

KTCI-DT CHANNEL 26 MINOR
CHANGE IN LICENSED FACILITY
APPLICATION FOR MAXIMIZED
POST-TRANSITION DTV OPERATION
ST. PAUL, MINNESOTA
(Twin Cities Public Television)

KESSLER AND GEHMAN ASSOCIATES, INC.

TELECOMMUNICATIONS CONSULTING ENGINEERS

20080617

Prepared by William T. Godfrey, Jr.

KGGA

507 N.W. 60th Street, Suite C
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ENGINEERING TECHNICAL STATEMENT PREPARED BY WILLIAM T. GODFREY, JR. OF THE FIRM KESSLER AND GEHMAN ASSOCIATES (KGA), TELECOMMUNICATIONS CONSULTING ENGINEERS IN CONNECTION WITH A MINOR CHANGE IN LICENSED FACILITY APPLICATION REQUESTING A CONSTRUCTION PERMIT FOR AUTHORIZATION TO OPERATE THE TWIN CITIES PUBLIC TELEVISION (TPT) DIGITAL BROADCAST FACILITY, KTCI-DT CHANNEL 26, WITH MAXIMIZED PARAMETERS ON ITS POST-TRANSITION DIGITAL CHANNEL AS ADOPTED IN APPENDIX B OF THE DTV TABLE OF ALLOTMENTS.

The firm Kessler and Gehman Associates, Inc. (KGA) has been retained by Twin Cities Public Television, Inc. (tpt), St. Paul, MN to prepare engineering studies and the engineering portion of a minor change in licensed facility application requesting authorization to maximize the KTCI-DT Channel 26 post-transition DTV facility pursuant to the procedures outlined in the Third Periodic Review Report and Order (MB Docket No. 07-91) and the Public Notice released on May 30, 2008 lifting the freeze on maximization application filings (DA-08-1213). The following table depicts the allotted (Appendix B) and proposed (maximization) parameters respectively for the KTCI-DT post-transition DTV facility.

Facility ID	State	City	Call Sign	DTV Chan	DTV ERP (kW)	DTV HAAT (m)	DTV Antenna ID	DTV Latitude (DDMMSS)	DTV Longitude (DDMMSS)
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Final DTV Table of Allotments (Appendix B) Parameters:

68597	MN	ST. PAUL	KTCI	26	63.1	396.0	74396	450329	930727
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Proposed Maximized Parameters:

68597	MN	ST. PAUL	KTCI	26	45.0	412.9	29226	450330	930727
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Accordingly, tpt proposes to maximize operation of the KTCI-DT Channel 26 post-transition DTV facility by making the following modifications to the parameters adopted in Appendix B of the DTV Table of Allotments:



- 1) Increase antenna Height Above Average Terrain (HHAT) from 396.0 m to 412.9 m
- 2) Decrease maximum Effective Radiated Power (ERP) from 63.1 kW to 45.0 kW.
- 3) Change from an Andrew model ATW30H4-DSC3-17S elliptically polarized directional antenna (antenna ID: 74396) to a Dielectric model TUP-SP4-12-1 horizontally polarized directional antenna (antenna ID: 29226).

This application also proposes to correct the coordinates by one second from north latitude 45° 03' 29' to north latitude 45° 03' 30'. All other operating parameters shall remain as adopted in Appendix B.

Post-Transition Interference Protection

The proposed facility satisfies the post-transition interference protection provisions of §73.616 of the FCC Rules. Exhibits 11 (Part1) and 12 (Part2) are Longley-Rice interference studies that were computed using a Sun Microsystems SPARC 5 computer work station loaded with the FCC's DTV analysis software. The interference percentages are exactly the same as the FCC calculations since the studies were performed using the same type computers and the same interference analysis software. Exhibit 11 was run to determine the interference predicted to each desired station from the proposed KTCI-DT Channel 26 post-transition DTV maximized facility. The FCC program recognized a mutually exclusive situation between the proposed KTCI-DT maximized facility and the allotted KTCI-DT Appendix B facility because they both had the same community of license (St. Paul) and they both were assigned Channel 26. As a result, the program threw out the allotted Channel 26 facility in the "Before" studies and used the proposed Channel 26 maximized facility in the "After" studies. Therefore, only the populations in the "After" studies are used in Exhibit 11 to identify the population predicted to receive interference from the proposed maximized facility. Exhibit 12 is the exact same study as Exhibit 11 except the community of license was purposely changed from "St. Paul" to "St. Paul_2" for the proposed maximized facility so that the program would not throw out the allotted Channel 26 facility. Referring to Exhibit 12, it can be seen that the "Before" studies now contain the allotted Channel 26 facility so that the



population predicted to be received by the desired stations from the allotted Channel 26 facility can be calculated for masking purposes.

Referring to Exhibit 13 page 8, it can be seen in the “Before” analysis that 118,027 persons within the protected noise limited contour of the WHWC-DT Channel 27 post-transition DTV facility are predicted to receive interference from one or more of the following post-transition DTV stations:

- 1) KTCI-DT Channel 26 allotted facility (St. Paul, MN)
- 2) KFXA-DT Channel 27 allotted facility (Cedar Rapids, IA)
- 3) NEW DTV Channel 27 allotted facility (Duluth, MN)
- 4) KRWF-DT Channel 27 allotted facility (Redwood Falls, MN)
- 5) WACY-DT Channel 27 allotted facility (Appleton, WI)

The “Before” analysis includes the allotted KTCI-DT Channel 26 facility with an ERP of 63.1 kW. Referring to Exhibit 12 page 5, it can be seen in the “After” analysis that 119,024 persons within the protected noise limited contour of the WHWC-DT Channel 27 post-transition DTV facility are predicted to receive interference from one or more of the following post-transition DTV stations:

- 1) KFXA-DT Channel 27 allotted facility (Cedar Rapids, IA)
- 2) NEW DTV Channel 27 allotted facility (Duluth, MN)
- 3) KRWF-DT Channel 27 allotted facility (Redwood Falls, MN)
- 4) WACY-DT Channel 27 allotted facility (Appleton, WI)
- 5) KTCI-DT Channel 26 proposed facility (St. Paul, MN)

The “After” analysis includes the proposed KTCI-DT Channel 26 facility with an ERP of 45.0 kW. Therefore the proposed KTCI-DT Channel 26 maximized facility is predicted to cause only 0.1% new interference $[(119,024-118,027)/743,668]$ to the WHWC-DT Channel 27 post-transition DTV facility. The interference studies demonstrate that the proposed facility is predicted to cause no more than 0.1% interference to all post-transition DTV stations considered in the culling list which is below the 0.5% new interference standard. Accordingly, the 0.5% new interference standard pursuant to §V.F. (¶155) of the Third Periodic Review Report and Order has been satisfied.



Exhibits

Exhibits 1 and 2 represent KTCI's administration data, antenna and antenna structure specifications.

Exhibit 3 depicts the profile view of the proposed antenna on the antenna structure with all the appropriate elevations.

Exhibits 4 (11 deg) and 5 (90 deg) display the elevation pattern and Exhibit 6 displays the elevation pattern tabulation.

Exhibit 7 depicts the proposed antenna azimuth pattern and Exhibit 8 depicts the proposed antenna azimuth pattern tabulation.

Exhibit 9 depicts the location of the KTCI-DT transmitter site using the White Bear Lake West, MN Topographic map.

Exhibit 10 is a principal community contour map demonstrating that the proposed (maximized) KTCI-DT Channel 26 post-transition DTV facility's F(50,90) 48.0 dBuV/m Principal Community contour would completely encompass the principal community of St. Paul, MN.

Exhibit 11 is a contour map comparing the allotted KTCI-DT Channel 26 F(50,90) 40.0 dBuV/m contour (green) and the proposed (maximized) KTCI-DT Channel 26 F(50,90) 40.0 dBuV/m contour (red).

Exhibits 12 and 13 are Longley-Rice interference studies that were computed using a Sun Microsystems SPARC 5 computer work station loaded with the FCC's DTV analysis software. The exhibits demonstrate compliance with the 0.5% new interference standard.



Environmental Impact

The proposed construction would have no significant environmental impact as defined in §1.1307 of the FCC Rules. The digital transmitter, 6-1/8 inch transmission line and horizontally polarized antenna system shall produce an ERP of 45.0 kW. Assuming the maximum lobe of radiation were oriented toward the base of the tower, the proposed KTCI-DT facility's power density six feet above the ground would be 0.00877 mW/cm². That would only be 0.48% of the Maximum Permissible Exposure (MPE) limits for Occupational/Controlled Exposure and only 2.41% of the MPE limits for General Population/Uncontrolled Exposure authorized by the American National Standards Institute (ANSI). Since operation of the proposed KTCI-DT Channel 26 maximized digital facility would not exceed 5.0% of the MPE limit for Occupational/Controlled Exposure or General Population/Uncontrolled Exposure at any point on the ground, the proposed (maximized) KUHT-DT facility would not be considered a "significant contributor" to the RF exposure environment pursuant to OET Bulletin 65, Edition 97-01. Therefore, contributions of exposure from other sources were not accounted for in this analysis. It is safe to conclude that the emissions would be insignificant and well within the maximum allowable requirements.

If other antennas are placed on the tower in the future, the licensee will cooperate with those users by reducing or completely terminating the power to the antenna when maintenance workers are in danger from the electromagnetic radiation emanating from the antenna. It is also understood that additional antennas on the support structure could increase the overall RF exposure levels and it is the responsibility of each licensee to ensure that the total RF exposure resulting from the operation of all antennas on the support structure do not exceed the maximum permissible exposure level at any point on the ground.

Certification

This technical statement was prepared by William T. Godfrey, Telecommunications Consultant with Kessler and Gehman Associates, Inc. having offices in Gainesville, Florida and



Kessler and Gehman Associates, Inc.

Telecommunications Consulting Engineers

has been working in the field of radio and television broadcast consulting since 1998. He graduated from the University of North Florida with a Bachelor of Arts degree in Criminal Justice and a minor in Mathematics in 1993. As a Professional in the field of Telecommunications he states under penalty of perjury that the information contained in this report is true and correct to the best of his knowledge and belief.



KESSLER AND GEHMAN ASSOCIATES, INC.


WILLIAM T. GODFREY, JR.
Telecommunications Technical Consultant

17 June, 2008

KTCI-DT CHANNEL 26 MAXIMIZED DTV FACILITY

ST. PAUL, MINNESOTA

ENGINEERING SPECIFICATIONS

A. Transmitter Site:

Geographic coordinates (NAD27):

North Latitude: _____ **45° 03' 30"**
West Longitude: _____ **93° 07' 27"**

Transmitter Site Address: **550 Gramsie Road
Shoreview, MN**

B. Main Studio Address:

**Twin Cities Public Television
172 East Fourth Street
Saint Paul, MN 55101**

Post-Transition Facility:

DTV Channel: _____ Number: _____ **26**
Frequency: _____ **542-548 MHz**
Offset: _____ **N/A**

C. Antenna Height:

Height of Site Above Mean Sea Level (AMSL): _____ **277.0 M**
Overall Height of Structure Above Ground: _____ **446.8 M**
(including all appurtenances)
Overall Height of Structure Above Mean Sea Level: _____ **723.8 M**
(including all appurtenances)
Height of Site Above Average Terrain: _____ **-3.1 M**
Antenna Height Radiation Center (R/C) Above Ground: _____ **416.0 M**
Antenna Height R/C Above Mean Sea Level: _____ **693.0 M**
Average of All Non-Odd Radials: _____ **280.1 M**
Antenna Height R/C Above Average Terrain: _____ **412.9 M**

D. System Parameters – Horizontal Polarization:

Transmitter Power Required: _____ **1.8 kW**
Maximum Power Input to Antenna: _____ **1.2 kW**
Transmission Line Loss: _____ **1.75 dB**
Transmission Line Efficiency: _____ **66.8%**
Maximum Antenna Gain in Beam Maximum: _____ **15.79 dB**
Maximum Antenna Gain in Horizontal Plane: _____ **14.38 dB**
Maximum Effective Radiated Power: _____ **16.53 dBk**
 In Beam Maximum: _____ **45.0 kW**
Maximum Effective Radiated Power: _____ **15.12 dBk**
 In Horizontal Plane: _____ **32.5 kW**

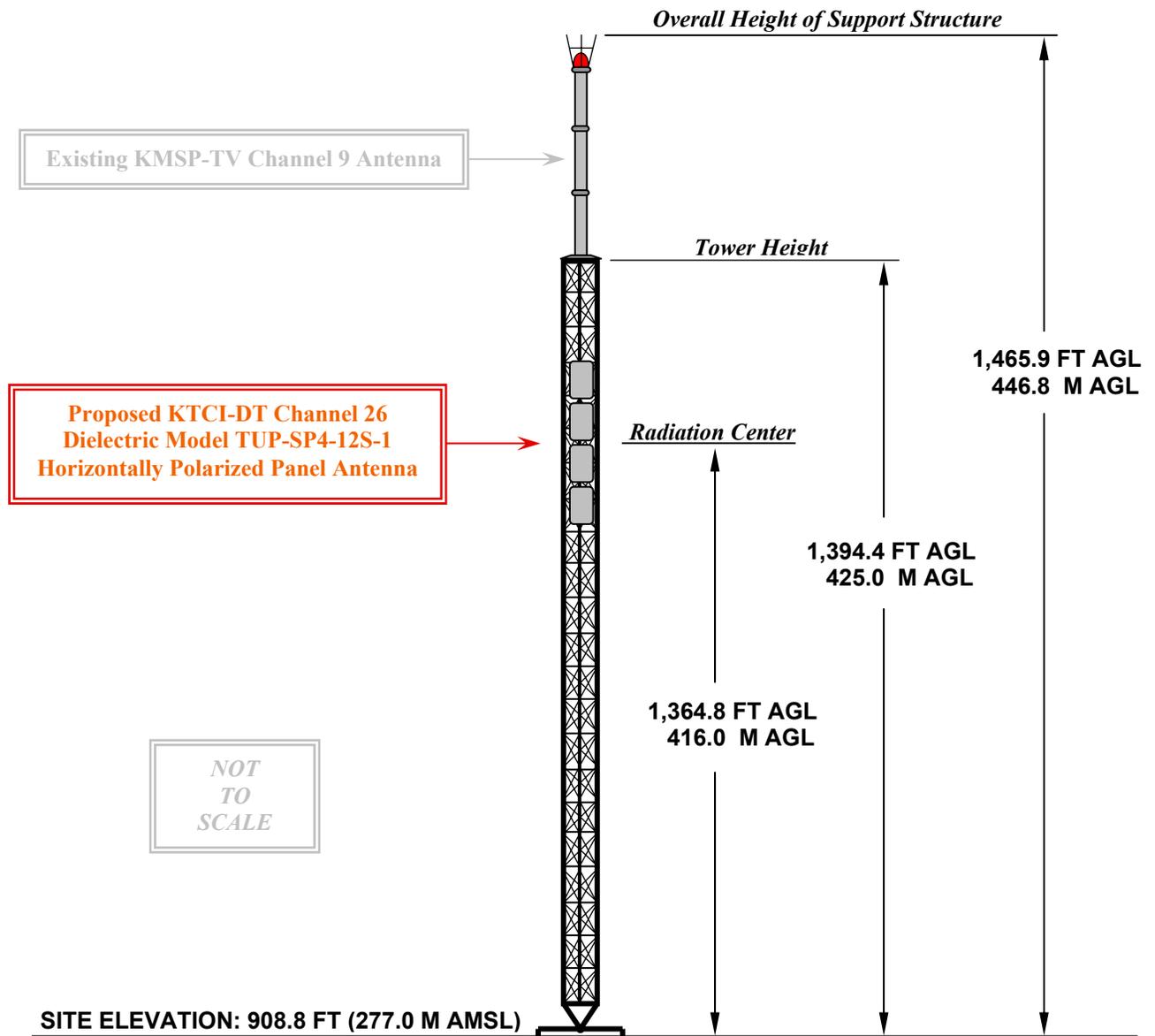
KTCI-DT CHANNEL 26 MAXIMIZED DTV FACILITY

ST. PAUL, MINNESOTA

DATA FOR PROPOSED DIRECTIONAL TRANSMITTING ANTENNA

- A. **Antenna:** Dielectric Model TUP-SP4-12S-1, Horizontally Polarized, Directional, Broadband, Panel Antenna.
- B. **Electrical Beam Tilt:** 0.75 degrees
- C. **Mechanical Beam Tilt:** None
- D. **Maximum Power Gain** **Horizontal Polarization**
Maximum: 37.9 (15.79 dB)
Horizontal: 27.4 (14.38 dB)
- E. **Length:** 45.3 feet (13.8 meters) not including appurtenances.
- F. **TPO:** 1.8 kW
- G. **Null Fill:** 20.0%
- H. **Transmission Line:** 6-1/8" 50 ohm EHT digiTLine
- I. **Transmission Line Attenuation:** 0.121 dB/100-feet
- J. **Transmission Line Length:** 1,450 feet
- K. **Transmission Line Loss:** 1.75 dB

KTCI-DT CHANNEL 26 TOWER ELEVATION VIEW



OVERALL HEIGHT AGL:	-----	446.8 M
OVERALL HEIGHT AMSL:	-----	723.8 M
RADIATION CENTER AGL:	-----	416.0 M
RADIATION CENTER AMSL:	-----	693.0 M
RADIATION CENTER HAAT:	-----	412.9 M
AVG OF ALL NON-ODD RADIALS:	-----	280.1 M
SITE HAAT:	-----	-3.1 M

COORDINATES (NAD 27):
 N. LATITUDE 45° 03' 30"
 W. LONGITUDE 93° 07' 27"
Antenna Structure Registration Number:
 1022899

NOTE: NOT TO SCALE

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KTCI-DT CHANNEL 26
 ST. PAUL, MINNESOTA

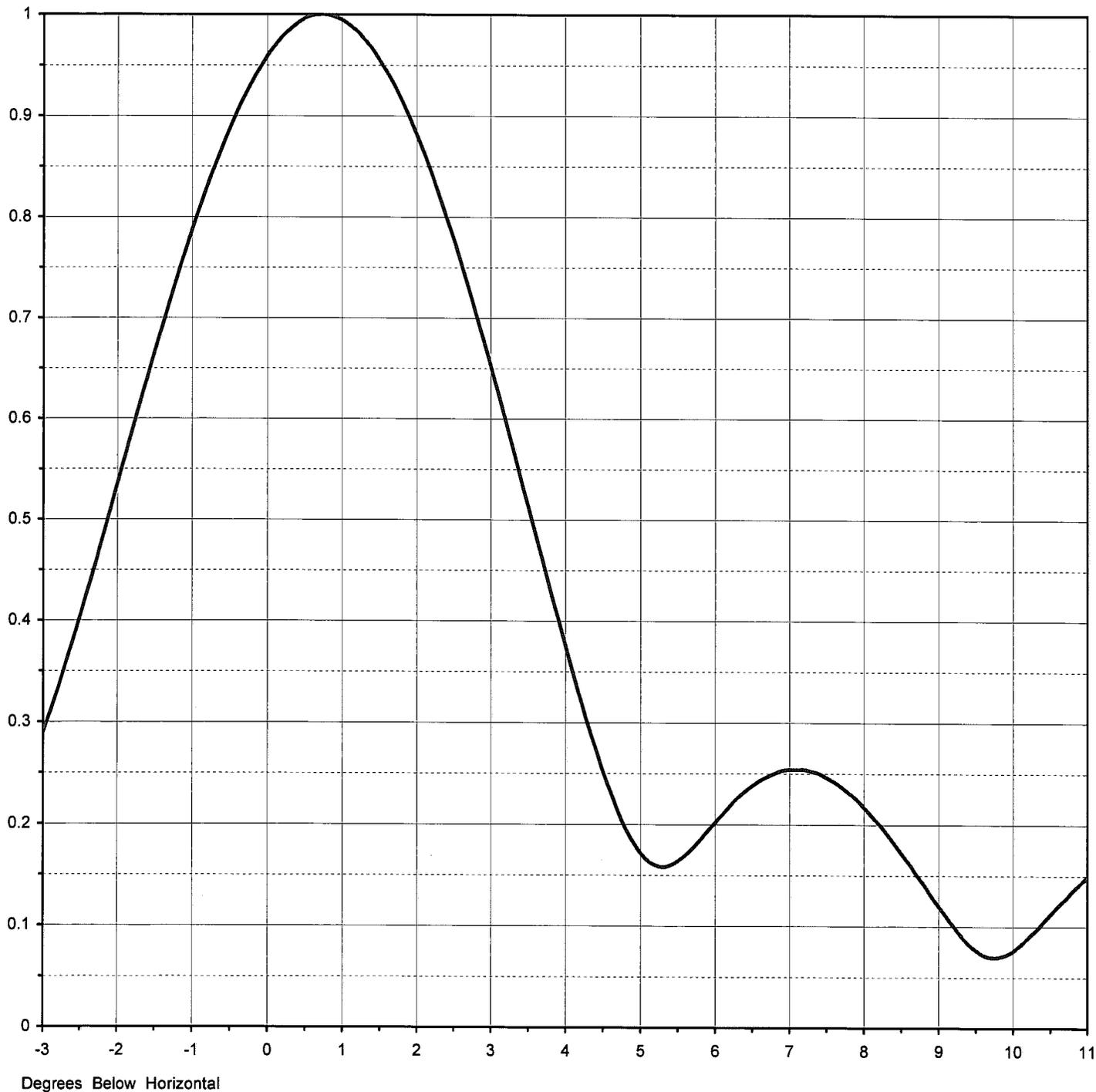
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EXHIBIT 3

Proposal Number **DCA-8110**
Date **9-Dec-98**
Call Letters **KMSP-DT** Channel **26**
Location **Minneapolis, MN**
Customer **Chris Craft**
Antenna Type **TUP-SP4-12S-1**

ELEVATION PATTERN: 6 Panels

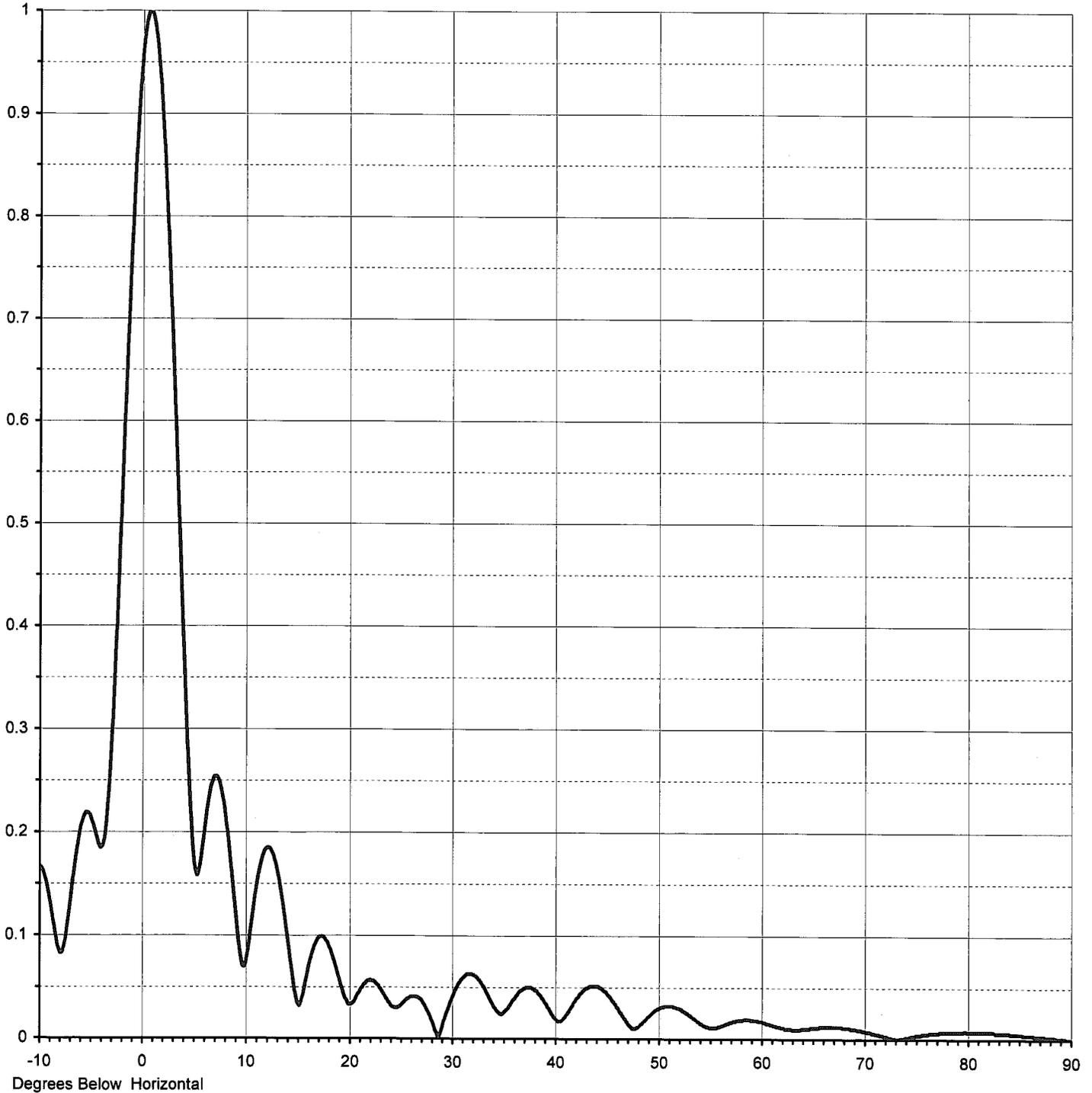
RMS Gain at Main Lobe	12.70 (11.04 dB)	Beam Tilt	0.75 deg
RMS Gain at Horizontal	11.70 (10.68 dB)	Frequency	545.00 MHz
Calculated / Measured	Calculated	Drawing #	06U127075



Proposal Number **DCA-8110**
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ELEVATION PATTERN: 6 Panels

RMS Gain at Main Lobe	12.70 (11.04 dB)	Beam Tilt	0.75 deg
RMS Gain at Horizontal	11.70 (10.68 dB)	Frequency	545.00 MHz
Calculated / Measured	Calculated	Drawing #	06U127075-90



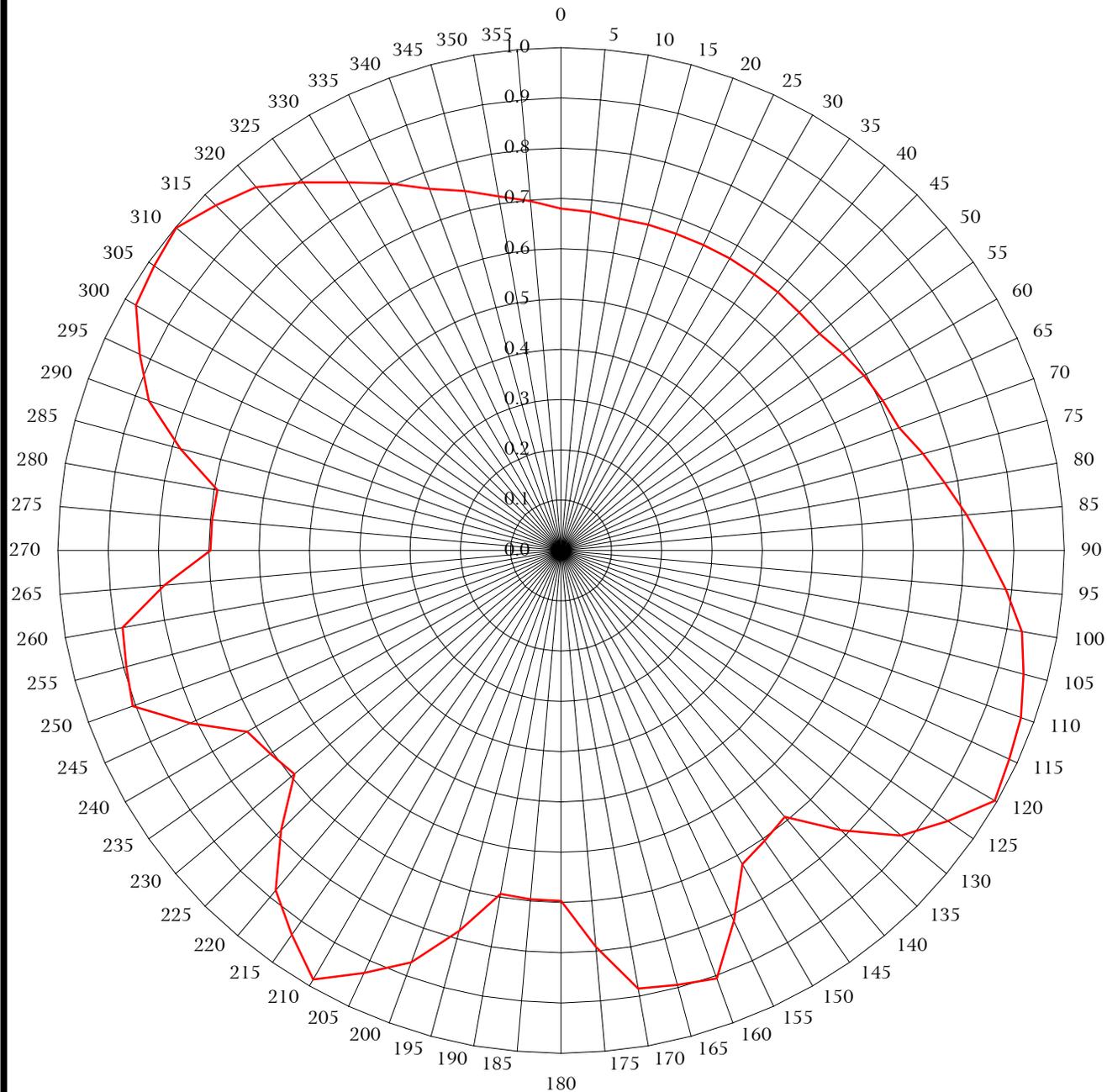
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 Location **Minneapolis, MN**
 Customer **Chris Craft**
 Antenna Type **TUP-SP4-12S-1**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **06U127075-90**

Angle	Field										
-10.0	0.167	2.4	0.801	10.6	0.112	30.5	0.050	51.0	0.032	71.5	0.004
-9.5	0.157	2.6	0.755	10.8	0.127	31.0	0.058	51.5	0.031	72.0	0.003
-9.0	0.133	2.8	0.705	11.0	0.142	31.5	0.063	52.0	0.030	72.5	0.002
-8.5	0.103	3.0	0.653	11.5	0.170	32.0	0.063	52.5	0.027	73.0	0.000
-8.0	0.083	3.2	0.598	12.0	0.184	32.5	0.059	53.0	0.023	73.5	0.001
-7.5	0.096	3.4	0.542	12.5	0.182	33.0	0.052	53.5	0.020	74.0	0.002
-7.0	0.134	3.6	0.486	13.0	0.166	33.5	0.043	54.0	0.016	74.5	0.003
-6.5	0.174	3.8	0.430	13.5	0.138	34.0	0.033	54.5	0.013	75.0	0.004
-6.0	0.205	4.0	0.376	14.0	0.102	34.5	0.026	55.0	0.011	75.5	0.005
-5.5	0.219	4.2	0.323	14.5	0.064	35.0	0.025	55.5	0.011	76.0	0.005
-5.0	0.214	4.4	0.275	15.0	0.035	35.5	0.030	56.0	0.012	76.5	0.006
-4.5	0.197	4.6	0.232	15.5	0.041	36.0	0.038	56.5	0.014	77.0	0.006
-4.0	0.185	4.8	0.196	16.0	0.065	36.5	0.045	57.0	0.016	77.5	0.007
-3.5	0.211	5.0	0.172	16.5	0.085	37.0	0.049	57.5	0.017	78.0	0.007
-3.0	0.290	5.2	0.160	17.0	0.097	37.5	0.050	58.0	0.018	78.5	0.007
-2.8	0.333	5.4	0.160	17.5	0.099	38.0	0.048	58.5	0.019	79.0	0.007
-2.6	0.380	5.6	0.170	18.0	0.092	38.5	0.043	59.0	0.018	79.5	0.007
-2.4	0.430	5.8	0.185	18.5	0.078	39.0	0.036	59.5	0.018	80.0	0.007
-2.2	0.482	6.0	0.202	19.0	0.060	39.5	0.028	60.0	0.017	80.5	0.007
-2.0	0.535	6.2	0.218	19.5	0.043	40.0	0.020	60.5	0.015	81.0	0.007
-1.8	0.588	6.4	0.232	20.0	0.033	40.5	0.017	61.0	0.014	81.5	0.007
-1.6	0.640	6.6	0.243	20.5	0.036	41.0	0.021	61.5	0.012	82.0	0.007
-1.4	0.691	6.8	0.250	21.0	0.045	41.5	0.029	62.0	0.011	82.5	0.007
-1.2	0.740	7.0	0.254	21.5	0.053	42.0	0.037	62.5	0.010	83.0	0.006
-1.0	0.787	7.2	0.254	22.0	0.057	42.5	0.044	63.0	0.009	83.5	0.006
-0.8	0.830	7.4	0.250	22.5	0.055	43.0	0.049	63.5	0.009	84.0	0.006
-0.6	0.869	7.6	0.242	23.0	0.049	43.5	0.051	64.0	0.010	84.5	0.005
-0.4	0.904	7.8	0.231	23.5	0.041	44.0	0.051	64.5	0.010	85.0	0.005
-0.2	0.934	8.0	0.217	24.0	0.033	44.5	0.049	65.0	0.011	85.5	0.004
0.0	0.959	8.2	0.201	24.5	0.030	45.0	0.045	65.5	0.011	86.0	0.004
0.2	0.978	8.4	0.182	25.0	0.032	45.5	0.038	66.0	0.012	86.5	0.003
0.4	0.991	8.6	0.162	25.5	0.037	46.0	0.031	66.5	0.012	87.0	0.003
0.6	0.999	8.8	0.141	26.0	0.041	46.5	0.023	67.0	0.012	87.5	0.002
0.8	1.000	9.0	0.120	26.5	0.041	47.0	0.016	67.5	0.012	88.0	0.002
1.0	0.995	9.2	0.100	27.0	0.038	47.5	0.010	68.0	0.011	88.5	0.001
1.2	0.984	9.4	0.083	27.5	0.030	48.0	0.011	68.5	0.011	89.0	0.001
1.4	0.967	9.6	0.072	28.0	0.019	48.5	0.016	69.0	0.010	89.5	0.000
1.6	0.944	9.8	0.070	28.5	0.006	49.0	0.021	69.5	0.009	90.0	0.000
1.8	0.916	10.0	0.072	29.0	0.009	49.5	0.026	70.0	0.008		
2.0	0.882	10.2	0.082	29.5	0.025	50.0	0.029	70.5	0.007		
2.2	0.844	10.4	0.096	30.0	0.038	50.5	0.031	71.0	0.005		

RELATIVE FIELD AZIMUTH PATTERN



DIELECTRIC MODEL TUP-SP4-12S-1

BEAM MAXIMA AT 305°

AZIMUTH GAIN: 3.0 (4.75 dB)

POLARIZATION: HORIZONTAL

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KTCI-DT CHANNEL 26

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EXHIBIT 7

KTCI-DT CHANNEL 26

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TABULATION OF RELATIVE FIELD FOR DIRECTIONAL ANTENNA

<u>AZIMUTH</u>	<u>RELATIVE FIELD</u>	<u>AZIMUTH</u>	<u>RELATIVE FIELD</u>
N000°E	0.680	N180°E	0.697
N010°E	0.670	N190°E	0.694
N020°E	0.670	N200°E	0.871
N030°E	0.670	N210°E	0.985
N040°E	0.670	N220°E	0.882
N050°E	0.670	N230°E	0.691
N060°E	0.695	N240°E	0.720
N070°E	0.715	N250°E	0.905
N080°E	0.774	N260°E	0.885
N090°E	0.845	N270°E	0.697
N100°E	0.930	N280°E	0.694
N110°E	0.972	N290°E	0.871
N120°E	0.995	N300°E	0.976
N130°E	0.882	N310°E	0.998
N140°E	0.691	N320°E	0.943
N150°E	0.720	N330°E	0.845
N160°E	0.905	N340°E	0.765
N170°E	0.885	N350°E	0.715

MAXIMUM RELATIVE FIELD OF 1.000 AT N305°E
 MINIMUM RELATIVE FIELD OF 0.670 AT N010°E - N050°E

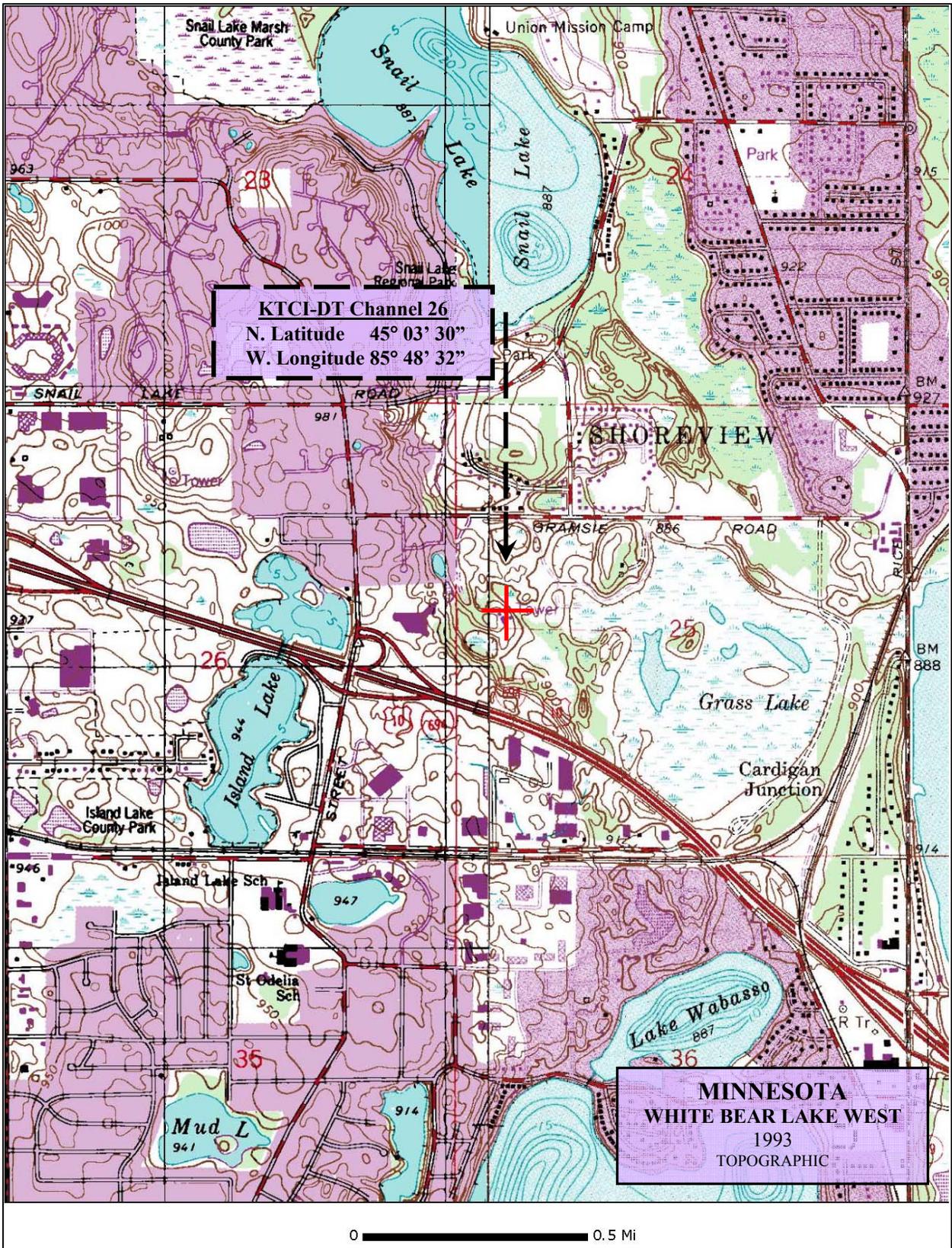


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EXHIBIT 8

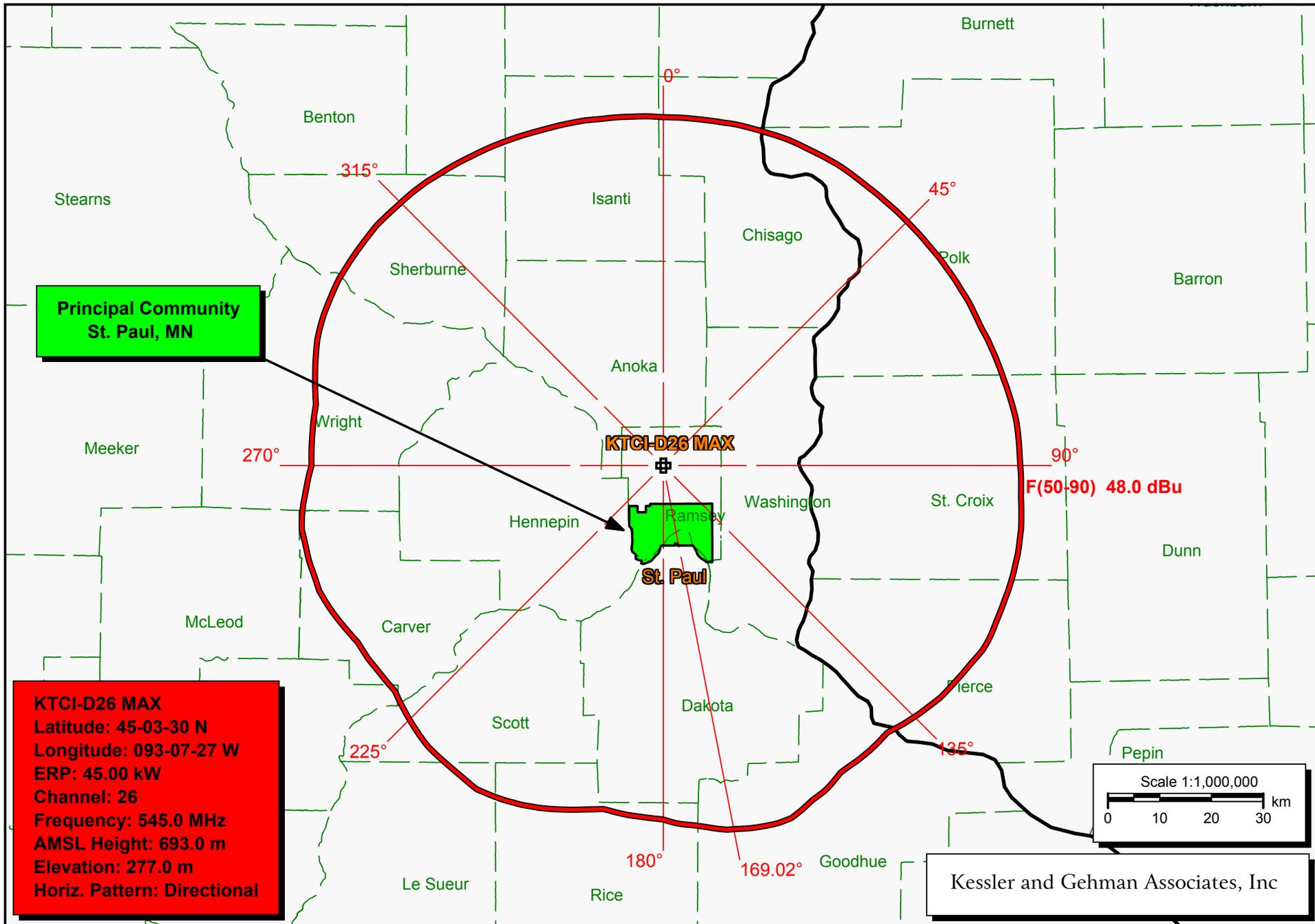


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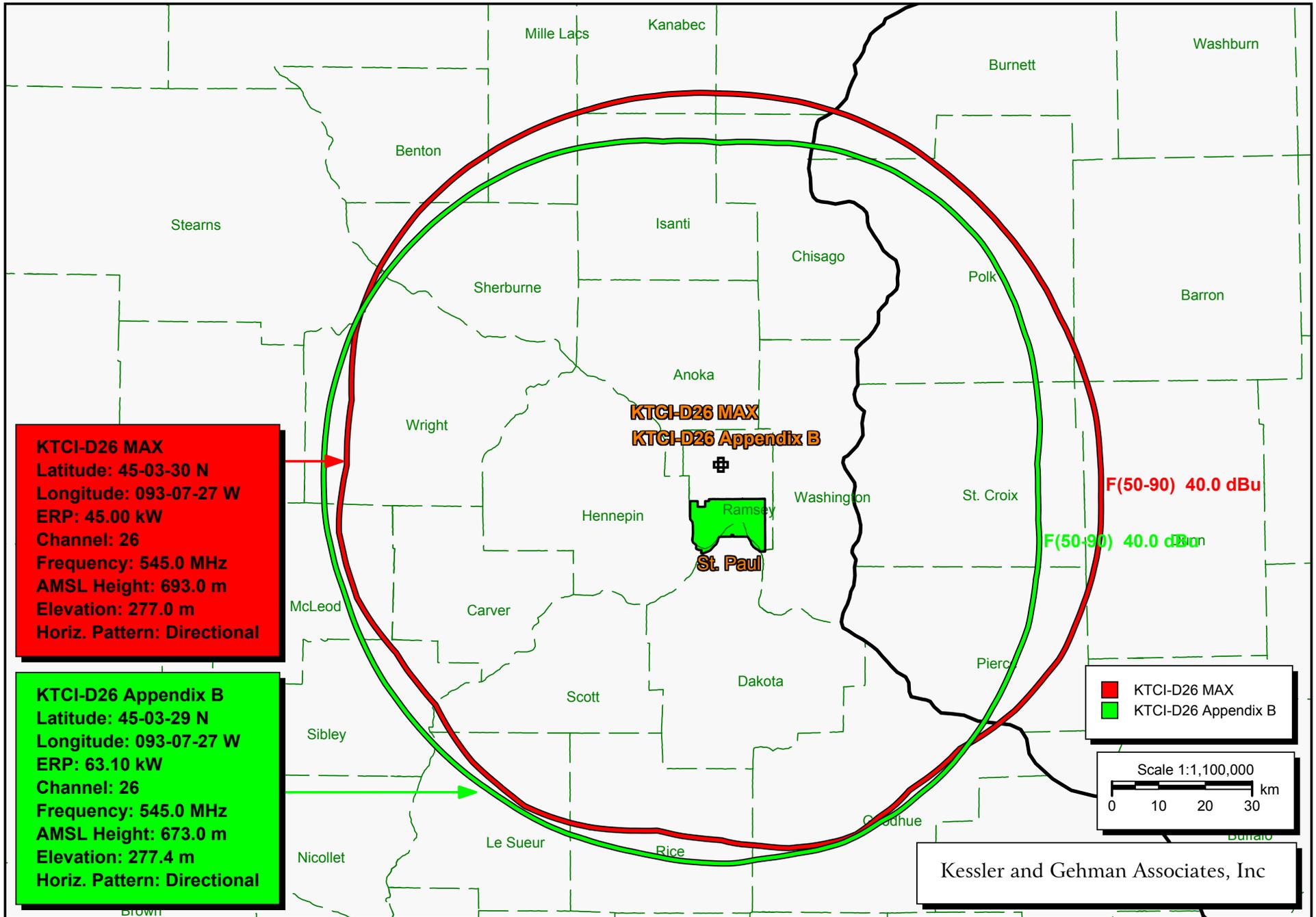
KTCI-DT CHANNEL 26
ST. PAUL, MINNESOTA

20080616

EXHIBIT 9



KTCI-DT Channel 26 F(50,90) 48.0 dBuV/m Principal Community Contour



KTCI-D26 Appendix B (green) vs. KTCI-D26 Proposed (red)

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 06-17-2008 Time: 08:36:50

Record Selected for Analysis

KTCI-D26 USERRECORD-01 ST. PAUL MN US
Channel 26 ERP 45. kW HAAT 413. m RCAMSL 00693 m
Latitude 045-03-30 Longitude 0093-07-27
Status APP Zone 2 Border
Dir Antenna Make usr Model USRPAT01 Beam tilt N Ref Azimuth 0.
Last update Cutoff date Docket
Comments
Applicant

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility meets maximum height/power limits

Azimuth (Deg)	ERP (kW)	HAAT (m)	41.0 dBu F(50,90) (km)
0.0	20.808	414.1	77.7
45.0	20.201	406.3	77.0
90.0	32.131	397.8	79.6
135.0	27.836	406.6	79.2
180.0	21.861	426.6	78.7
225.0	27.836	417.7	79.8
270.0	21.861	420.4	78.4
315.0	42.384	412.7	82.3

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

SPACING VIOLATION FOUND BETWEEN STATION

KTCI-D26 26 ST. PAUL MN USERRECORD01

and station

SHORT TO: KTCI-TV 26 ST. PAUL MN BDTV 0843
 45 -03-29 093 -07-27
 Req. separation 223.7 Actual separation 0.0 Short 223.7 km

SHORT TO: WHWC-TV 27 MENOMONIE WI BDTV 1757
 45 -02-49 091 -51-47
 Req. separation => 24.0 <= 110.0 Actual separation 99.4 Short 10.6(75.4) km

LANDMOBILE SPACING VIOLATIONS FOUND

NONE

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quite zone

Proposed facility OK toward Table Mountain

Proposed facility is within the Canadian coordination distance
 Distance to border = 353.7km

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

Start of Interference Analysis

Channel	Proposed Station Call	City/State	ARN
26	KTCI-D26	ST. PAUL MN	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
26	KFTC	BEMIDJI MN	298.0	LIC	BDTV	-0820
26	WKOW-TV	MADISON WI	362.9	LIC	BDTV	-1754
27	NEW	DULUTH MN	207.2	LIC	BDTV	-0827
27	KRWF	REDWOOD FALLS MN	197.3	LIC	BDTV	-0838
27	WHWC-TV	MENOMONIE WI	99.0	LIC	BDTV	-1757

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Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
26	KFTC	BEMIDJI MN	BDTV	-0820

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
27	NEW	DULUTH MN	217.8	LIC	BDTV	-0827
27	KCPM	GRAND FORKS ND	175.6	LIC	BDTV	-1007
26	KTCI-D26	ST. PAUL MN	298.0	APP	USERRECORD-01	

Proposal causes no interference

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Analysis of Interference to Affected Station 2

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
26	WKOW-TV	MADISON WI	BDTV	-1754

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
25	KWKB	IOWA CITY IA	210.1	LIC	BDTV	-0478
25	WCGV-TV	MILWAUKEE WI	132.4	LIC	BDTV	-1761
26	WCCU	URBANA IL	333.2	LIC	BDTV	-0561
26	WCMU-TV	MOUNT PLEASANT MI	357.6	LIC	BDTV	-0805
27	WCIU-TV	CHICAGO IL	203.3	LIC	BDTV	-0524
27	WACY	APPLETON WI	191.2	LIC	BDTV	-1733
26	KTCI-D26	ST. PAUL MN	362.9	APP	USERRECORD-01	

Total scenarios = 1

Result key: 1
Scenario 1 Affected station 2
Before Analysis

Results for: 26A WI MADISON BDTV 1754 LIC
HAAT 455.0 m, ATV ERP 400.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1477744	30672.5
not affected by terrain losses	1468804	30294.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	18701	161.1
lost to ATV IX only	18701	161.1
lost to all IX	18701	161.1

Potential Interfering Stations Included in above Scenario 1

25A WI MILWAUKEE	BDTV	1761	LIC
26A IL URBANA	BDTV	0561	LIC
26A MI MOUNT PLEASANT	BDTV	0805	LIC

After Analysis

Results for: 26A WI MADISON BDTV 1754 LIC
HAAT 455.0 m, ATV ERP 400.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1477744	30672.5

not affected by terrain losses	1468804	30294.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	18841	173.1
lost to ATV IX only	18841	173.1
lost to all IX	18841	173.1

Potential Interfering Stations Included in above Scenario 1

25A WI MILWAUKEE	BDTV	1761	LIC
26A IL URBANA	BDTV	0561	LIC
26A MI MOUNT PLEASANT	BDTV	0805	LIC
26A MN ST. PAUL	USERRECORD01		APP
*Percent Service lost without proposal:	0.0	to BDTV	1754
*Percent Service lost with proposal:	0.0	to BDTV	1754

#####

Analysis of Interference to Affected Station 3

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
27	NEW	DULUTH MN	BDTV	-0827

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
26	KFTC	BEMIDJI MN	217.8	LIC	BDTV	-0820
27	KRWF	REDWOOD FALLS MN	366.1	LIC	BDTV	-0838
27	KCPM	GRAND FORKS ND	393.4	LIC	BDTV	-1007
27	WACY	APPLETON WI	420.4	LIC	BDTV	-1733
27	WHWC-TV	MENOMONIE WI	194.5	LIC	BDTV	-1757
28	KAWB	BRAINERD MN	183.2	LIC	BDTV	-0821
26	KTCI-D26	ST. PAUL MN	207.2	APP	USERRECORD-01	

Proposed station is beyond the site to nearest cell evaluation distance

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Analysis of Interference to Affected Station 4

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
27	KRWF	REDWOOD FALLS MN	BDTV	-0838

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
27	KFXA	CEDAR RAPIDS IA	382.9	LIC	BDTV	-0463
27	NEW	DULUTH MN	366.1	LIC	BDTV	-0827
27	KCPM	GRAND FORKS ND	404.8	LIC	BDTV	-1007
27	WHWC-TV	MENOMONIE WI	293.0	LIC	BDTV	-1757

28 KSIN-TV SIOUX CITY IA 228.5 LIC BDTV -0485
 26 KTCI-D26 ST. PAUL MN 197.3 APP USERRECORD-01

Proposed station is beyond the site to
 nearest cell evaluation distance

#####

Analysis of Interference to Affected Station 5

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
27	WHWC-TV	MENOMONIE WI	BDTV	-1757

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
27	KFXA	CEDAR RAPIDS IA	329.1	LIC	BDTV	-0463
27	NEW	DULUTH MN	194.5	LIC	BDTV	-0827
27	KRWF	REDWOOD FALLS MN	293.0	LIC	BDTV	-0838
27	WACY	APPLETON WI	316.1	LIC	BDTV	-1733
28	WYOW	EAGLE RIVER WI	219.5	LIC	BDTV	-1736
26	KTCI-D26	ST. PAUL MN	99.0	APP	USERRECORD-01	

Total scenarios = 1

Result key: 2
 Scenario 1 Affected station 5
 Before Analysis

Results for: 27A WI MENOMONIE BDTV 1757 LIC
 HAAT 350.0 m, ATV ERP 291.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	888182	27094.0
not affected by terrain losses	861695	26533.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	626	80.6
lost to ATV IX only	626	80.6
lost to all IX	626	80.6

Potential Interfering Stations Included in above Scenario 1

27A IA CEDAR RAPIDS	BDTV	0463	LIC
27A MN DULUTH	BDTV	0827	LIC
27A MN REDWOOD FALLS	BDTV	0838	LIC
27A WI APPLETON	BDTV	1733	LIC

After Analysis

Results for: 27A WI MENOMONIE BDTV 1757 LIC
 HAAT 350.0 m, ATV ERP 291.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	888182	27094.0
not affected by terrain losses	861695	26533.9

lost to NTSC IX	0	0.0
lost to additional IX by ATV	119024	306.2
lost to ATV IX only	119024	306.2
lost to all IX	119024	306.2

Potential Interfering Stations Included in above Scenario 1

27A IA CEDAR RAPIDS	BDTV	0463	LIC
27A MN DULUTH	BDTV	0827	LIC
27A MN REDWOOD FALLS	BDTV	0838	LIC
27A WI APPLETON	BDTV	1733	LIC
26A MN ST. PAUL	USERRECORD01		APP

The following station failed the de minimis interference criteria.

26D MN ST. PAUL USERRECORD01
 ERP 45.00 kW HAAT 413.0 m RCAMSL 693.0 m
 Antenna usr USRPAT01

Due to interference to the following station and scenario: 1

27D WI MENOMONIE BDTV 1757
 ERP 291.00 kW HAAT 350.0 m RCAMSL 655.0 m
 Antenna CDB 999999999999999

Percent Service lost without proposal: 0.0 to BDTV 1757
 Percent Service lost with proposal: 13.8 to BDTV 1757

#####

Analysis of Interference to Affected Station 6

Analysis of current record

Channel	Call	City/State	Application Ref. No.
26	KTCI-D26	ST. PAUL MN	USERRECORD-01

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
26	KFTC	BEMIDJI MN	298.0	LIC	BDTV -0820
26	WKOW-TV	MADISON WI	362.9	LIC	BDTV -1754
27	NEW	DULUTH MN	207.2	LIC	BDTV -0827
27	KRWF	REDWOOD FALLS MN	197.3	LIC	BDTV -0838
27	WHWC-TV	MENOMONIE WI	99.0	LIC	BDTV -1757

Total scenarios = 1

Result key: 3
 Scenario 1 Affected station 6
 Before Analysis

Results for: 26A MN ST. PAUL USERRECORD01 APP
 HAAT 413.0 m, ATV ERP 45.0 kW
 POPULATION 3067975 AREA (sq km) 20762.3
 within Noise Limited Contour

not affected by terrain losses	3065914	20701.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2981	273.9
lost to ATV IX only	2981	273.9
lost to all IX	2981	273.9

Potential Interfering Stations Included in above Scenario 1

27A WI MENOMONIE BDTV 1757 LIC

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FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 06-17-2008 Time: 08:40:05

Record Selected for Analysis

KTCI-D26 USERRECORD-01 ST. PAUL_2 MN US
Channel 26 ERP 45. kW HAAT 413. m RCAMSL 00693 m
Latitude 045-03-30 Longitude 0093-07-27
Status APP Zone 2 Border
Dir Antenna Make usr Model USRPAT01 Beam tilt N Ref Azimuth 0.
Last update Cutoff date Docket
Comments
Applicant

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility meets maximum height/power limits

Azimuth (Deg)	ERP (kW)	HAAT (m)	41.0 dBu F(50,90) (km)
0.0	20.808	414.1	77.7
45.0	20.201	406.3	77.0
90.0	32.131	397.8	79.6
135.0	27.836	406.6	79.2
180.0	21.861	426.6	78.7
225.0	27.836	417.7	79.8
270.0	21.861	420.4	78.4
315.0	42.384	412.7	82.3

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

SPACING VIOLATION FOUND BETWEEN STATION

KTCI-D26 26 ST. PAUL_2 MN USERRECORD01

and station

SHORT TO: KTCI-TV 26 ST. PAUL MN BDTV 0843
 45 -03-29 093 -07-27
 Req. separation 223.7 Actual separation 0.0 Short 223.7 km

SHORT TO: WHWC-TV 27 MENOMONIE WI BDTV 1757
 45 -02-49 091 -51-47
 Req. separation => 24.0 <= 110.0 Actual separation 99.4 Short 10.6(75.4) km

LANDMOBILE SPACING VIOLATIONS FOUND

NONE

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quite zone

Proposed facility OK toward Table Mountain

Proposed facility is within the Canadian coordination distance
 Distance to border = 353.7km

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

Start of Interference Analysis

	Proposed Station			
Channel	Call	City/State		ARN
26	KTCI-D26	ST. PAUL_2 MN		USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
26	KFTC	BEMIDJI MN	298.0	LIC	BDTV	-0820
26	KTCI-TV	ST. PAUL MN	0.0	LIC	BDTV	-0843
26	WKOW-TV	MADISON WI	362.9	LIC	BDTV	-1754
27	NEW	DULUTH MN	207.2	LIC	BDTV	-0827
27	KRWF	REDWOOD FALLS MN	197.3	LIC	BDTV	-0838
27	WHWC-TV	MENOMONIE WI	99.0	LIC	BDTV	-1757

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Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
26	KFTC	BEMIDJI MN	BDTV	-0820

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
26	KTCI-TV	ST. PAUL MN	298.0	LIC	BDTV	-0843
27	NEW	DULUTH MN	217.8	LIC	BDTV	-0827
27	KCPM	GRAND FORKS ND	175.6	LIC	BDTV	-1007
26	KTCI-D26	ST. PAUL_2 MN	298.0	APP	USERRECORD-01	

Proposal causes no interference

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Analysis of Interference to Affected Station 2

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
26	KTCI-TV	ST. PAUL MN	BDTV	-0843

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
26	KFTC	BEMIDJI MN	298.0	LIC	BDTV	-0820
26	WKOW-TV	MADISON WI	362.9	LIC	BDTV	-1754
27	NEW	DULUTH MN	207.2	LIC	BDTV	-0827
27	KRWF	REDWOOD FALLS MN	197.3	LIC	BDTV	-0838
27	WHWC-TV	MENOMONIE WI	99.0	LIC	BDTV	-1757
26	KTCI-D26	ST. PAUL_2 MN	0.0	APP	USERRECORD-01	

Total scenarios = 2

Result key: 1
 Scenario 1 Affected station 2
 Before Analysis

Results for: 26A MN ST. PAUL BDTV 0843 LIC

HAAT 396.0 m, ATV ERP 63.1 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	3058004	19369.1
not affected by terrain losses	3055250	19304.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	1521	68.5
lost to ATV IX only	1521	68.5
lost to all IX	1521	68.5

Potential Interfering Stations Included in above Scenario 1

26A WI MADISON	BDTV	1754	LIC
27A WI MENOMONIE	BDTV	1757	LIC

After Analysis

Results for: 26A MN ST. PAUL BDTV 0843 LIC

HAAT 396.0 m, ATV ERP 63.1 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	3058004	19369.1

not affected by terrain losses	3055250	19304.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2999648	18288.6
lost to ATV IX only	2999648	18288.6
lost to all IX	2999648	18288.6

Potential Interfering Stations Included in above Scenario 1

26A WI MADISON	BDTV	1754	LIC
27A WI MENOMONIE	BDTV	1757	LIC
26A MN ST. PAUL_2	USERRECORD01		APP

The following station failed the de minimis interference criteria.

26D MN ST. PAUL_2 USERRECORD01
 ERP 45.00 kW HAAT 413.0 m RCAMSL 693.0 m
 Antenna usr USRPAT01

Due to interference to the following station and scenario: 1

26D MN ST. PAUL BDTV 0843
 ERP 63.14 kW HAAT 396.0 m RCAMSL 674.0 m
 Antenna CDB 00000000074396

Percent Service lost without proposal:	0.0	to BDTV	0843
Percent Service lost with proposal:	98.2	to BDTV	0843

Result key: 2
 Scenario 2 Affected station 2
 Before Analysis

Results for: 26A MN ST. PAUL BDTV 0843 LIC
 HAAT 396.0 m, ATV ERP 63.1 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	3058004	19369.1
not affected by terrain losses	3055250	19304.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	1521	68.5
lost to ATV IX only	1521	68.5
lost to all IX	1521	68.5

Potential Interfering Stations Included in above Scenario 2

26A WI MADISON	BDTV	1754	LIC
27A WI MENOMONIE	BDTV	1757	LIC

After Analysis

Results for: 26A MN ST. PAUL BDTV 0843 LIC
 HAAT 396.0 m, ATV ERP 63.1 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	3058004	19369.1
not affected by terrain losses	3055250	19304.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2999648	18288.6
lost to ATV IX only	2999648	18288.6
lost to all IX	2999648	18288.6

Potential Interfering Stations Included in above Scenario 2

26A WI MADISON	BDTV	1754	LIC
27A WI MENOMONIE	BDTV	1757	LIC
26A MN ST. PAUL_2	USERRECORD01		APP

The following station failed the de minimis interference criteria.

26D MN ST. PAUL_2 USERRECORD01
 ERP 45.00 kW HAAT 413.0 m RCAMSL 693.0 m
 Antenna usr USRPAT01

Due to interference to the following station and scenario: 2

26D MN ST. PAUL BDTV 0843
 ERP 63.14 kW HAAT 396.0 m RCAMSL 674.0 m
 Antenna CDB 00000000074396

Percent Service lost without proposal: 0.0 to BDTV 0843
 Percent Service lost with proposal: 98.2 to BDTV 0843

#####

Analysis of Interference to Affected Station 3

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
26	WKOW-TV	MADISON WI	BDTV	-1754

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
25	KWKB	IOWA CITY IA	210.1	LIC	BDTV	-0478
25	WCGV-TV	MILWAUKEE WI	132.4	LIC	BDTV	-1761
26	WCCU	URBANA IL	333.2	LIC	BDTV	-0561
26	WCMU-TV	MOUNT PLEASANT MI	357.6	LIC	BDTV	-0805
26	KTCI-TV	ST. PAUL MN	362.9	LIC	BDTV	-0843
27	WCIU-TV	CHICAGO IL	203.3	LIC	BDTV	-0524
27	WACY	APPLETON WI	191.2	LIC	BDTV	-1733
26	KTCI-D26	ST. PAUL_2 MN	362.9	APP	USERRECORD-01	

Total scenarios = 2

Result key: 3
 Scenario 1 Affected station 3
 Before Analysis

Results for: 26A WI MADISON BDTV 1754 LIC
 HAAT 455.0 m, ATV ERP 400.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1477744	30672.5
not affected by terrain losses	1468804	30294.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	18731	165.1
lost to ATV IX only	18731	165.1

lost to all IX 18731 165.1

Potential Interfering Stations Included in above Scenario 1

25A WI MILWAUKEE	BDTV	1761	LIC
26A IL URBANA	BDTV	0561	LIC
26A MI MOUNT PLEASANT	BDTV	0805	LIC
26A MN ST. PAUL	BDTV	0843	LIC

After Analysis

Results for: 26A WI MADISON BDTV 1754 LIC
 HAAT 455.0 m, ATV ERP 400.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1477744	30672.5
not affected by terrain losses	1468804	30294.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	18841	173.1
lost to ATV IX only	18841	173.1
lost to all IX	18841	173.1

Potential Interfering Stations Included in above Scenario 1

25A WI MILWAUKEE	BDTV	1761	LIC
26A IL URBANA	BDTV	0561	LIC
26A MI MOUNT PLEASANT	BDTV	0805	LIC
26A MN ST. PAUL	BDTV	0843	LIC
26A MN ST. PAUL_2	USERRECORD01		APP
*Percent Service lost without proposal:		0.0	to BDTV 1754
*Percent Service lost with proposal:		0.0	to BDTV 1754

Result key: 4
 Scenario 2 Affected station 3
 Before Analysis

Results for: 26A WI MADISON BDTV 1754 LIC
 HAAT 455.0 m, ATV ERP 400.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1477744	30672.5
not affected by terrain losses	1468804	30294.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	18731	165.1
lost to ATV IX only	18731	165.1
lost to all IX	18731	165.1

Potential Interfering Stations Included in above Scenario 2

25A WI MILWAUKEE	BDTV	1761	LIC
26A IL URBANA	BDTV	0561	LIC
26A MI MOUNT PLEASANT	BDTV	0805	LIC
26A MN ST. PAUL	BDTV	0843	LIC

After Analysis

Results for: 26A WI MADISON BDTV 1754 LIC
 HAAT 455.0 m, ATV ERP 400.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	1477744	30672.5
not affected by terrain losses	1468804	30294.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	18841	173.1
lost to ATV IX only	18841	173.1
lost to all IX	18841	173.1

Potential Interfering Stations Included in above Scenario 2

25A WI MILWAUKEE	BDTV	1761	LIC
26A IL URBANA	BDTV	0561	LIC
26A MI MOUNT PLEASANT	BDTV	0805	LIC
26A MN ST. PAUL	BDTV	0843	LIC
26A MN ST. PAUL_2	USERRECORD01		APP
*Percent Service lost without proposal:	0.0	to BDTV	1754
*Percent Service lost with proposal:	0.0	to BDTV	1754

#####

Analysis of Interference to Affected Station 4

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
27	NEW	DULUTH MN	BDTV	-0827

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
26	KFTC	BEMIDJI MN	217.8	LIC	BDTV	-0820
26	KTCI-TV	ST. PAUL MN	207.2	LIC	BDTV	-0843
27	KRWF	REDWOOD FALLS MN	366.1	LIC	BDTV	-0838
27	KCPM	GRAND FORKS ND	393.4	LIC	BDTV	-1007
27	WACY	APPLETON WI	420.4	LIC	BDTV	-1733
27	WHWC-TV	MENOMONIE WI	194.5	LIC	BDTV	-1757
28	KAWB	BRAINERD MN	183.2	LIC	BDTV	-0821
26	KTCI-D26	ST. PAUL_2 MN	207.2	APP	USERRECORD-01	

Proposed station is beyond the site to nearest cell evaluation distance

#####

Analysis of Interference to Affected Station 5

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
27	KRWF	REDWOOD FALLS MN	BDTV	-0838

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
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26	KTCI-TV	ST. PAUL MN	197.3	LIC	BDTV	-0843
27	KFXA	CEDAR RAPIDS IA	382.9	LIC	BDTV	-0463
27	NEW	DULUTH MN	366.1	LIC	BDTV	-0827
27	KCPM	GRAND FORKS ND	404.8	LIC	BDTV	-1007
27	WHWC-TV	MENOMONIE WI	293.0	LIC	BDTV	-1757
28	KSIN-TV	SIOUX CITY IA	228.5	LIC	BDTV	-0485
26	KTCI-D26	ST. PAUL_2 MN	197.3	APP	USERRECORD-01	

Proposed station is beyond the site to nearest cell evaluation distance

#####

Analysis of Interference to Affected Station 6

Analysis of current record

Channel	Call	City/State	Application Ref. No.
27	WHWC-TV	MENOMONIE WI	BDTV -1757

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
26	KTCI-TV	ST. PAUL MN	99.0	LIC	BDTV -0843
27	KFXA	CEDAR RAPIDS IA	329.1	LIC	BDTV -0463
27	NEW	DULUTH MN	194.5	LIC	BDTV -0827
27	KRWF	REDWOOD FALLS MN	293.0	LIC	BDTV -0838
27	WACY	APPLETON WI	316.1	LIC	BDTV -1733
28	WYOW	EAGLE RIVER WI	219.5	LIC	BDTV -1736
26	KTCI-D26	ST. PAUL_2 MN	99.0	APP	USERRECORD-01

Total scenarios = 2

Result key: 5
Scenario 1 Affected station 6
Before Analysis

Results for: 27A WI MENOMONIE BDTV 1757 LIC
HAAT 350.0 m, ATV ERP 291.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	888182	27094.0
not affected by terrain losses	861695	26533.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	118027	261.9
lost to ATV IX only	118027	261.9
lost to all IX	118027	261.9

Potential Interfering Stations Included in above Scenario 1

26A MN ST. PAUL	BDTV	0843	LIC
27A IA CEDAR RAPIDS	BDTV	0463	LIC
27A MN DULUTH	BDTV	0827	LIC
27A MN REDWOOD FALLS	BDTV	0838	LIC
27A WI APPLETON	BDTV	1733	LIC

After Analysis

Results for: 27A WI MENOMONIE BDTV 1757 LIC
 HAAT 350.0 m, ATV ERP 291.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	888182	27094.0
not affected by terrain losses	861695	26533.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	134197	342.5
lost to ATV IX only	134197	342.5
lost to all IX	134197	342.5

Potential Interfering Stations Included in above Scenario 1

26A MN ST. PAUL	BDTV	0843	LIC
27A IA CEDAR RAPIDS	BDTV	0463	LIC
27A MN DULUTH	BDTV	0827	LIC
27A MN REDWOOD FALLS	BDTV	0838	LIC
27A WI APPLETON	BDTV	1733	LIC
26A MN ST. PAUL_2	USERRECORD01		APP

The following station failed the de minimis interference criteria.

26D MN ST. PAUL_2 USERRECORD01
 ERP 45.00 kW HAAT 413.0 m RCAMSL 693.0 m
 Antenna usr USRPAT01

Due to interference to the following station and scenario: 1

27D WI MENOMONIE BDTV 1757
 ERP 291.00 kW HAAT 350.0 m RCAMSL 655.0 m
 Antenna CDB 999999999999999

Percent Service lost without proposal: 0.0 to BDTV 1757
 Percent Service lost with proposal: 2.2 to BDTV 1757

Result key: 6
 Scenario 2 Affected station 6
Before Analysis

Results for: 27A WI MENOMONIE BDTV 1757 LIC
 HAAT 350.0 m, ATV ERP 291.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	888182	27094.0
not affected by terrain losses	861695	26533.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	118027	261.9
lost to ATV IX only	118027	261.9
lost to all IX	118027	261.9

Potential Interfering Stations Included in above Scenario 2

26A MN ST. PAUL	BDTV	0843	LIC
27A IA CEDAR RAPIDS	BDTV	0463	LIC
27A MN DULUTH	BDTV	0827	LIC
27A MN REDWOOD FALLS	BDTV	0838	LIC
27A WI APPLETON	BDTV	1733	LIC

After Analysis

Results for: 27A WI MENOMONIE BDTV 1757 LIC
 HAAT 350.0 m, ATV ERP 291.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	888182	27094.0
not affected by terrain losses	861695	26533.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	134197	342.5
lost to ATV IX only	134197	342.5
lost to all IX	134197	342.5

Potential Interfering Stations Included in above Scenario 2

26A MN ST. PAUL	BDTV	0843	LIC
27A IA CEDAR RAPIDS	BDTV	0463	LIC
27A MN DULUTH	BDTV	0827	LIC
27A MN REDWOOD FALLS	BDTV	0838	LIC
27A WI APPLETON	BDTV	1733	LIC
26A MN ST. PAUL_2	USERRECORD01		APP

The following station failed the de minimis interference criteria.

26D MN ST. PAUL_2 USERRECORD01
 ERP 45.00 kW HAAT 413.0 m RCAMSL 693.0 m
 Antenna usr USRPAT01

Due to interference to the following station and scenario: 2

27D WI MENOMONIE BDTV 1757
 ERP 291.00 kW HAAT 350.0 m RCAMSL 655.0 m
 Antenna CDB 999999999999999

Percent Service lost without proposal:	0.0	to BDTV	1757
Percent Service lost with proposal:	2.2	to BDTV	1757

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Analysis of Interference to Affected Station 7

Analysis of current record

Channel	Call	City/State	Application Ref. No.
26	KTCI-D26	ST. PAUL_2 MN	USERRECORD-01

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
26	KFTC	BEMIDJI MN	298.0	LIC	BDTV -0820
26	KTCI-TV	ST. PAUL MN	0.0	LIC	BDTV -0843
26	WKOW-TV	MADISON WI	362.9	LIC	BDTV -1754
27	NEW	DULUTH MN	207.2	LIC	BDTV -0827
27	KRWF	REDWOOD FALLS MN	197.3	LIC	BDTV -0838
27	WHWC-TV	MENOMONIE WI	99.0	LIC	BDTV -1757

Total scenarios = 1

Result key: 7
 Scenario 1 Affected station 7
 Before Analysis

Results for: 26A MN ST. PAUL_2 USERRECORD01 APP
 HAAT 413.0 m, ATV ERP 45.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	3067975	20762.3
not affected by terrain losses	3065914	20701.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	3013153	19570.2
lost to ATV IX only	3013153	19570.2
lost to all IX	3013153	19570.2

Potential Interfering Stations Included in above Scenario 1

26A MN ST. PAUL	BDTV	0843	LIC
27A WI MENOMONIE	BDTV	1757	LIC

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