

ENGINEERING EXHIBIT

Modification of a Licensed Facility for LPTV Station Application

prepared for

West Central Minnesota Educational Television Company
Fergus Falls, Minnesota
Facility ID 71562
Ch. 8 (Digital) 3 kW

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FCC Form 2100, Schedule C – Engineering Data (Digital)

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Statement A
COMPREHENSIVE ENGINEERING STATEMENT
prepared for
West Central Minnesota Educational Television Company
Fergus Falls, Minnesota
Facility ID 71562
Ch. 8 (Digital) 3 kW

West Central Minnesota Educational Television Company (“*Central Minnesota*”) is the licensee of low power television station K49FA-D, Channel 49, Fergus Falls, MN, Facility ID 71562 (LMS File No. BLDTT-20111109AEH). K49FA-D is displaced by full service and Class A Low Power television stations as a result of the TV Band Repack. Under the provisions of the FCC’s Special Displacement Filing Window for low power television stations and television translators that are out of core, *Pioneer* requests a displacement channel change to Channel 8.

Nature of the Proposal

The proposed antenna system for the proposed K49FA-D operation is an omnidirectional ERI Model ATW16V2-HSO-8 which will be side-mounted on the current licensed tower with ASR number 1058524 at 136.9 meters AGL.

The proposed digital facility will operate on Channel 8 using a “full service” out of channel emission mask, a maximum effective radiated power of 3 kW, and an antenna height of 613 meters AMSL.

Allocation Considerations

The instant proposal complies with the Commission’s interference protection requirements toward all DTV, television translator, LPTV, and Class A stations. A detailed interference study was conducted in accordance with the terrain dependent Longley-Rice point-to-point propagation model, per the Commission’s Office of Engineering and Technology Bulletin No. 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 (“OET-69”)¹. The interference study examined the change in interference as experienced by nearby pertinent stations that would result from the proposed facility.

¹ The implementation of OET-69 for this study (*TV Study*) followed the guidelines of OET-69 as specified therein. **A cell size of 0.5 km and a terrain increment of 0.1 km were employed.** Comparisons of various results of this computer program (run on a Sun processor) to the Commission’s implementation of OET-69 show excellent correlation.

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COMPREHENSIVE ENGINEERING STATEMENT
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The results of this study shows that any new interference does not exceed the Commission's interference limits (0.5 percent to full service and Class A stations, and 2.0 percent to secondary stations). Accordingly, the instant proposal complies with §74.793 regarding interference protection to analog and digital television, low power television, television translator, and Class A television facilities. The results of this study are shown at the end of this document.

International Coordination

The proposed transmitter site is located 271.1 km from the closest point on the U.S.-Canadian border and 1862 km from the U.S. – Mexico border. The proposal's 21 dBμ worst-case contour does not cross the Canadian border. Therefore, International coordination is not required.

Other Allocation Considerations

The nearest FCC monitoring station is at Grand Island, NE at a distance of 647 km from the proposed site. The proposed site is also located outside the areas specified in §73.1030(a)(1) and §73.1030(b). Thus, notification of the instant proposal to the National Radio Astronomy Observatory at Green Bank, West Virginia, or the Table Mountain Radio Receiving Zone in Boulder County, Colorado is not required. There are no AM broadcast stations located within 3.2 km (2 miles) of the proposed site according to information extracted from the Commission's engineering database.

Environmental Considerations

The instant proposal is not believed to have a significant environmental impact as defined under §1.1306 of the Commission's Rules. Consequently, preparation of an Environmental Assessment is not required. *Central Minnesota* herein proposes to construct the proposed facility on an existing tower with ASR Number 1058524.

The use of existing antenna support structures has been characterized as being environmentally preferable by the Commission, according to Note 1 of §1.1306 of the FCC

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Rules. No change in structure height is proposed, thus no change in current structure marking and lighting requirements is anticipated. Therefore, it is believed that this application may be categorically excluded from environmental processing pursuant to §1.1306 of the Commission's rules.

Human Exposure to Radiofrequency Electromagnetic Field

The proposed operation was evaluated for human exposure to radiofrequency electromagnetic field using the procedures outlined in the Commission's OET Bulletin 65 ("OET 65"). OET 65 describes a means of determining whether a proposed facility exceeds the radiofrequency exposure guidelines adopted in §1.1310. Under present Commission policy, a facility may be presumed to comply with the limits specified in §1.1310 if it satisfies the exposure criteria set forth in OET 65. Based upon that methodology, and as demonstrated in the following, the proposed transmitting system will comply with the cited adopted guidelines.

The K49FA-D Channel 8 antenna center of radiation will be 136.9 meters above ground level. An effective radiated power of 3 kilowatts, horizontally polarized, will be employed utilizing an ERI model ATW16V2-HSO-8 omni-directional antenna. A "worst-case" relative field value of 50 percent (from 10° to 90° below the horizontal) is assumed for purposes of the calculation. The "uncontrolled/general population" limit specified in §1.1310 for Channel 8 (center frequency 183 MHz) is 200 $\mu\text{W}/\text{cm}^2$.

OET 65's formula for television transmitting antennas is based on the NTSC transmission standards, where the average power is normally much less than the peak power. For the DTV facility in the instant proposal, the peak-to-average ratio is different than the NTSC ratio. The DTV ERP figure herein refers to the average power level. The formula used for calculating DTV signal density in this analysis is essentially the same as equation (10) in OET-65.

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$$S = (33.4098) (F^2) (ERP) / D^2$$

Where:

- S = power density in microwatts/cm²
- ERP = total (average) ERP in Watts
- F = relative field factor
- D = distance in meters

Using this formula and the above assumptions, the proposed facility would contribute a power density of 1.4 μ W/cm² at two meters above ground level near the antenna support structure, or 0.7 percent of the general population/uncontrolled limit.

§1.1307(b)(3) states that facilities at locations with multiple emitters are categorically excluded from responsibility for taking any corrective action in the areas where their contribution is less than five percent of the pertinent MPE limit. Since the instant situation meets the five percent exclusion test at all ground level areas, the impact of any other facilities near this site may be considered independently from this proposal. Accordingly, it is believed that the impact of the proposed operation should not be considered to be a factor at ground level as defined under §1.1307(b).

Safety of Tower Workers and the General Public

As demonstrated herein, excessive levels of RF energy attributable to the proposal will not be caused at publicly accessible areas at ground level or near the base of the antenna supporting structure. Consequently, members of the general public will not be exposed to RF levels in excess of the Commission's guidelines. Nevertheless, site access will continue to be restricted and controlled through the use of a locked fence. Additionally, appropriate RF exposure warning signs are currently posted.

With respect to worker safety, it is believed that based on the preceding analysis, excessive exposure would not occur in areas at ground level or at the base of the top mounted tower structure. A site exposure policy will be employed protecting maintenance workers from excessive exposure when work must be performed on the tower or in areas where high RF levels may be present. Such protective measures may include, but will not be limited to, restriction of

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COMPREHENSIVE ENGINEERING STATEMENT
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access to areas where levels in excess of the guidelines may be expected, power reduction, or the complete shutdown of facilities when work or inspections must be performed in areas where the exposure guidelines would otherwise be exceeded. On-site RF exposure measurements may also be undertaken to establish the bounds of safe working areas. The applicant will coordinate exposure procedures with all pertinent stations.

Conclusion

Based on the preceding, it is believed that the instant proposal complies with all Commission Rules and policies.

Table I – TV Study Results

Page 1 of 3

tvstudy v2.2.5 (V91R41)
Database: localhost, Study: ch8_3kW, Model: Longley-Rice
Start: 2018.03.28 20:33:06

Study created: 2018.03.28 20:33:06

Study build station data: LMS TV 2018-03-19

Proposal: K49FA-D D8 LD LIC FERGUS FALLS, MN
File number: BLDTT20111109AEH
Facility ID: 71562
Station data: User record
Record ID: 133
Country: U.S.

Build options:
Protect baseline records from LPTV

Search options:
Baseline record excluded if station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	KJRR	D7	DT	LIC	JAMESTOWN, ND	BLCDT20090622AEP	214.8 km
Yes	WDSE	D8	DT	LIC	DULUTH, MN	BLEDT20090618ABE	300.1
Yes	WDAZ-TV	D8	DT	LIC	DEVIL'S LAKE, ND	BLCDT20090223AAR	236.4
Yes	KESD-TV	D8	DT	LIC	BROOKINGS, SD	BLEDT20090527AGV	255.8
No	WKBT-DT	D8	DT	APP	LA CROSSE, WI	BLANK0000035780	452.8
No	WKBT-DT	D8	DT	LIC	LA CROSSE, WI	BLCDT20090507ACT	452.8
No	KAWE	D9	DT	LIC	BEMIDJI, MN	BLEDT20091026ABU	179.0
No	KMSP-TV	D9	DT	APP	MINNEAPOLIS, MN	BLANK0000035734	275.1
No	KMSP-TV	D9	DT	LIC	MINNEAPOLIS, MN	BMLCDT20140703AAU	275.1
No	KABY-TV	D9	DT	LIC	ABERDEEN, SD	BLCDT20090223ABF	210.5

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D8
Mask: Full Service
Latitude: 46 28 48.00 N (NAD83)
Longitude: 96 1 46.00 W
Height AMSL: 613.0 m
HAAT: 0.0 m
Peak ERP: 3.00 kW
Antenna: Omnidirectional
Elev Pattn: Generic
Elec Tilt: 0.50

48.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	3.00 kW	201.4 m	56.5 km
45.0	3.00	180.9	55.3
90.0	3.00	185.2	55.6
135.0	3.00	195.2	56.1
180.0	3.00	212.3	57.1
225.0	3.00	216.1	57.3
270.0	3.00	210.4	57.0
315.0	3.00	207.1	56.8

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 201 m

Proposal 21.00 dBu contour does not cross Canadian border
Distance to Canadian border: 271.1 km

Distance to Mexican border: 1862.4 km

Conditions at FCC monitoring station: Grand Island NE
Bearing: 198.2 degrees Distance: 647.0 km

Table I – TV Study Results

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
 Bearing: 229.8 degrees Distance: 1022.3 km

Study cell size: 0.50 km
 Profile point spacing: 0.10 km

Maximum new IX to full-service and Class A: 0.50%
 Maximum new IX to LPTV: 2.00%

Interference to BLEDT20090618ABE LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WDSE	D8	DT	LIC	DULUTH, MN	BLEDT20090618ABE	
Undesireds:	K49FA-D	D8	LD	LIC	FERGUS FALLS, MN	BLDTT20111109AEH	300.1 km
	WNMU	D8	DT	CP	MARQUETTE, MI	BLANK0000026951	329.7
	WKBT-DT	D8	DT	APP	LA CROSSE, WI	BLANK0000035780	306.3
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	33104.0	332,098	31465.6	314,229	30816.3	307,651	30810.0 307,651 0.02 0.00
Undesired			Total IX	Unique IX, before	Unique IX, after		
	K49FA-D D8 LD LIC	6.2	0	0	6.2	0	
	WNMU D8 DT CP	130.9	1,154	85.7	1,054	85.7	1,054
	WKBT-DT D8 DT APP	563.6	5,524	518.4	5,424	518.4	5,424

Interference to BLEDT20090618ABE LIC scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WDSE	D8	DT	LIC	DULUTH, MN	BLEDT20090618ABE	
Undesireds:	K49FA-D	D8	LD	LIC	FERGUS FALLS, MN	BLDTT20111109AEH	300.1 km
	WNMU	D8	DT	CP	MARQUETTE, MI	BLANK0000026951	329.7
	WKBT-DT	D8	DT	LIC	LA CROSSE, WI	BLCDT20090507ACT	306.3
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	33104.0	332,098	31465.6	314,229	30983.3	309,265	30977.1 309,265 0.02 0.00
Undesired			Total IX	Unique IX, before	Unique IX, after		
	K49FA-D D8 LD LIC	6.2	0	0	6.2	0	
	WNMU D8 DT CP	130.9	1,154	99.0	1,116	99.0	1,116
	WKBT-DT D8 DT LIC	383.3	3,848	351.4	3,810	351.4	3,810

Interference to BLCDT20090223AAR LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WDAZ-TV	D8	DT	LIC	DEVIL'S LAKE, ND	BLCDT20090223AAR	
Undesireds:	K49FA-D	D8	LD	LIC	FERGUS FALLS, MN	BLDTT20111109AEH	236.4 km
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	36198.5	150,106	36075.5	149,996	36075.5	149,996	35933.1 149,898 0.39 0.07
	847.6	4,939	747.4	4,264	747.4	4,264	0.00 0.00 (in
	Canada)						
Undesired			Total IX	Unique IX, before	Unique IX, after		
	K49FA-D D8 LD LIC	142.4	98	98	142.4	98	

Interference to BLEDT20090527AGV LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KESD-TV	D8	DT	LIC	BROOKINGS, SD	BLEDT20090527AGV	
Undesireds:	K49FA-D	D8	LD	LIC	FERGUS FALLS, MN	BLDTT20111109AEH	255.8 km
	KTTW	D7	DT	LIC	SIOUX FALLS, SD	BLCDT20081104AGG	106.4
	KLKN	D8	DT	APP	LINCOLN, NE	BLANK0000035726	384.0
	KZSD-TV	D8	DT	LIC	MARTIN, SD	BLEDT20090527AGU	360.8

Table I – TV Study Results

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KABY-TV	D9	DT	LIC	ABERDEEN, SD	BLCDT20090223ABF		100.5		
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
26521.0	165,746	24898.2	158,822	23227.4	150,308	23117.0	150,216	0.48	0.06
Undesired			Total IX	Unique IX, before		Unique IX, after			
K49FA-D	D8	LD LIC	123.3	106		110.4	92		
KTTW	D7	DT LIC	249.1	6,460	243.0	6,419	243.0	6,419	
KLKN	D8	DT APP	75.4	503	69.3	462	69.3	462	
KZSD-TV	D8	DT LIC	6.0	8	1.2	0	1.2	0	
KABY-TV	D9	DT LIC	1351.2	1,592	1346.5	1,584	1333.6	1,570	

Interference to BLEDT20090527AGV LIC scenario 2

	Call	Chan	Svc	Status	City, State	File Number		Distance	
Desired:	KESD-TV	D8	DT	LIC	BROOKINGS, SD	BLEDT20090527AGV			
Undesireds:	K49FA-D	D8	LD	LIC	FERGUS FALLS, MN	BLDTT20111109AEH		255.8 km	
	KTTW	D7	DT	LIC	SIOUX FALLS, SD	BLCDT20081104AGG		106.4	
	KLKN	D8	DT	LIC	LINCOLN, NE	BLCDT20090618ACT		384.0	
	KZSD-TV	D8	DT	LIC	MARTIN, SD	BLEDT20090527AGU		360.8	
	KABY-TV	D9	DT	LIC	ABERDEEN, SD	BLCDT20090223ABF		100.5	
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
26521.0	165,746	24898.2	158,822	23259.8	150,697	23149.4	150,605	0.47	0.06

Undesired			Total IX	Unique IX, before		Unique IX, after			
K49FA-D	D8	LD LIC	123.3	106		110.4	92		
KTTW	D7	DT LIC	249.1	6,460	248.3	6,460	248.3	6,460	
KLKN	D8	DT LIC	37.7	73	37.0	73	37.0	73	
KZSD-TV	D8	DT LIC	6.0	8	1.2	0	1.2	0	
KABY-TV	D9	DT LIC	1351.2	1,592	1346.5	1,584	1333.6	1,570	

Interference to proposal scenario 1

	Call	Chan	Svc	Status	City, State	File Number		Distance	
Desired:	K49FA-D	D8	LD	LIC	FERGUS FALLS, MN	BLDTT20111109AEH			
Undesireds:	WDAZ-TV	D8	DT	LIC	DEVIL'S LAKE, ND	BLCDT20090223AAR		236.4 km	
Service area		Terrain-limited		IX-free		Percent IX			
10040.6	104,107	9923.0	103,568	9912.2	103,512	0.11	0.05		
Undesired			Total IX	Unique IX		Prcnt Unique IX			
WDAZ-TV	D8	DT LIC	10.7	56	10.7	56	0.11	0.05	

Table II – Pre and Post Transition Study

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tvstudy v2.2.5 (V91R41)

Database: localhost, Study: K49FA - all, Model: Longley-Rice
Start: 2018.04.09 09:13:04

Study created: 2018.04.09 09:13:04

Study build station data: LMS TV 2018-03-19

Proposal: K49FA-D D8 LD LIC FERGUS FALLS, MN
File number: BLDTT20111109AEH
Facility ID: 71562
Station data: User record
Record ID: 372
Country: U.S.

Build options:

Protect pre-transition records not on baseline channel
Protect baseline records from LPTV

Search options:

Baseline record excluded if station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	KJRR	D7	DT	LIC	JAMESTOWN, ND	BLCDT20090622AEP	214.8 km
Yes	WDSE	D8	DT	LIC	DULUTH, MN	BLEDT20090618ABE	300.1
Yes	WDAZ-TV	D8	DT	LIC	DEVIL'S LAKE, ND	BLCDT20090223AAR	236.4
Yes	KESD-TV	D8	DT	LIC	BROOKINGS, SD	BLEDT20090527AGV	255.8
No	WKBT-DT	D8	DT	APP	LA CROSSE, WI	BLANK0000035780	452.8
No	WKBT-DT	D8	DT	LIC	LA CROSSE, WI	BLCDT20090507ACT	452.8
No	KAWE	D9	DT	LIC	BEMIDJI, MN	BLEDT20091026ABU	179.0
No	KMSP-TV	D9	DT	APP	MINNEAPOLIS, MN	BLANK0000035734	275.1
No	KMSP-TV	D9	DT	LIC	MINNEAPOLIS, MN	BMLCDT20140703AAU	275.1
No	KABY-TV	D9	DT	LIC	ABERDEEN, SD	BLCDT20090223ABF	210.5

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D8
Mask: Full Service
Latitude: 46 28 48.00 N (NAD83)
Longitude: 96 1 46.00 W
Height AMSL: 613.0 m
HAAT: 0.0 m
Peak ERP: 3.00 kW
Antenna: Omnidirectional
Elev Pattn: Generic
Elec Tilt: 0.50

48.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	3.00 kW	201.4 m	56.5 km
45.0	3.00	180.9	55.3
90.0	3.00	185.2	55.6
135.0	3.00	195.2	56.1
180.0	3.00	212.3	57.1
225.0	3.00	216.1	57.3
270.0	3.00	210.4	57.0
315.0	3.00	207.1	56.8

Database HAAT does not agree with computed HAAT

Database HAAT: 0 m Computed HAAT: 201 m

Proposal 21.00 dBu contour does not cross Canadian border

Distance to Canadian border: 271.1 km

Distance to Mexican border: 1862.4 km

Conditions at FCC monitoring station: Grand Island NE

Table II – Pre and Post Transition Study

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Bearing: 198.2 degrees Distance: 647.0 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
 Bearing: 229.8 degrees Distance: 1022.3 km

Study cell size: 0.50 km
 Profile point spacing: 0.10 km

Maximum new IX to full-service and Class A: 0.50%
 Maximum new IX to LPTV: 2.00%

Interference to BLEDT20090618ABE LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance		
	WDSE	D8	DT	LIC	DULUTH, MN	BLEDT20090618ABE			
Undesireds:	K49FA-D	D8	LD	LIC	FERGUS FALLS, MN	BLDTT20111109AEH	300.1 km		
	WNMU	D8	DT	CP	MARQUETTE, MI	BLANK0000026951	329.7		
	WKBT-DT	D8	DT	APP	LA CROSSE, WI	BLANK0000035780	306.3		
	Service area	Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
	33104.0	332,098	31465.6	314,229	30816.3	307,651	30810.0	307,651	0.02 0.00
Undesired			Total IX		Unique IX, before		Unique IX, after		
	K49FA-D D8 LD LIC	6.2	0		6.2		0		
	WNMU D8 DT CP	130.9	1,154		85.7		1,054		
	WKBT-DT D8 DT APP	563.6	5,524		518.4		5,424		

Interference to BLEDT20090618ABE LIC scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance		
	WDSE	D8	DT	LIC	DULUTH, MN	BLEDT20090618ABE			
Undesireds:	K49FA-D	D8	LD	LIC	FERGUS FALLS, MN	BLDTT20111109AEH	300.1 km		
	WNMU	D8	DT	CP	MARQUETTE, MI	BLANK0000026951	329.7		
	WKBT-DT	D8	DT	LIC	LA CROSSE, WI	BLCDT20090507ACT	306.3		
	Service area	Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
	33104.0	332,098	31465.6	314,229	30983.3	309,265	30977.1	309,265	0.02 0.00
Undesired			Total IX		Unique IX, before		Unique IX, after		
	K49FA-D D8 LD LIC	6.2	0		6.2		0		
	WNMU D8 DT CP	130.9	1,154		99.0		1,116		
	WKBT-DT D8 DT LIC	383.3	3,848		351.4		3,810		

Interference to BLCDT20090223AAR LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance		
	WDAZ-TV	D8	DT	LIC	DEVIL'S LAKE, ND	BLCDT20090223AAR			
Undesireds:	K49FA-D	D8	LD	LIC	FERGUS FALLS, MN	BLDTT20111109AEH	236.4 km		
	Service area	Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
	36198.5	150,106	36075.5	149,996	36075.5	149,996	35933.1	149,898	0.39 0.07
	847.6	4,939	747.4	4,264	747.4	4,264	747.4	4,264	0.00 0.00 (in
	Canada)								
Undesired			Total IX		Unique IX, before		Unique IX, after		
	K49FA-D D8 LD LIC	142.4	98		142.4		98		

Interference to BLEDT20090527AGV LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KESD-TV	D8	DT	LIC	BROOKINGS, SD	BLEDT20090527AGV	
Undesireds:	K49FA-D	D8	LD	LIC	FERGUS FALLS, MN	BLDTT20111109AEH	255.8 km
	KTTW	D7	DT	LIC	SIOUX FALLS, SD	BLCDT20081104AGG	106.4

Table II – Pre and Post Transition Study

KLKN	D8	DT	APP	LINCOLN, NE	BLANK0000035726	384.0
KZSD-TV	D8	DT	LIC	MARTIN, SD	BLEDT20090527AGU	360.8
KABY-TV	D9	DT	LIC	ABERDEEN, SD	BLCDT20090223ABF	100.5

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
26521.0	165,746	24898.2	158,822	23227.4	150,308	23117.0	150,216	0.48 0.06

Undesired			Total IX		Unique IX, before		Unique IX, after
K49FA-D D8 LD LIC		123.3	106			110.4	92
KTTW D7 DT LIC		249.1	6,460	243.0	6,419	243.0	6,419
KLKN D8 DT APP		75.4	503	69.3	462	69.3	462
KZSD-TV D8 DT LIC		6.0	8	1.2	0	1.2	0
KABY-TV D9 DT LIC		1351.2	1,592	1346.5	1,584	1333.6	1,570

Interference to BLEDT20090527AGV LIC scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KESD-TV	D8	DT	LIC	BROOKINGS, SD	BLEDT20090527AGV	
Undesireds:	K49FA-D	D8	LD	LIC	FERGUS FALLS, MN	BLDTT20111109AEH	255.8 km
	KTTW	D7	DT	LIC	SIOUX FALLS, SD	BLCDT20081104AGG	106.4
	KLKN	D8	DT	LIC	LINCOLN, NE	BLCDT20090618ACT	384.0
	KZSD-TV	D8	DT	LIC	MARTIN, SD	BLEDT20090527AGU	360.8
	KABY-TV	D9	DT	LIC	ABERDEEN, SD	BLCDT20090223ABF	100.5

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
26521.0	165,746	24898.2	158,822	23259.8	150,697	23149.4	150,605	0.47 0.06

Undesired			Total IX		Unique IX, before		Unique IX, after
K49FA-D D8 LD LIC		123.3	106			110.4	92
KTTW D7 DT LIC		249.1	6,460	248.3	6,460	248.3	6,460
KLKN D8 DT LIC		37.7	73	37.0	73	37.0	73
KZSD-TV D8 DT LIC		6.0	8	1.2	0	1.2	0
KABY-TV D9 DT LIC		1351.2	1,592	1346.5	1,584	1333.6	1,570

Interference to proposal scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	K49FA-D	D8	LD	LIC	FERGUS FALLS, MN	BLDTT20111109AEH	
Undesireds:	WDAZ-TV	D8	DT	LIC	DEVIL'S LAKE, ND	BLCDT20090223AAR	236.4 km

Service area		Terrain-limited		IX-free		Percent IX
10040.6	104,107	9923.0	103,568	9912.2	103,512	0.11 0.05

Undesired			Total IX		Unique IX	Prcnt Unique IX
WDAZ-TV D8 DT LIC		10.7	56	10.7	56	0.11 0.05