

ENGINEERING STATEMENT
APPLICATION FOR A DTV
CONSTRUCTION PERMIT FOR
AN EXISTING TELEVISION TRANSLATOR
K29EB, GRAND RAPIDS, MINNESOTA
CHANNEL 29 14.909 KW MAX ERP 606 METERS RC/AMSL

MARCH 2006

COHEN, DIPPELL AND EVERIST, P.C.
CONSULTING ENGINEERS
RADIO AND TELEVISION
WASHINGTON, D.C.

COHEN, DIPPELL AND EVERIST, P. C.


City of Washington)
) ss
District of Columbia)

Ryan Felmlee, being duly sworn upon his oath, deposes and states that:

He is a graduate electrical engineer of the Pennsylvania State University, has successfully completed the Engineer-In-Training examination ("EIT") in the State of Virginia, and is a staff engineer of Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1300 L Street, N.W., Suite 1100, Washington, D.C. 20005;

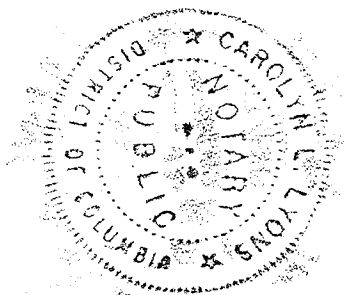
That the attached engineering report was prepared by him or under his supervision and direction and

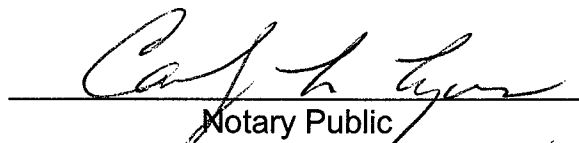
That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true.



Ryan Felmlee
District of Columbia

Subscribed and sworn to before me this 29th day of March, 2006.





Notary Public

My Commission Expires: 2/28/2008

INTRODUCTION

This engineering statement has been prepared on behalf of KQDS Acquisition Corp., licensee of TV translator K29EB, Grand Rapids, Minnesota. This statement supports the licensee's request to convert to DTV operation on the currently licensed analog Channel 29, commonly referred to as "flash-cut" with a DTV effective radiated power ("ERP") of 14.909 kW at a radiation center above mean sea level ("RCAMSL") of 606 meters.

TRANSMITTER SITE

The existing antenna will be utilized and no significant alteration of the tower is proposed. The existing tower is located approximately 2 miles north-northwest of Taconite, Minnesota. There is no change in transmitter site. The geographic coordinates of the site follow below.

North Latitude: 47° 20' 22"

West Longitude: 93° 23' 48"

NAD-27

ELEVATION DATA

Elevation of site above mean sea level	461.5 meters (1514 feet)
Center of radiation of antenna above ground level	146 meters (479 feet)
Center of radiation of antenna above mean sea level	607.5 meters (1993 feet)
Overall height of tower above ground level	151.5 meters (497 feet)

The Antenna Structure Registration Number (“ASRN”) for the existing tower is 104885.

EQUIPMENT DATA

Transmitter:	Type-approved
Transmission Line:	Cablewave, Type HCC300-50J, 1-5/8", 146.3 meters (480 feet) with 68.8% efficiency
Antenna:	Bogner, B16UG with maximum gain of 17.5 and 0° electrical beam tilt

POWER DATA

Transmitter:	0.385 kW	-4.14 dBk
Transmission Line Loss:	31.2%	0.12 kW
Input Into Antenna:	0.265 kW	-5.76 dBk
Antenna Gain:	56.2	17.5 dB
ERP:	14.909 kW	11.73 dBk

As indicated above, the transmitter with typical power output of 0.385 kW will deliver 0.265 kW to the input of the antenna. The antenna, having a maximum gain of 17.5 dB and an electrical beam tilt of 0°, will produce maximum ERP of 14.909 kW. A coverage map providing the protected contour of the proposed facility compared to the currently licensed operation of K29EB has been included as Exhibit E-1 of this report. The antenna elevation pattern and associated tabulation and the horizontal pattern and accompanying tabulation are on file at the Commission as this antenna make and model has been designated as “Off-the-Shelf”, and is the currently licensed antenna for K29EB with no alterations proposed.

OTHER BROADCAST FACILITIES

A brief analysis was completed to determine the presence of stations in the vicinity of the K29EB tower using the March 17, 2006, data contained within the Commission's Consolidated Database System ("CDBS"). Within 500 meters of the proposed site, there is one authorized FM radio stations, no authorized DTV and NTSC television stations, and no authorized low-power analog television and television translator stations aside from K29EB. There are no AM facilities within 3.2 km of the existing tower. Although no adverse technical affects are expected due to the proposed changes, the licensee will take measures to resolve any problems proven to be related to the changes proposed in this application.

Interference Analysis

A study of predicted interference caused by the proposed K29EB low-power digital operation has been performed using the Longley-Rice program for which the source data has been posted by the Commission on its website at http://www.fcc.gov/oet/dtv/dtv_apps.html. The FCC's FORTRAN-77 code was modified only to the extent necessary (primarily input/output handling) for the program to run on a Microsoft Windows XP/Intel platform. Comparison of service/interference areas and population indicates this model closely matches the FCC's digital low-power TV/translator evaluation program. Best efforts have been made to use data and calculation identical to the FCC's program. The model employs the Longley-Rice propagation methodology and evaluates in grid cells of approximately 1 sq. km. Using 3-second terrain data sampled approximately every 1.0 km at one-degree azimuth intervals with 1990 census centroids, all studies are based upon data in the current CDBS database update of the FCC's engineering database. A Longley-Rice study was performed with the proposed K29EB

low-power digital facilities and all relevant stations listed in the FCC database as of March 16, 2006. The study results and the included stations are listed in Exhibit E-2.

Other Licensed and Broadcast Facilities

No adverse technical effect is anticipated by the proposed DTV operation to any other FCC licensed facility. If required, the licensee will install filters or take other measures as necessary to resolve the problem.

FCC Rule, Section 1.1307

The proposed 14.909 kW directional operation will utilize a Bogner, Type B16UG antenna (or equivalent) described above with a center of radiation above ground of 146 meters. The proposed antenna is side-mounted on an existing tower with an overall height of 151.5 meters above ground. The proposed digital operation of K29EB will create a radiofrequency field level of $1.5 \mu\text{W}/\text{cm}^2$ at the base of the tower. The level is less than 0.4% of the maximum permissible exposure (“MPE”) limit for the general population and uncontrolled environment.

Authorized personnel and rigging contractors will be alerted to the potential zone of high field levels on the tower, and if necessary, the station will operate with reduced power or terminate the operation of the transmitter as appropriate when it is necessary for authorized personnel or contractors to perform work on or near the tower. Workers and the general public, therefore, will not be subjected to RFF levels in excess of the current FCC guidelines.

Environmental Assessment

An environmental assessment (“EA”) is categorically excluded under Section 1.1306 of the FCC Rules and Regulations as the tower was constructed prior to the requirements specified in WT Docket No. 03-128 and the applicant indicates:

- (a)(1) The existing tower is not located in an officially designated wilderness area.
- (a)(2) The existing tower is not located in an officially designated wildlife preserve.
- (a)(3) The proposed facilities will not affect any listed threatened or endangered species or habitats.
- (a)(3)(ii) The proposed facilities will not jeopardize the continued existence of any proposed endangered or threatened species or likely to result in the destruction or adverse modification of proposed critical habitats.
- (a)(4) The proposed facilities located on a tower which was built prior to the adoption of WT Docket No. 03-128 and is grandfathered and has not affected any known districts, sites, buildings, structures, or objects significant in American history, architecture, archaeology, engineering, or culture.
- (a)(5) The existing tower is not located near any known Indian religious sites.
- (a)(6) The existing tower is not located in a flood plain.
- (a)(7) The installation of the DTV facilities on an existing tower will not involve a significant change in surface features of the ground in the vicinity of the tower.
- (a)(8) It is not proposed to equip the tower with high intensity white lights unless required by the FAA.
- (b) Workers and the general public will not be subjected to RFF levels in excess of the current FCC guidelines contained in OET Bulletin No. 65, Edition 97-01, dated August 1997 and Supplement A.



EXHIBIT E-2

DLPTV ANALYSIS RESULTS

FOR THE PROPOSED DIGITAL “FLASH-CUT”

OPERATION OF

K29EB, GRAND RAPIDS, MINNESOTA

K29EB, Grand Rapids, Minnesota
1990 Census data selected
TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 03-23-2006 Time: 16:39:29

Record Selected for Analysis

K29EB BLTT -20060314TOM GRAND RAPIDS MN US
Channel 29 ERP 15.49 kW HAAT 194 m RCAMSL 606 m
Latitude 47 -20-22 Longitude 93 -23-48
Status LIC Zone Border C Offset -
Dir Antenna Make CDB Model 00000000000946 Beam tilt N Ref Azimuth 227
Last update Cutoff date 18991231 Docket
Comments
Applicant KQDS ACQUISITION CORP.

Cell Size for Service Analysis 1.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Not full service station

Facility does not meet maximum power limit

Azimuth (Deg)	ERP (kW)	HAAT (m)	51.0 dBu F(50,90) (km)
0.0	2.142	197.8	39.6
45.0	2.275	187.9	39.4
90.0	15.068	180.3	48.7
135.0	2.793	197.2	41.0
180.0	0.455	203.6	31.9
225.0	0.419	196.0	31.0
270.0	3.946	200.2	42.9
315.0	13.231	203.5	49.4

Contour Overlap to Proposed Station

Contour Overlap Evaluation to Proposed Station Complete

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 = 125.7km

Proposed facility is beyond the Mexican coordination distance

results.txt

Proposed station is OK toward AM broadcast stations

Start of Interference Analysis

Channel	Proposed Station Call	City/State	ARN
29	K29EB	GRAND RAPIDS MN	BLTT 20060314TOM

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
14	KLKS-LP	BREEZY POINT MN	104.3	LIC	BLTTTL	-19950313IB
15	K15GT	HIBBING MN	33.6	LIC	BLTT	-20040909ABE
15	K15GT	HIBBING MN	33.6	STA	BSTA	-20030806DDZ
21	KQDS-TV	DULUTH MN	114.3	LIC	BLCT	-20000320AAX
22	KAWB	BRAINERD MN	130.1	LIC	BLET	-19880304KG
25	K25IN	DULUTH MN	117.7	CP	BNPTTL	-20000830BBV
26	KFTC	BEMIDJI MN	108.3	LIC	BLCT	-19991203AAP
27	960920LP	DULUTH MN	113.8	APP	BPCT	-19960920LP
28	K28DD	BEMIDJI MN	108.3	CP	BPTT	-20050804AAE
28	K28DD	BEMIDJI MN	108.3	LIC	BLTT	-19921030JE
28	KAWB	BRAINERD MN	130.1	LIC	BLEDT	-20030429AAJ
29	K29CC	APPLETON MN	312.2	LIC	BLTTTL	-19890815IJ
29	WFTC	MINNEAPOLIS MN	254.4	LIC	BLCT	-19910823KG
29	WAOW-TV	WAUSAU WI	392.0	CP	BPCDT	-19991026ABQ
30	K30DK	BEMIDJI MN	108.3	LIC	BLTT	-19920901IC
30	K30IN	ROYALTON MN	175.3	CP	BNPTTL	-20000831CHR
32	K32FY	PARK RAPIDS MN	130.0	LIC	BLTT	-20020429AAS
33	K33ET	AITKIN MN	96.6	LIC	BLTT	-19970530JC

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Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
14	KLKS-LP	BREEZY POINT MN	BLTTTL	-19950313IB

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
14	KSAX-DT	ALEXANDRIA MN	123.2	PLN	DTVPLN	-DTVP0127
14	KJRR-DT	JAMESTOWN ND	346.0	PLN	DTVPLN	-DTVP0132
14	WXOW-DT	LA CROSSE WI	384.2	PLN	DTVPLN	-DTVP0147
14	WXOW-TV	LACROSSE WI	384.2	CP MOD	BMPCDT	-20041001AOG
18	Kawe	BEMIDJI MN	123.3	LIC	BLEDT	-20040120AEA
18	Kawe-DT	BEMIDJI MN	123.3	PLN	DTVPLN	-DTVP0294
28	KAWB	BRAINERD MN	25.8	LIC	BLEDT	-20030429AAJ
28	KAWB-DT	BRAINERD MN	25.8	PLN	DTVPLN	-DTVP0673
29	K29EB	GRAND RAPIDS MN	104.3	LIC	BLTT	-20060314TOM
29	K29EB	GRAND RAPIDS MN	104.3	LIC	BLTT	-20021011AAW

Proposed station is beyond the site to
nearest cell evaluation distance

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Analysis of Interference to Affected Station 2

Analysis of current record

Channel	Call	City/State	Application Ref. No.
15	K15GT	HIBBING MN	BLTT -20040909ABE

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
15	KVRR	FARGO ND	260.1	LIC	BLCT -20010914ABC
15	KNRR	PEMBINA ND	375.5	CP	BPCDT -19991101AKT
15	KNRR-DT	PEMBINA ND	375.4	PLN	DTVPLN -DTVP0171
15	WQOW-DT	EAU CLAIRE WI	286.7	PLN	DTVPLN -DTVP0193
15	WQOW-TV	EAU CLAIRE WI	309.0	CP MOD	BMPCDT -20041001AOM
17	KNLD-DT	DULUTH MN	90.9	PLN	DTVPLN -DTVP0255
17	KQDS-TV	DULUTH MN	91.0	CP	BPCDT -19991028ABI
18	Kawe	BEMIDJI MN	120.3	LIC	BLEDT -20040120AEA
18	Kawe-DT	BEMIDJI MN	120.3	PLN	DTVPLN -DTVP0294
19	KBJR-DT	SUPERIOR WI	91.5	PLN	DTVPLN -DTVP0363
19	KBJR-TV	SUPERIOR WI	91.5	CP	BPCDT -19991028AFF
29	K29EB	GRAND RAPIDS MN	33.6	LIC	BLTT -20060314TOM
29	K29EB	GRAND RAPIDS MN	33.6	LIC	BLTT -20021011AAW

Proposal causes no interference

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Analysis of Interference to Affected Station 3

Analysis of current record

Channel	Call	City/State	Application Ref. No.
15	K15GT	HIBBING MN	BSTA -20030806DDZ

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
15	KVRR	FARGO ND	260.1	LIC	BLCT -20010914ABC
15	KNRR	PEMBINA ND	375.5	CP	BPCDT -19991101AKT
15	KNRR-DT	PEMBINA ND	375.4	PLN	DTVPLN -DTVP0171
15	WQOW-DT	EAU CLAIRE WI	286.7	PLN	DTVPLN -DTVP0193
15	WQOW-TV	EAU CLAIRE WI	309.0	CP MOD	BMPCDT -20041001AOM
17	KNLD-DT	DULUTH MN	90.9	PLN	DTVPLN -DTVP0255
17	KQDS-TV	DULUTH MN	91.0	CP	BPCDT -19991028ABI
18	Kawe	BEMIDJI MN	120.3	LIC	BLEDT -20040120AEA
18	Kawe-DT	BEMIDJI MN	120.3	PLN	DTVPLN -DTVP0294
19	KBJR-DT	SUPERIOR WI	91.5	PLN	DTVPLN -DTVP0363
19	KBJR-TV	SUPERIOR WI	91.5	CP	BPCDT -19991028AFF
29	K29EB	GRAND RAPIDS MN	33.6	LIC	BLTT -20060314TOM
29	K29EB	GRAND RAPIDS MN	33.6	LIC	BLTT -20021011AAW

Proposal causes no interference

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Analysis of Interference to Affected Station 4

NTSC Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
21	KNLD	DULUTH MN	DTVPLN	-NPLN0757

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
17	KNLD-DT	DULUTH MN	0.0	PLN	DTVPLN	-DTVP0255
19	KBJR-DT	SUPERIOR WI	0.7	PLN	DTVPLN	-DTVP0363
20	KCCW-DT	WALKER MN	178.4	PLN	DTVPLN	-DTVP0382
21	WFTC-DT	MINNEAPOLIS MN	208.1	PLN	DTVPLN	-DTVP0420
21	WDAY-DT	FARGO ND	386.6	PLN	DTVPLN	-DTVP0424
21	WSCO-DT	SURING WI	376.9	PLN	DTVPLN	-DTVP0439
22	KAWB	BRAINERD MN	183.6	PLN	DTVPLN	-NPLN0758
28	WHWCTV	MENOMONIE WI	195.3	PLN	DTVPLN	-NPLN1664
36	WIRT-DT	HIBBING MN	90.9	PLN	DTVPLN	-DTVP0963
36	WLEFTV	PARK FALLS WI	170.0	PLN	DTVPLN	-NPLN1743

Results for: 21N MN DULUTH		DTVPLN	NPLN0757	PLN
	POPULATION	AREA (sq km)		
within Noise Limited Contour	179279	5760.9		
not affected by terrain losses	178514	5732.4		
lost to NTSC IX	0	0.0		
lost to additional IX by ATV	9414	482.5		
lost to all IX	9414	482.5		

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
21	KQDS-TV	DULUTH MN	BLCT	-20000320AAX

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
17	KNLD-DT	DULUTH MN	0.1	PLN	DTVPLN	-DTVP0255
17	KQDS-TV	DULUTH MN	0.0	CP	BPCDT	-19991028ABI
19	KBJR-DT	SUPERIOR WI	0.6	PLN	DTVPLN	-DTVP0363
19	KBJR-TV	SUPERIOR WI	0.6	CP	BPCDT	-19991028AFF
20	KCCW-DT	WALKER MN	178.5	PLN	DTVPLN	-DTVP0382
20	KCCW-TV	WALKER MN	178.3	CP	BPCDT	-19991025ACM
21	WFTC	MINNEAPOLIS MN	208.0	LIC	BLCDT	-20011009ADF
21	WFTC-DT	MINNEAPOLIS MN	208.0	PLN	DTVPLN	-DTVP0420
21	WDAY-DT	FARGO ND	386.6	PLN	DTVPLN	-DTVP0424
21	WDAY-TV	FARGO ND	386.7	CP	BPCDT	-19991028ABK
21	WSCO-DT	SURING WI	376.8	PLN	DTVPLN	-DTVP0439
22	KAWB	BRAINERD MN	183.7	LIC	BLET	-19880304KG
28	WHWC-TV	MENOMONIE WI	195.1	LIC	BMLET	-20021118ACH
29	K29EB	GRAND RAPIDS MN	114.3	LIC	BLTT	-20060314TOM
36	WIRT	HIBBING MN	91.0	CP	BPCDT	-19991027ABC
36	WIRT-DT	HIBBING MN	91.0	PLN	DTVPLN	-DTVP0963
36	WLEF-TV	PARK FALLS WI	170.0	LIC	BMLET	-20031211AAB

Proposed station is beyond the site to
nearest cell evaluation distance

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Analysis of Interference to Affected Station 5

NTSC Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
22	KAWB	BRAINERD MN	DTVPLN	-NPLN0758

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
14	KSAX-DT	ALEXANDRIA MN	97.5	PLN	DTVPLN	-DTVP0127
15	KVRR	FARGO ND	137.9	PLN	DTVPLN	-NPLN0956
19	KVRR-DT	FARGO ND	137.9	PLN	DTVPLN	-DTVP0346
20	KCCW-DT	WALKER MN	56.9	PLN	DTVPLN	-DTVP0382
21	KNLD	DULUTH MN	183.6	PLN	DTVPLN	-NPLN0757
21	WFTC-DT	MINNEAPOLIS MN	183.7	PLN	DTVPLN	-DTVP0420
22	KLGT-DT	MINNEAPOLIS MN	183.7	PLN	DTVPLN	-DTVP0460
22	KTTM-DT	HURON SD	390.1	PLN	DTVPLN	-DTVP0475
23	KLGTTV	MINNEAPOLIS MN	183.7	PLN	DTVPLN	-NPLN0761
24	KCCO-DT	ALEXANDRIA MN	97.2	PLN	DTVPLN	-DTVP0538
26	NEW	BEMIDJI MN	110.2	PLN	DTVPLN	-NPLN0766
29	WFTC	MINNEAPOLIS MN	183.7	PLN	DTVPLN	-NPLN0771

Results for: 22N MN BRAINERD	DTVPLN	NPLN0758	PLN
	POPULATION	AREA (sq km)	
within Noise Limited Contour	101066	9932.8	
not affected by terrain losses	101066	9929.8	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	786	254.0	
lost to all IX	786	254.0	

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
22	KAWB	BRAINERD MN	BLET	-19880304KG

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
14	KSAX-DT	ALEXANDRIA MN	97.5	PLN	DTVPLN	-DTVP0127
15	KVRR	FARGO ND	137.9	LIC	BLCT	-20010914ABC
19	KVRR	FARGO ND	137.9	CP	BPCDT	-19991028ACA
19	KVRR-DT	FARGO ND	137.9	PLN	DTVPLN	-DTVP0346
20	KCCW-DT	WALKER MN	56.9	PLN	DTVPLN	-DTVP0382
20	KCCW-TV	WALKER MN	56.9	CP	BPCDT	-19991025ACM
21	KQDS-TV	DULUTH MN	183.7	LIC	BLCT	-20000320AAX
21	WFTC	MINNEAPOLIS MN	183.7	LIC	BLCDDT	-20011009ADF
21	WFTC-DT	MINNEAPOLIS MN	183.7	PLN	DTVPLN	-DTVP0420
22	KLGT-DT	MINNEAPOLIS MN	183.7	PLN	DTVPLN	-DTVP0460
22	KMWB	MINNEAPOLIS MN	182.7	CP	BPCDT	-19991027ADG
22	KTTM	HURON SD	390.1	CP	BPCDT	-19991029ADD
22	KTTM-DT	HURON SD	390.1	PLN	DTVPLN	-DTVP0475
23	KMWB	MINNEAPOLIS MN	182.7	LIC	BLCT	-20030401AXI
24	KCCO-DT	ALEXANDRIA MN	97.2	PLN	DTVPLN	-DTVP0538
24	KCCO-TV	ALEXANDRIA MN	96.9	CP	BPCDT	-19991025ACO
26	KFTC	BEMIDJI MN	119.5	LIC	BLCT	-19991203AAP
29	K29EB	GRAND RAPIDS MN	130.1	LIC	BLTT	-20060314TOM
29	WFTC	MINNEAPOLIS MN	183.7	LIC	BLCT	-19910823KG
36	KSAX	ALEXANDRIA MN	97.4	CP MOD	BMPCDT	-20020605AAX

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Proposed station is beyond the site to
nearest cell evaluation distance

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Analysis of Interference to Affected Station 6

Analysis of current record

Channel	Call	City/State	Application Ref. No.
25	K25IN	DULUTH MN	BNPTTL -20000830BBV

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
17	KNLD-DT	DULUTH MN	6.6	PLN	DTVPLN -DTVP0255
17	KQDS-TV	DULUTH MN	6.5	CP	BPCDT -19991028ABI
24	NEW	DULUTH MN	0.0	APP	BNPTTL -20000830BTS
25	WAST-LP	ASHLAND WI	92.7	LIC	BLTTL -20050906AAS
25	WLAX	LA CROSSE WI	331.0	LIC	BLCT -20000314AAA
29	K29EB	GRAND RAPIDS MN	117.7	LIC	BLTT -20060314TOM
29	K29EB	GRAND RAPIDS MN	117.7	LIC	BLTT -20021011AAW
33	KDLH	DULUTH MN	5.6	CP	BPCDT -19991028ADK
33	KDLH-DT	DULUTH MN	5.6	PLN	DTVPLN -DTVP0854
40	NEW	DULUTH MN	1.8	APP	BNPTTL -20000828AOT

Proposed station is beyond the site to
nearest cell evaluation distance

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Analysis of Interference to Affected Station 7

NTSC Baseline Analysis

Channel	Call	City/State	Application Ref. No.
26	NEW	BEMIDJI MN	DTVPLN -NPLN0766

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
18	KAWB-DT	BEMIDJI MN	47.1	PLN	DTVPLN -DTVP0294
19	KVRR-DT	FARGO ND	128.1	PLN	DTVPLN -DTVP0346
26	KMSP-DT	MINNEAPOLIS MN	290.5	PLN	DTVPLN -DTVP0603
27	NEW	GRAND FORKS ND	183.2	PLN	DTVPLN -NPLN0978
28	KAWB-DT	BRAINERD MN	110.2	PLN	DTVPLN -DTVP0673

Results for: 26N MN BEMIDJI	DTVPLN	NPLN0766	PLN
within Noise Limited Contour	69790	13829.7	
not affected by terrain losses	69252	13613.6	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	938	383.6	
lost to all IX	938	383.6	

Analysis of current record

results.txt

Channel	Call	City/State	Application	Ref. No.
26	KFTC	BEMIDJI MN	BLCT	-19991203AAP

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
18	Kawe	BEMIDJI MN	36.1	LIC	BLEDT	-20040120AEA
18	Kawe-DT	BEMIDJI MN	36.0	PLN	DTVPLN	-DTVP0294
19	KVRR	FARGO ND	138.2	CP	BPCDT	-19991028ACA
19	KVRR-DT	FARGO ND	138.2	PLN	DTVPLN	-DTVP0346
26	KMSP-DT	MINNEAPOLIS MN	298.0	PLN	DTVPLN	-DTVP0603
26	KMSP-TV	MINNEAPOLIS/ST. PAUL MN	298.0	LIC	BLCDT	-20000712ABH
27	KCPM	GRAND FORKS ND	175.6	CP MOD	BMPCT	-20031223AAH
28	KAWB	BRAINERD MN	119.5	LIC	BLEDT	-20030429AAJ
28	KAWB-DT	BRAINERD MN	119.5	PLN	DTVPLN	-DTVP0673
29	K29EB	GRAND RAPIDS MN	108.3	LIC	BLTT	-20060314TOM

Proposed station is beyond the site to
nearest cell evaluation distance

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Analysis of Interference to Affected Station 8

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
27	960920LP	DULUTH MN	BPCT	-19960920LP

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
19	KBJR-DT	SUPERIOR WI	1.0	PLN	DTVPLN	-DTVP0363
19	KBJR-TV	SUPERIOR WI	1.0	CP	BPCDT	-19991028AFF
27	KRWF	REDWOOD FALLS MN	366.5	CP MOD	BMPCDT	-20010518AAO
27	KRWF-DT	REDWOOD FALLS MN	366.5	PLN	DTVPLN	-DTVP0635
27	KCPM	GRAND FORKS ND	392.9	CP MOD	BMPCT	-20031223AAH
27	WHWC-DT	MENOMONIE WI	195.3	PLN	DTVPLN	-DTVP0657
27	WHWC-TV	MENOMONIE WI	195.3	LIC	BLEDT	-20040824AAF
28	KAWB	BRAINERD MN	183.2	LIC	BLEDT	-20030429AAJ
28	KAWB-DT	BRAINERD MN	183.1	PLN	DTVPLN	-DTVP0673
28	WHWC-TV	MENOMONIE WI	195.3	LIC	BMLET	-20021118ACH
29	K29EB	GRAND RAPIDS MN	113.8	LIC	BLTT	-20060314TOM
41	KPXM	ST. CLOUD MN	198.7	LIC	BLCT	-19850822KK

Proposal causes no interference

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Analysis of Interference to Affected Station 9

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
28	K28DD	BEMIDJI MN	BPTT	-20050804AAE

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
20	KCCW-DT	WALKER MN	65.5	PLN	DTVPLN	-DTVP0382
20	KCCW-TV	WALKER MN	65.5	CP	BPCDT	-19991025ACM
28	KAWB	BRAINERD MN	119.5	LIC	BLEDT	-20030429AAJ
28	KAWB-DT	BRAINERD MN	119.5	PLN	DTVPLN	-DTVP0673
28	KABY-DT	ABERDEEN SD	352.6	PLN	DTVPLN	-DTVP0683
28	KABY-TV	ABERDEEN SD	353.2	LIC	BLCDDT	-20021118ACA
28	WHWC-TV	MENOMONIE WI	352.4	LIC	BMLET	-20021118ACH
29	K29EB	GRAND RAPIDS MN	108.3	LIC	BLTT	-20060314TOM
29	K29EB	GRAND RAPIDS MN	108.3	LIC	BLTT	-20021011AAW
36	WIRT	HIBBING MN	140.9	CP	BPCDT	-19991027ABC
36	WIRT-DT	HIBBING MN	140.8	PLN	DTVPLN	-DTVP0963

Proposal causes no interference

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Analysis of Interference to Affected Station 10

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
28	K28DD	BEMIDJI MN	BLTT	-19921030JE

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
20	KCCW-DT	WALKER MN	65.6	PLN	DTVPLN	-DTVP0382
20	KCCW-TV	WALKER MN	65.5	CP	BPCDT	-19991025ACM
28	KAWB	BRAINERD MN	119.5	LIC	BLEDT	-20030429AAJ
28	KAWB-DT	BRAINERD MN	119.5	PLN	DTVPLN	-DTVP0673
28	KABY-DT	ABERDEEN SD	352.6	PLN	DTVPLN	-DTVP0683
28	KABY-TV	ABERDEEN SD	353.2	LIC	BLCDDT	-20021118ACA
28	WHWC-TV	MENOMONIE WI	352.4	LIC	BMLET	-20021118ACH
29	K29EB	GRAND RAPIDS MN	108.3	LIC	BLTT	-20060314TOM
29	K29EB	GRAND RAPIDS MN	108.3	LIC	BLTT	-20021011AAW
36	WIRT	HIBBING MN	140.9	CP	BPCDT	-19991027ABC
36	WIRT-DT	HIBBING MN	140.8	PLN	DTVPLN	-DTVP0963

Proposal causes no interference

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Analysis of Interference to Affected Station 11

DTV Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
28	KAWB-DT	BRAINERD MN	DTVPLN	-DTVP0673

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
28	KABY-DT	ABERDEEN SD	303.4	PLN	DTVPLN	-DTVP0683
28	WYOW-DT	EAGLE RIVER WI	408.1	PLN	DTVPLN	-DTVP0689
28	WHWCTV	MENOMONIE WI	253.0	PLN	DTVPLN	-NPLN1664
29	WFTC	MINNEAPOLIS MN	183.7	PLN	DTVPLN	-NPLN0771

Results for: 28A MN BRAINERD

DTVPLN DTVP0673 PLN

results.txt

HAAT 227.0 m, ATV ERP 50.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	101066	9932.8
not affected by terrain losses	101066	9932.8
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	0	0.0

NTSC Baseline Analysis

Channel	Call	City/State	Application Ref. No.
22	KAWB	BRAINERD MN	DTVPLN -NPLN0758

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
14	KSAX-DT	ALEXANDRIA MN	97.5	PLN	DTVPLN -DTVP0127
15	KVRR	FARGO ND	137.9	PLN	DTVPLN -NPLN0956
19	KVRR-DT	FARGO ND	137.9	PLN	DTVPLN -DTVP0346
20	KCCW-DT	WALKER MN	56.9	PLN	DTVPLN -DTVP0382
21	KNLD	DULUTH MN	183.6	PLN	DTVPLN -NPLN0757
21	WFTC-DT	MINNEAPOLIS MN	183.7	PLN	DTVPLN -DTVP0420
22	KLGT-DT	MINNEAPOLIS MN	183.7	PLN	DTVPLN -DTVP0460
22	KTTM-DT	HURON SD	390.1	PLN	DTVPLN -DTVP0475
23	KLGGTV	MINNEAPOLIS MN	183.7	PLN	DTVPLN -NPLN0761
24	KCCO-DT	ALEXANDRIA MN	97.2	PLN	DTVPLN -DTVP0538
26	NEW	BEMIDJI MN	110.2	PLN	DTVPLN -NPLN0766
29	WFTC	MINNEAPOLIS MN	183.7	PLN	DTVPLN -NPLN0771

Results for: 22N MN BRAINERD DTVPLN NPLN0758 PLN

	POPULATION	AREA (sq km)
within Noise Limited Contour	101066	9932.8
not affected by terrain losses	101066	9929.8
lost to NTSC IX	0	0.0
lost to additional IX by ATV	786	254.0
lost to all IX	786	254.0

Analysis of current record

Channel	Call	City/State	Application Ref. No.
28	KAWB	BRAINERD MN	BLEDT -20030429AAJ

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
27	960920LP	DULUTH MN	183.2	APP	BPCT -19960920LP
28	KABY-DT	ABERDEEN SD	303.4	PLN	DTVPLN -DTVP0683
28	KABY-TV	ABERDEEN SD	304.0	LIC	BLCDDT -20021118ACA
28	WYOW	EAGLE RIVER WI	408.1	CP MOD	BMPCDDT -20041001ANY
28	WYOW-DT	EAGLE RIVER WI	408.1	PLN	DTVPLN -DTVP0689
28	WHWC-TV	MENOMONIE WI	253.0	LIC	BMLETT -20021118ACH
29	K29EB	GRAND RAPIDS MN	130.1	LIC	BLTT -20060314TOM
29	WFTC	MINNEAPOLIS MN	183.7	LIC	BLCT -19910823KG

Proposal causes no interference

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Analysis of Interference to Affected Station 12

results.txt

Analysis of current record

Channel	Call	City/State	Application Ref. No.
29	K29CC	APPLETON MN	BLTTL -19890815IJ

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
25	KDLO-DT	FLORENCE SD	127.3	PLN	DTVPLN -DTVP0582
27	KRWF	REDWOOD FALLS MN	87.0	CP MOD	BMPCDT -20010518AAO
27	KRWF-DT	REDWOOD FALLS MN	87.0	PLN	DTVPLN -DTVP0635
29	K29EB	GRAND RAPIDS MN	312.2	LIC	BLTT -20060314TOM
29	K29EB	GRAND RAPIDS MN	312.2	LIC	BLTT -20021011AAW
29	WFTC	MINNEAPOLIS MN	225.7	LIC	BLCT -19910823KG
29	KSFY-DT	SIOUX FALLS SD	189.6	PLN	DTVPLN -DTVP0720
29	KSFY-TV	SIOUX FALLS SD	189.6	LIC	BLCDDT -20030404AAM
31	KWCM-DT	APPLETON MN	1.5	PLN	DTVPLN -DTVP0779
36	KSAX	ALEXANDRIA MN	86.2	CP MOD	BMPCDT -20020605AAX
43	KRWF	REDWOOD FALLS MN	87.0	LIC	BLCT -19870424KH
44	NEW	APPLETON MN	0.0	APP	BNPTTL -20000831BXO

Proposal causes no interference

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Analysis of Interference to Affected Station 13

NTSC Baseline Analysis

Channel	Call	City/State	Application Ref. No.
29	WFTC	MINNEAPOLIS MN	DTVPLN -NPLN0771

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
21	WFTC-DT	MINNEAPOLIS MN	0.0	PLN	DTVPLN -DTVP0420
22	KAWB	BRAINERD MN	183.7	PLN	DTVPLN -NPLN0758
22	KLGT-DT	MINNEAPOLIS MN	0.0	PLN	DTVPLN -DTVP0460
26	KMSP-DT	MINNEAPOLIS MN	0.0	PLN	DTVPLN -DTVP0603
27	WHWC-DT	MENOMONIE WI	99.0	PLN	DTVPLN -DTVP0657
28	KAWB-DT	BRAINERD MN	183.7	PLN	DTVPLN -DTVP0673
28	WHWCTV	MENOMONIE WI	99.0	PLN	DTVPLN -NPLN1664
29	KSFY-DT	SIOUX FALLS SD	320.8	PLN	DTVPLN -DTVP0720
29	WAOW-DT	WAUSAU WI	270.2	PLN	DTVPLN -DTVP0727
30	WHLA-DT	LA CROSSE WI	197.1	PLN	DTVPLN -DTVP0762
32	WCCO-DT	MINNEAPOLIS MN	1.3	PLN	DTVPLN -DTVP0818
43	KRWF	REDWOOD FALLS MN	197.3	PLN	DTVPLN -NPLN0783
44	KVBM-DT	MINNEAPOLIS MN	1.3	PLN	DTVPLN -DTVP1207

Results for: 29N MN MINNEAPOLIS	DTVPLN	NPLN0771	PLN
	POPULATION	AREA (sq km)	
within Noise Limited Contour	2679059	22547.8	
not affected by terrain losses	2671900	22312.6	
lost to NTSC IX	11410	942.9	
lost to additional IX by ATV	5444	205.5	
lost to all IX	16854	1148.4	

Analysis of current record

Channel	Call	City/State	Application Ref. No.
			Page 10

29 WFTC MINNEAPOLIS MN results.txt BLCT -19910823KG

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
21	WFTC	MINNEAPOLIS MN	0.0	LIC	BLCDDT	-20011009ADF
21	WFTC-DT	MINNEAPOLIS MN	0.0	PLN	DTVPLN	-DTVP0420
22	KAWB	BRAINERD MN	183.7	LIC	BLET	-19880304KG
22	KLGT-DT	MINNEAPOLIS MN	0.0	PLN	DTVPLN	-DTVP0460
22	KMWB	MINNEAPOLIS MN	1.3	CP	BPCDDT	-19991027ADG
26	KMSP-DT	MINNEAPOLIS MN	0.0	PLN	DTVPLN	-DTVP0603
26	KMSP-TV	MINNEAPOLIS/ST. PAUL MN	0.0	LIC	BLCDDT	-20000712ABH
27	WHWC-DT	MENOMONIE WI	99.0	PLN	DTVPLN	-DTVP0657
27	WHWC-TV	MENOMONIE WI	99.0	LIC	BLEDT	-20040824AAF
28	KAWB	BRAINERD MN	183.7	LIC	BLEDT	-20030429AAJ
28	KAWB-DT	BRAINERD MN	183.7	PLN	DTVPLN	-DTVP0673
28	WHWC-TV	MENOMONIE WI	99.0	LIC	BMLET	-20021118ACH
29	960920IP	DUBUQUE IA	342.0	APP	BPET	-19960920IP
29	K29EB	GRAND RAPIDS MN	254.4	LIC	BLTT	-20060314TOM
29	KSFY-DT	SIOUX FALLS SD	320.8	PLN	DTVPLN	-DTVP0720
29	KSFY-TV	SIOUX FALLS SD	320.8	LIC	BLCDDT	-20030404AAM
29	WAOW-DT	WAUSAU WI	270.2	PLN	DTVPLN	-DTVP0727
29	WAOW-TV	WAUSAU WI	270.3	CP	BPCDDT	-19991026ABQ
30	WHLA-DT	LA CROSSE WI	197.1	PLN	DTVPLN	-DTVP0762
30	WHLA-TV	LA CROSSE WI	197.1	LIC	BMLEDT	-20041013AAL
32	WCCO-DT	MINNEAPOLIS MN	1.3	PLN	DTVPLN	-DTVP0818
32	WCCO-TV	MINNEAPOLIS MN	1.3	LIC	BLCDDT	-20010921ABB
43	KRWF	REDWOOD FALLS MN	197.3	LIC	BLCT	-19870424KH
44	KSTC-TV	MINNEAPOLIS MN	1.3	CP MOD	BMPCDDT	-20020306ABH
44	KVBM-DT	MINNEAPOLIS MN	1.3	PLN	DTVPLN	-DTVP1207

Proposal causes no interference

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Analysis of Interference to Affected Station 14

DTV Baseline Analysis

Channel	Call	City/State	Application	Ref. No.
29	WAOW-DT	WAUSAU WI	DTVPLN	-DTVP0727

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
28	WYOW-DT	EAGLE RIVER WI	101.1	PLN	DTVPLN	-DTVP0689
28	WHWCTV	MENOMONIE WI	171.3	PLN	DTVPLN	-NPLN1664
29	WGTU	TRAVERSE CITY MI	364.8	PLN	DTVPLN	-NPLN0770
29	WFTC	MINNEAPOLIS MN	270.2	PLN	DTVPLN	-NPLN0771
30	WHLA-DT	LA CROSSE WI	182.0	PLN	DTVPLN	-DTVP0762

Results for: 29A WI WAUSAU DTVPLN DTVP0727 PLN
 HAAT 369.0 m, ATV ERP 670.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	495858	32483.0
not affected by terrain losses	494265	32344.8
lost to NTSC IX	757	122.2
lost to additional IX by ATV	1035	150.1
lost to ATV IX only	1035	150.1

lost to all IX

results.txt
1792 272.3

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
29	WAOW-TV	WAUSAU WI	BPCDT	-19991026ABQ

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
28	WYOW	EAGLE RIVER WI	101.1	CP MOD	BMPCDT	-20041001ANY
28	WYOW-DT	EAGLE RIVER WI	101.1	PLN	DTVPLN	-DTVP0689
28	WHWC-TV	MENOMONIE WI	171.3	LIC	BMLET	-20021118ACH
28	960722KR	SHEBOYGAN WI	197.4	APP	BPCT	-19960722KR
29	960920IP	DUBUQUE IA	281.7	APP	BPET	-19960920IP
29	WGTU	TRAVERSE CITY MI	364.8	LIC	BLCT	-20041012AIJ
29	K29EB	GRAND RAPIDS MN	392.0	LIC	BLTT	-20060314TOM
29	WFTC	MINNEAPOLIS MN	270.3	LIC	BLCT	-19910823KG
30	WHLA-DT	LA CROSSE WI	182.1	PLN	DTVPLN	-DTVP0762
30	WHLA-TV	LA CROSSE WI	182.1	LIC	BMLEDT	-20041013AAL

Proposal causes no interference

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Analysis of Interference to Affected Station 15

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
30	K30DK	BEMIDJI MN	BLTT	-19920901IC

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
28	KAWB	BRAINERD MN	119.5	LIC	BLEDT	-20030429AAJ
28	KAWB-DT	BRAINERD MN	119.5	PLN	DTVPLN	-DTVP0673
29	K29EB	GRAND RAPIDS MN	108.3	LIC	BLTT	-20060314TOM
29	K29EB	GRAND RAPIDS MN	108.3	LIC	BLTT	-20021011AAW

Proposal causes no interference

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Analysis of Interference to Affected Station 16

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
30	K30IN	ROYALTON MN	BNPTTL	-20000831CHR

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
22	KLGT-DT	MINNEAPOLIS MN	132.4	PLN	DTVPLN	-DTVP0460
22	KMWB	MINNEAPOLIS MN	131.3	CP	BPCDT	-19991027ADG
23	KMWB	MINNEAPOLIS MN	131.3	LIC	BLCT	-20030401AXI
26	KMSP-DT	MINNEAPOLIS MN	132.4	PLN	DTVPLN	-DTVP0603
26	KMSP-TV	MINNEAPOLIS/ST. PAUL MN	132.4	LIC	BLCDT	-20000712ABH
28	KAWB	BRAINERD MN	59.2	LIC	BLEDT	-20030429AAJ

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28	KAWB-DT	BRAINERD MN	59.2	PLN	DTVPLN	-DTVP0673
29	K29EB	GRAND RAPIDS MN	175.3	LIC	BLTT	-20060314TOM
29	K29EB	GRAND RAPIDS MN	175.3	LIC	BLTT	-20021011AAW
29	WFTC	MINNEAPOLIS MN	132.4	LIC	BLCT	-19910823KG
30	K30DK	BEMIDJI MN	178.6	LIC	BLTT	-19920901IC
30	WHLA-DT	LA CROSSE WI	329.4	PLN	DTVPLN	-DTVP0762
30	WHLA-TV	LA CROSSE WI	329.4	LIC	BMLEDT	-20041013AAL
32	WCCO-DT	MINNEAPOLIS MN	131.2	PLN	DTVPLN	-DTVP0818
32	WCCO-TV	MINNEAPOLIS MN	131.3	LIC	BLCDDT	-20010921ABB
34	KTCA-TV	SAINT PAUL MN	132.4	CP MOD	BMPEDT	-20050322AGE
34	KTCA-DT	ST. PAUL MN	132.4	PLN	DTVPLN	-DTVP0888
44	KSTC-TV	MINNEAPOLIS MN	131.2	CP MOD	BMPCDDT	-20020306ABH
44	KVBM-DT	MINNEAPOLIS MN	131.3	PLN	DTVPLN	-DTVP1207
45	KSTC-TV	MINNEAPOLIS-ST. PAUL MN	131.2	LIC	BLCT	-20020318AAJ

Proposed station is beyond the site to
nearest cell evaluation distance

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Analysis of Interference to Affected Station 17

Analysis of current record

Channel	Call	City/State	Application Ref. No.
32	K32FY	PARK RAPIDS MN	BLTT -20020429AAS

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
24	KCCO-DT	ALEXANDRIA MN	138.9	PLN	DTVPLN -DTVP0538
24	KCCO-TV	ALEXANDRIA MN	138.7	CP	BPCDDT -19991025ACO
28	KAWB	BRAINERD MN	70.2	LIC	BLEDT -20030429AAJ
28	KAWB-DT	BRAINERD MN	70.2	PLN	DTVPLN -DTVP0673
29	K29EB	GRAND RAPIDS MN	130.0	LIC	BLTT -20060314TOM
29	K29EB	GRAND RAPIDS MN	130.0	LIC	BLTT -20021011AAW
32	WCCO-DT	MINNEAPOLIS MN	252.8	PLN	DTVPLN -DTVP0818
32	WCCO-TV	MINNEAPOLIS MN	252.9	LIC	BLCDDT -20010921ABB
36	KSAX	ALEXANDRIA MN	137.5	CP MOD	BMPCDDT -20020605AAX

Proposed station is beyond the site to
nearest cell evaluation distance

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Analysis of Interference to Affected Station 18

Analysis of current record

Channel	Call	City/State	Application Ref. No.
33	K33ET	AITKIN MN	BLTT -19970530JC

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
26	KFTC	BEMIDJI MN	126.1	LIC	BLCT -19991203AAP
29	K29EB	GRAND RAPIDS MN	96.6	LIC	BLTT -20060314TOM

			results.txt			
29	K29EB	GRAND RAPIDS MN	96.6	LIC	BLTT	-20021011AAW
33	KAAL	AUSTIN MN	328.0	CP	BPCDT	-19991022ABU
33	KAAL-DT	AUSTIN MN	328.0	PLN	DTVPLN	-DTVP0853
33	KDLH	DULUTH MN	136.9	CP	BPCDT	-19991028ADK
33	KDLH-DT	DULUTH MN	136.9	PLN	DTVPLN	-DTVP0854
36	KSAX	ALEXANDRIA MN	136.5	CP MOD	BMPCDT	-20020605AAX
36	WIRT	HIBBING MN	117.3	CP	BPCDT	-19991027ABC
36	WIRT-DT	HIBBING MN	117.3	PLN	DTVPLN	-DTVP0963
40	KPXM	ST. CLOUD MN	128.6	LIC	BLCDT	-20030903AAU
40	KXLI-DT	ST. CLOUD MN	128.6	PLN	DTVPLN	-DTVP1070

Proposed station is beyond the site to
nearest cell evaluation distance

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Analysis of Interference to Affected Station 19

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
29	K29EB	GRAND RAPIDS MN	BLTT	-20060314TOM

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
22	KAWB	BRAINERD MN	130.1	LIC	BLET	-19880304KG
28	KAWB	BRAINERD MN	130.1	LIC	BLEDT	-20030429AAJ
28	KAWB-DT	BRAINERD MN	130.1	PLN	DTVPLN	-DTVP0673
29	WFTC	MINNEAPOLIS MN	254.4	LIC	BLCT	-19910823KG
29	WAOW-DT	WAUSAU WI	392.0	PLN	DTVPLN	-DTVP0727
29	WAOW-TV	WAUSAU WI	392.0	CP	BPCDT	-19991026ABQ
33	KDLH	DULUTH MN	114.6	CP	BPCDT	-19991028ADK
33	KDLH-DT	DULUTH MN	114.6	PLN	DTVPLN	-DTVP0854
36	WIRT	HIBBING MN	33.6	CP	BPCDT	-19991027ABC
36	WIRT-DT	HIBBING MN	33.6	PLN	DTVPLN	-DTVP0963
43	WDIO-DT	DULUTH MN	114.4	PLN	DTVPLN	-DTVP1167
43	WDIO-TV	DULUTH MN	114.3	CP	BPCDT	-19991027ABA

Total scenarios = 1

Result key: 1
Scenario 1 Affected station 19
Before Analysis

Results for: 29A MN GRAND RAPIDS BLTT 20060314TOM LIC
HAAT 194.0 m, ATV ERP 15.5 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	62558	5543.6
not affected by terrain losses	62558	5543.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	0	0.0

Potential Interfering Stations Included in above Scenario 1

results.txt

#####

FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED

Section III - Engineering (Digital)

TECHNICAL SPECIFICATIONS

Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

TECH BOX

1. Channel: _____
2. Translator Input Channel No. _____
3. Station proposed to be rebroadcast:

Call Sign	City	State	Channel
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4. Antenna Location Coordinates: (NAD 27)

_____ ° _____ ' _____ " ☐ N ☐ S Latitude
_____ ° _____ ' _____ " ☐ E ☐ W Longitude

5. Antenna Structure Registration Number: _____

☐

Not applicable

See Explanation
in Exhibit No.

☐

FAA Notification Filed with FAA

6. Antenna Location Site Elevation Above Mean Sea Level: _____ meters
7. Overall Tower Height Above Ground Level: _____ meters
8. Height of Radiation Center Above Ground Level: _____ meters
9. Maximum Effective Radiated Power (ERP): _____ kW
10. Transmitter Output Power: _____ kW
11. a. Transmitting Antenna: ☐ Nondirectional ☐ Directional ("Off-the-shelf") ☐ Directional composite

Manufacturer	Model
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- b. Electrical Beam Tilt: _____ degrees ☐ Not applicable

c. Directional Antenna Relative Field Values:

Rotation: _____ ° ☐ No rotation ☐ N/A (Nondirectional)

Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value
0		60		120		180		240		300	
10		70		130		190		250		310	
20		80		140		200		260		320	
30		90		150		210		270		330	
40		100		160		220		280		340	
50		110		170		230		290		350	
Additional Azimuths											

NOTE: In addition to the information called for in this section, an explanatory exhibit providing full particulars must be submitted for each question for which a "No" response is provided.

12. **Out-of-Channel Emission Mask:** Simple ☐ Stringent ☐

CERTIFICATION

13. **Interference.** The proposed facility complies with all of the following applicable rule sections. 47 C.F.R. Sections 74.709, 74.793(e), 74.793(f), 74.793(g), 74.793(h), 74.794(b) and 73.1030. ☐ Yes ☐ No

See Explanation in Exhibit No.

14. **Environmental Protection Act.** The proposed facility is excluded from environmental processing under 47 C.F.R. Section 1.1306 (*i.e.*, the facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments). Unless the applicant can determine RF compliance. An **Exhibit is required.** ☐ Yes ☐ No

See Explanation in Exhibit No.

Exhibit No.

By checking "Yes" above, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic exposure in excess of FCC guidelines.

15. **Channels 52-59.** If the proposed channel is within channels 52-59, the applicant certifies compliance with the following requirements, as applicable:

☐ The applicant is applying for a digital companion channel for which no suitable channel from channel 2-51 is available.

☐ Pursuant to Section 74.786(d), the applicant has notified, within 30 days of filing this application, all commercial wireless licensees of the spectrum comprising the proposed TV channel and the first adjacent channels thereto, for which the proposed digital LPTV or TV translator antenna site lies inside the licensed geographic boundaries of the wireless licensees or within 75 miles and 50 miles, respectively, of the geographic boundaries of co-channel and adjacent-channel wireless licensees.

PREPARER'S CERTIFICATION ON PAGE 8 MUST BE COMPLETED AND SIGNED.

16. **Channels 60-69.** If the proposed channel is within channels 60-69, the applicant certifies compliance with the following requirements, as applicable:

☐ Pursuant to Section 74.786(e), the applicant has notified, within 30 days of filing this application, all commercial wireless licensees of the spectrum comprising the proposed TV channel and the first adjacent channels thereto, for which the proposed digital LPTV or TV translator antenna site lies inside the licensed geographic boundaries of the wireless licensees or within 75 miles and 50 miles, respectively, of the geographic boundaries of co-channel and adjacent-channel wireless licensees,

☐ Pursuant to Section 74.786(e), the applicant proposing operation on channel 63, 64, 68 and 69 ("public safety channels") has secured a coordinated spectrum use agreement(s) with 700 MHz public safety regional planning committee(s) and state frequency administrator(s) of the region(s) and state(s) within which the antenna site of the digital LPTV or TV translator station is proposed to locate, and those adjoining regions and states with boundaries within 75 miles of the proposed station location.

☐ Pursuant to Section 74.786(e), an applicant for a channel adjacent to channel 63, 64, 68 or 69 has notified, within 30 days of filing this application, the 700 MHz public safety regional planning committee(s) and state administrator(s) of the region and state containing the proposed digital LPTV or TV translator antenna site and regions and states whose geographic boundaries lie within 50 miles of the proposed LPTV or TV translator antenna site.

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		Relationship to Applicant (e.g., Consulting Engineer) Consulting Engineer	
Signature		Date	
Mailing Address Cohen, Dippell and Everist, P.C., 1300 L Street, N.W., Suite 1100			
City Washington		State or Country (if foreign address) DC	ZIP Code 20005
Telephone Number (include area code) (202) 898-0111		E-Mail Address (if available) cde@attglobal.net	

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).