	DTVPLN	-DTVP0072
07	KJRR	JAMESTOWN ND	417.2	CP	BPCDT	-20080317AHR
07	KJRR	JAMESTOWN ND	417.3	PLN	DTVPLN	-DTVP0079
07	KMNE-TV	BASSETT NE	270.4	CP	BPEDT	-20080317ACJ
07	KMNE-TV	BASSETT NE	270.3	PLN	DTVPLN	-DTVP0080
08	KESD-TV	BROOKINGS SD	106.4	CP	BPEDT	-20080214ADE
08	KESD-TV	BROOKINGS SD	106.4	PLN	DTVPLN	-DTVP0161
07	KCCO-DT	ALEXANDRIA MN	267.8	APP	USERRECORD-01	

Total scenarios = 4

Result key: 9

**Table 1 KCCO-DT OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 6 of 9)

**Cell Size = 1 km**

Scenario 4 Affected station 4  
Before Analysis

Results for: 7A SD SIOUX FALLS BMPCDT 20080213ACH CP  
HAAT 218.0 m, ATV ERP 7.5 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	286411	18878.0
not affected by terrain losses	283444	17828.7
lost to NTSC IX	0	0.0
lost to additional IX by ATV	4454	1093.0
lost to ATV IX only	4454	1093.0
lost to all IX	4454	1093.0

Potential Interfering Stations Included in above Scenario 4

7A NE BASSETT	DTVPLN	DTVP0080	PLN
8A SD BROOKINGS	DTVPLN	DTVP0161	PLN
7A MN ALEXANDRIA	DTVPLN	DTVP0072	PLN

After Analysis

Results for: 7A SD SIOUX FALLS BMPCDT 20080213ACH CP  
HAAT 218.0 m, ATV ERP 7.5 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	286411	18878.0
not affected by terrain losses	283444	17828.7
lost to NTSC IX	0	0.0
lost to additional IX by ATV	5481	1267.2
lost to ATV IX only	5481	1267.2
lost to all IX	5481	1267.2

Potential Interfering Stations Included in above Scenario 4

7A NE BASSETT	DTVPLN	DTVP0080	PLN
8A SD BROOKINGS	DTVPLN	DTVP0161	PLN
7A MN ALEXANDRIA	USERRECORD01		APP

Percent new IX = 0.3681%

Worst case new IX 0.3681% Scenario 4

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Analysis of Interference to Affected Station 5

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
07	KTTW	SIOUX FALLS SD	DTVPLN	-DTVP0097

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
07	KWWL	WATERLOO IA	417.9	CP	BPCDT	-20080314ADY
07	KWWL	WATERLOO IA	417.9	PLN	DTVPLN	-DTVP0059
07	KCCO-TV	ALEXANDRIA MN	275.8	PLN	DTVPLN	-DTVP0072
07	KJRR	JAMESTOWN ND	413.0	CP	BPCDT	-20080317AHR
07	KJRR	JAMESTOWN ND	413.1	PLN	DTVPLN	-DTVP0079
07	KMNE-TV	BASSETT NE	256.1	CP	BPEDT	-20080317ACJ
07	KMNE-TV	BASSETT NE	256.1	PLN	DTVPLN	-DTVP0080
08	KESD-TV	BROOKINGS SD	101.5	CP	BPEDT	-20080214ADE

**Table 1 KCCO-DT OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 7 of 9)

**Cell Size = 1 km**

08	KESD-TV	BROOKINGS SD	101.5	PLN	DTVPLN	-DTVP0161
07	KCCO-DT	ALEXANDRIA MN	276.1	APP	USERRECORD-01	

Total scenarios = 4

Result key: 13  
Scenario 4 Affected station 5  
Before Analysis

Results for:	7A SD SIOUX FALLS	DTVPLN	DTVP0097	PLN
HAAT	126.0 m, ATV ERP 65.0 kW			
	POPULATION	AREA (sq km)		
within Noise Limited Contour	331012	23024.5		
not affected by terrain losses	326087	22367.0		
lost to NTSC IX	0	0.0		
lost to additional IX by ATV	7426	1252.1		
lost to ATV IX only	7426	1252.1		
lost to all IX	7426	1252.1		

Potential Interfering Stations Included in above Scenario 4

7A NE BASSETT	DTVPLN	DTVP0080	PLN
8A SD BROOKINGS	DTVPLN	DTVP0161	PLN
7A MN ALEXANDRIA	DTVPLN	DTVP0072	PLN

After Analysis

Results for:	7A SD SIOUX FALLS	DTVPLN	DTVP0097	PLN
HAAT	126.0 m, ATV ERP 65.0 kW			
	POPULATION	AREA (sq km)		
within Noise Limited Contour	331012	23024.5		
not affected by terrain losses	326087	22367.0		
lost to NTSC IX	0	0.0		
lost to additional IX by ATV	9005	1456.3		
lost to ATV IX only	9005	1456.3		
lost to all IX	9005	1456.3		

Potential Interfering Stations Included in above Scenario 4

7A NE BASSETT	DTVPLN	DTVP0080	PLN
8A SD BROOKINGS	DTVPLN	DTVP0161	PLN
7A MN ALEXANDRIA	USERRECORD01	APP	

Percent new IX = 0.4955%

Worst case new IX 0.4955% Scenario 4

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Analysis of Interference to Affected Station 6

Analysis of current record					
Channel	Call	City/State	Application Ref. No.		
08	KESD-TV	BROOKINGS SD	BPEDT	-20080214ADE	

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
07	KCCO-TV	ALEXANDRIA MN	222.2	PLN	DTVPLN -DTVP0072
07	KTTW	SIOUX FALLS SD	106.4	CP MOD	BMPEDT -20080213ACH

**Table 1 KCCO-DT OET Bulletin 69 Interference Study**  
(worst-case scenarios shown page 8 of 9)

**Cell Size = 1 km**

07	KTTW	SIOUX FALLS SD	101.5	PLN	DTVPLN	-DTVP0097
08	KCCI	DES MOINES IA	405.8	CP	BPCDT	-20080314ABD
08	KCCI	DES MOINES IA	405.8	PLN	DTVPLN	-DTVP0123
08	WDAZ-TV	DEVIL'S LAKE ND	426.5	CP	BPCDT	-20080430AEC
08	WDAZ-TV	DEVILS LAKE ND	426.7	PLN	DTVPLN	-DTVP0144
08	KLKN	LINCOLN NE	384.0	CP	BPCDT	-20080411AAB
08	KLKN	LINCOLN NE	384.0	PLN	DTVPLN	-DTVP0146
08	KZSD-TV	MARTIN SD	360.8	CP	BPEDT	-20080214ADA
08	KZSD-TV	MARTIN SD	360.7	PLN	DTVPLN	-DTVP0162
09	KCAU-TV	SIOUX CITY IA	210.6	PLN	DTVPLN	-DTVP0195
09	KCAU-TV	SIOUX CITY IA	210.6	CP	BPCDT	-20080411AAC
09	KABY-TV	ABERDEEN SD	100.5	CP	BPCDT	-20080408AEN
09	KABY-TV	ABERDEEN SD	100.4	PLN	DTVPLN	-DTVP0221
07	KCCO-DT	ALEXANDRIA MN	222.6	APP	USERRECORD-01	

Proposal causes no interference

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Analysis of Interference to Affected Station 7

Analysis of current record					
Channel	Call	City/State	Application Ref. No.		
08	KESD-TV	BROOKINGS SD	DTVPLN	-DTVP0161	

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
07	KCCO-TV	ALEXANDRIA MN	222.2	PLN	DTVPLN -DTVP0072
07	KTTW	SIOUX FALLS SD	106.4	CP MOD	BMPEDT -20080213ACH
07	KTTW	SIOUX FALLS SD	101.5	PLN	DTVPLN -DTVP0097
08	KCCI	DES MOINES IA	405.8	CP	BPCDT -20080314ABD
08	KCCI	DES MOINES IA	405.8	PLN	DTVPLN -DTVP0123
08	WDAZ-TV	DEVIL'S LAKE ND	426.5	CP	BPCDT -20080430AEC
08	WDAZ-TV	DEVILS LAKE ND	426.7	PLN	DTVPLN -DTVP0144
08	KLKN	LINCOLN NE	384.0	CP	BPCDT -20080411AAB
08	KLKN	LINCOLN NE	384.0	PLN	DTVPLN -DTVP0146
08	KZSD-TV	MARTIN SD	360.8	CP	BPEDT -20080214ADA
08	KZSD-TV	MARTIN SD	360.7	PLN	DTVPLN -DTVP0162
09	KCAU-TV	SIOUX CITY IA	210.6	PLN	DTVPLN -DTVP0195
09	KCAU-TV	SIOUX CITY IA	210.6	CP	BPCDT -20080411AAC
09	KABY-TV	ABERDEEN SD	100.5	CP	BPCDT -20080408AEN
09	KABY-TV	ABERDEEN SD	100.4	PLN	DTVPLN -DTVP0221
07	KCCO-DT	ALEXANDRIA MN	222.6	APP	USERRECORD-01

Proposal causes no interference

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Analysis of Interference to Affected Station 8

Analysis of current record					
Channel	Call	City/State	Application Ref. No.		
07	KCCO-DT	ALEXANDRIA MN	USERRECORD-01		

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
07	KJRR	JAMESTOWN ND	311.3	CP	BPCDT -20080317AHR
07	KJRR	JAMESTOWN ND	311.4	PLN	DTVPLN -DTVP0079

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

**Cell Size = 1 km**

07	KTTW	SIOUX FALLS SD	267.8	CP MOD	BMPCDT	-20080213ACH
07	KTTW	SIOUX FALLS SD	276.1	PLN	DTVPLN	-DTVP0097
08	KESD-TV	BROOKINGS SD	222.6	CP	BPEDT	-20080214ADE
08	KESD-TV	BROOKINGS SD	222.6	PLN	DTVPLN	-DTVP0161

Total scenarios = 4

Result key: 17  
 Scenario 4 Affected station 8  
 Before Analysis

Results for: 7A MN ALEXANDRIA USERRECORD01 APP

HAAT 340.0 m, ATV ERP 32.0 kW	POPULATION	AREA (sq km)
within Noise Limited Contour	505046	34421.1
not affected by terrain losses	501106	34278.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2594	246.1
lost to ATV IX only	2594	246.1
lost to all IX	2594	246.1

Potential Interfering Stations Included in above Scenario 4

7A ND JAMESTOWN	DTVPLN	DTVP0079	PLN
7A SD SIOUX FALLS	DTVPLN	DTVP0097	PLN

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FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED

<b>SECTION III-D - DTV Engineering</b>	
<b>Complete Questions 1-5, and provide all data and information for the proposed facility, as requested in Technical Specifications, Items 1-13.</b>	
<p><b>Pre-Transition Certification Checklist:</b> 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.</p> <p><b>Post-Transition Expedited Processing:</b> 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.</p>	
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 <b>submit the Exhibit</b> 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

<b>SECTION III-D - DTV Engineering</b>	
<b>TECHNICAL SPECIFICATIONS</b>	
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.	
<b>TECH BOX</b>	
1. Channel Number:	DTV 7 Analog TV, if any 7
2. Zone:	<input type="radio"/> I <input checked="" type="radio"/> II <input type="radio"/> III
3. Antenna Location Coordinates: (NAD 27)	Latitude: Degrees 45 Minutes 41 Seconds 10 <input checked="" type="radio"/> North <input type="radio"/> South  Longitude: Degrees 95 Minutes 8 Seconds 3 <input checked="" type="radio"/> West <input type="radio"/> East
4. Antenna Structure Registration Number: 1028993	<input type="checkbox"/> Not Applicable <input type="checkbox"/> Notification filed with FAA
5. Antenna Location Site Elevation Above Mean Sea Level:	424.2 meters
6. Overall Tower Height Above Ground Level:	346.8 meters
7. Height of Radiation Center Above Ground Level:	325.3 meters
8. Height of Radiation Center Above Average Terrain :	339.6 meters
9. Maximum Effective Radiated Power (average power):	32 kW
10. Antenna Specifications:	

a. Manufacturer RCA Model TW-18A7	
b. Electrical Beam Tilt: degrees <input checked="" 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. <b>Exhibit required.</b> [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 <b>Certification Checklist</b> 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 <b>Certification Checklist</b> item 3 is answered "No.") [Exhibit 45]
13.	<b>Environmental Protection Act. Submit in an Exhibit</b> the following: [Exhibit 46] If <b>Certification Checklist</b> 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 <b>Certification Checklist</b> 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 <b>Certification Checklist</b> Item 2 is answered "No," an Environmental Assessment as required by 47 C.F.R Section 1.1311.
<b>PREPARERS CERTIFICATION ON SECTION III MUST BE COMPLETED AND SIGNED.</b>	

### 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 6/17/2008	
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).