Federal Communications Commission Washington, D.C. 20554	Approved by OMB 3060-0405 (March 2001)	FOR FCC USE ONLY
FCC 349		
APPLICATION FOR AUTHORITY TO CONSTRUCT OR MAKE CHANGES IN AN FM TRANSLATOR OR FM BOOSTER STATION Read INSTRUCTIONS Before Filling Out Form		FOR COMMISSION USE ONLY FILE NO. BMPFT - 20070402KQN

Section I - General Information

1. Legal Name of the Applicant
MINNESOTA PUBLIC RADIO

Mailing Address
480 CEDAR STREET

City	State or Country (if foreign address)	ZIP Code
ST. PAUL	MN	55101 -

Telephone Number (include area code)	E-Mail Address (if available)
6512901259	FCCFILING@MPR.ORG

FCC Registration Number:	Call Sign	Facility Identifier
0002642510	K276EW	149175

2. Contact Representative (if other than Applicant)
TODD M STANSBURY

Firm or Company Name
WILEY REIN LLP

Mailing Address
1776 K STREET NW
SUITE 500

City	State or Country (if foreign address)	ZIP Code
WASHINGTON	DC	20006 -

Telephone Number (include area code)	E-Mail Address (if available)
2027194948	TSTANSBURY@WILEYREIN.COM

3. If this application has been submitted without a fee, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114):
○ Governmental Entity ◉ Noncommercial Educational Licensee/Permittee ○ Other
○ N/A (Fee Required)

4. Facility information:
a. ◉ FM Translator ○ FM Booster
b. Community or communities to which the proposed facility will be licensed:

Community(ies)	State
OLIVIA	MN

5. **Application Purpose**

○ New station
○ Major Change in licensed facility
○ Minor Change in licensed facility
○ Major Modification of construction permit
◉ Minor Modification of construction permit
○ Major Amendment to pending application
○ Minor Amendment to pending application

a. File number of original construction permit: BNPFT-20030828AEY

If an amendment, **submit as an Exhibit** a listing by Section and Question Number the portions of the pending application that are being revised. [Exhibit 1]

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. See General Instruction J.

Section II - Legal

1.	**Certification.** Applicant certifies that it has answered each question in this application based on its review of the application instructions and worksheets. Applicant further certifies that where it has made an affirmative certification below, this certification constitutes its representation that the application satisfies each of the pertinent standards and criteria set forth in the application instructions and worksheets.	(●) Yes ( ) No

2.	Applicant is:		
	( ) an individual	( ) a general partnership	( ) a for-profit corporation
	( ) a limited partnership	(●) a not-for-profit corporation	( ) a limited liability company (LLC/LC)
	( ) other		
	a. If "other", describe nature of applicant in an Exhibit.		[Exhibit 2]

3.	a.	Applicant certifies that it is not the licensee or permittee of the commercial primary station being rebroadcast and that neither it nor any parties to the application have any interest in or connection with the commercial primary station being rebroadcast? See 47 C.F.R. Section 74.1232(d).	( ) Yes ( ) No (●) N/A See Explanation in [Exhibit 3]
	b.	Applicant certifies that the coverage contour of the translator station will not extend beyond the protected contour of the commercial primary station being rebroadcast.	( ) Yes ( ) No (●) N/A See Explanation in [Exhibit 4]

NOTE: **If No to a. and b., and no waiver has been requested in an Exhibit, this application is unacceptable for filing.** See 47 C.F.R. Section 74.1232(d).

If No to a. and Yes to b. applicant is prohibited from receiving any support, before or after construction, either directly or indirectly from the commercial primary station being rebroadcast or from any person or entity having any interest whatsoever, or any connection with the primary FM station. Interested and connected parties include group owners, corporate parents, shareholders, officers, directors, employees, general and limited partners, family members and business associates. See 47 C.F.R. Section 74.1232(e).

4.	The applicant, if for a commercial FM translator station with a coverage contour extending beyond the protected contour of the commercial primary station being rebroadcast, certifies that it has not received any support, before or after constructing, directly or indirectly, from the licensee/permittee of the primary station or any person with an interest in or connection with the licensee or permittee of the primary station, except for technical assistance as provided for under 47 C.F.R. Section 74.1232(e).	( ) Yes ( ) No (●) N/A See Explanation in [Exhibit 5]
5.	For applicants proposing translator rebroadcasts that are not the licensee of the primary station, the applicant certifies that written authority has been obtained from the licensee of the station whose programs are to be retransmitted. **If No, this application is unacceptable for filing.**	(●) Yes ( ) No ( ) N/A
6.	**Character Issues.** Applicant certifies that neither applicant nor any party to the application has or has had any interest in or connection with: a. any broadcast application in any proceeding where character issues were left unresolved or were resolved adversely against the applicant or party to the application; or b. any pending broadcast application in which character issues have been raised.	(●) Yes ( ) No See Explanation in [Exhibit 6]

7.	**Adverse Findings.** Applicant certifies that, with respect to the applicant , any party to the application, and any non-party equity owner in the applicant, no adverse finding has been made, nor has an adverse final action been taken by any court or administrative body in a civil or criminal proceding brought under the provisions of any law related to the following: any felony; mass media-related antitrust or unfair competition; fraudulent statements to another governmental unit; or discrimination. If the answer is "No," attach as an Exhibit a full disclosure concerning the persons and matters involved, including an identification of the court or administrative body and the proceeding (by dates and file numbers), and a description of the disposition of the matter. Where the requisite information has been earlier disclosed in connection with another application or as required by 47 C.F.R. Section 1.65, the applicant need only provide: (i) an identification of that previous submission by reference to the file number in the case of an application, the call letters of the station regarding which the application or Section 1.65 information was filed, and date of filing; and (ii) the disposition of the previously reported matter.	(●) Yes ( ) No See Explanation in [Exhibit 7]
8.	**Alien Ownership and Control.** Applicant certifies that it complies with the provisions of Section 310 of the Communications Act of 1934, as amended, relating to interests of aliens and foreign governments.	(●) Yes ( ) No See Explanation in [Exhibit 8]
9.	**Program Service Certification.** Applicant certifies that it is cognizant of and will comply with its obligations as a Commission licensee to present a program service responsive to the issues of public concern facing the station's community of license and service area.	(●) Yes ( ) No
10.	**Local Public Notice.** Applicant certifies compliance with the public notice requirements of 47 C.F.R. Section 73.3580.	(●) Yes ( ) No
11.	**Auction Authorization.** If the application is being submitted to obtain a construction permit for which the applicant was the winning bidder in an auction, then the applicant certifies, pursuant to 47 C.F.R. Section 73.5005(a), that it has attached an exhibit containing the information required by 47 C.F.R. Sections 1.2107(d), 1.2110(i), 1.2112(a) and 1.2112(b), if applicable. An exhibit is required unless this question is inapplicable.	( ) Yes ( ) No (●) N/A See Explanation in [Exhibit 9]
12.	**Anti-Drug Abuse Act Certification.** Applicant certifies that neither applicant nor any party to the application is subject to denial of federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862.	(●) Yes ( ) No
13.	**Equal Employment Opportunity (EEO).** If the applicant proposes to employ five or more full-time employees, applicant certifies that it is filing simultaneously with this application a Model EEO Program Report on FCC Form 396-A.	( ) Yes ( ) No (●) N/A

I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith. I acknowledge that all certifications and attached Exhibits are considered material representations. I hereby waive any claim to the use of any particular frequency as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and request an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)

Typed or Printed Name of Person Signing THOMAS J KIGIN	Typed or Printed Title of Person Signing EXECUTIVE VICE PRESIDENT
Signature	Date 4/2/2007

SECTION III - PREPARER'S CERTIFICATION

I certify that I have prepared Section III (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name	Relationship to Applicant (e.g., Consulting Engineer)

KATE MICHLER	TECHNICAL CONSULTANT
Signature	Date 3/19/2007

Mailing Address
DOUG VERNIER TELECOMMUNICATIONS CONSULTANTS
721 WEST 1ST STREET, SUITE A

City	State or Country (if foreign address)	Zip Code
CEDAR FALLS	IA	50613 -

Telephone Number (include area code)	E-Mail Address (if available)
3192668402	KMICHLER@V-SOFT.COM

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

Section III-A - Engineering

TECHNICAL SPECIFICATIONS

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

TECH BOX

1. Channel: 276

2. Primary Station:

Facility Identifier	Call Sign	City	State	Channel
42938	KNSR	COLLEGEVILLE	MN	205

3. Delivery Method (Select One):
(•) Off-air ( ) Microwave ( ) Satellite ( ) Via ( ) Other

4. Antenna Location Coordinates: (NAD 27)

Latitude:
Degrees 44 Minutes 45 Seconds 33 (•) North ( ) South

Longitude:
Degrees 94 Minutes 52 Seconds 23 (•) West ( ) East

5. Antenna Structure Registration Number: 1209827
☐ Not Applicable ☐ Notification filed with FAA

6. Antenna Location Site Elevation Above Mean Sea Level: 333 meters

7. Overall Tower Height Above Ground Level: 152 meters

8. Height of Radiation Center Above Ground Level: 122 meters(H) 122 meters(V)

9. Effective Radiated Power: 0.17 kW(H) 0.17 kW(V)

10. Transmitting Antenna:

Before selecting Directional "Off-the-Shelf", refer to "Search for Antenna Information" under CDBS Public Access (http://svartifoss2.fcc.gov/prod/cdbs/pubacc/prod/cdbs_pa.htm). Make sure that the Standard Pattern is marked Yes and that the relative field values shown match your values. Enter the Manufacturer (Make) and Model exactly as displayed in the Antenna Search.

(•) Nondirectional ( ) Directional "Off-the-shelf" ( ) Directional composite

Manufacturer SHI Model 6832-4

Rotation:degrees ☐ No Rotation

Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value
0		10		20		30		40		50	
60		70		80		90		100		110	

120	130	140	150	160	170
180	190	200	210	220	230
240	250	260	270	280	290
300	310	320	330	340	350
Additional Azimuths					

Relative Field Polar Plot

11.	**For FM Boosters and Fill-in translators only.** Applicant certifies that the proposal is for a fill-in translator or booster station entirely within the primary station's protected contour.	○ Yes ○ No ◉ N/A See Explanation in [Exhibit 10];
12.	**Interference.** The proposed facility complies with all of the following applicable rule sections. Check all that apply: **Overlap Requirements.** ☑ a) 47 C.F.R. Section 74.1204 **Exhibit Required.** **Television Channel 6 Protection.** ☐ b) 47 C.F.R. Section 74.1205 with respect to station(s) **Exhibit Required.**	◉ Yes ○ No See Explanation in [Exhibit 11] [Exhibit 12] [Exhibit 13]
13.	**Unattended operation.** Applicant certifies that unattended operation is not proposed, or if this application proposes unattended operation, the applicant certifies that it will comply with the requirements of 47 C.F.R. Section 74.1234.	◉ Yes ○ No See Explanation in [Exhibit 14]
14.	**Multiple Translators.** Applicant certifies that it does not have any interest in an application or an authorization for an FM translator station that serves substantially the same area and rebroadcasts the same signal as the proposed FM translator station.	◉ Yes ○ No See Explanation in [Exhibit 15]
15.	**Environmental Protection Act.** Applicant certifies that 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 compliance through the use of the RF worksheets in Appendix A, an **Exhibit is required.** 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.	◉ Yes ○ No See Explanation in [Exhibit 16]

PREPARER'S CERTIFICATION ON PAGE 4 MUST BE COMPLETED AND SIGNED.

Section IV -- Noncommercial Educational Point System Factors - -New and Major Change Applications on Reserved Channels Only (used to select among mutually exclusive applications for new stations and major modifications) **NOTE**: Applicants will not received any additional points for amendments made after the close of the application filing window.

Preliminary Matter: Does this application provide fill-in service only?	○ Yes ○ No

1.	**Established Local Applicant:** Applicant certifies that for at least the 24 months immediately prior to application, and continuing through the present, it qualifies as a local applicant pursuant to 47 C.F.R. Section 73.7000, that its governing documents require that such localism be maintained, and that it has placed documentation of its qualifications as an established local applicant in a local public inspection file and has submitted to the Commission copies of the documentation.	○ Yes ○ No
2.	**Diversity of Ownership:** Applicant certifies that the principal community (city grade) contour of the proposed station does not overlap the principal community contour of any other authorized radio station (including AM, FM, and non-fill-in FM translator stations, commercial or noncommercial) in which any party to the application has an attributable interest as defined in 47 C.F.R. Section 73.3555, that its governing documents require that such diversity qualification in a local public inspection file and has submitted to the Commission copies of the documentation.	○ Yes ○ No
3.	**State-wide Network:** Applicant certifies that (a) it has NOT claimed a credit for diversity of ownership above: (b) it is one of the three specific types of organizations described in 47 C.F.R. Section 73.7003(b)(3); and (c) it has placed documentation of its qualifications in a local public inspection file and has submitted to the Commission copies of the documentation.	○ Yes ○ No
4.	**Technical Parameters:** Applicant certifies that the numbers in the boxes below accurately reflect the new (increased) area and population that its proposal would serve with a 60 dBu signal measured in accordance with the standard predicted contours in 47 C.F.R. Section 73.713(c) and that it has documented the basis for its calculations in the local public inspection file and has submitted copies to the Commission. Major modification applicants should include the area of proposed increase only (exclude the station's existing service area). (Points, if any, will be determined by FCC)	○ Yes ○ No
	New (increased) area served in square kilometers (excluding areas of water):	
	Population served based on the most recent census block data from the United States Bureau of Census using the centroid method:	

Tie Breakers

5.	**Existing Authorizations**. a. By placing a number in the box, the applicant certifies that it and any persons and organizations with attributable interests in the applicant pursuant to 47 C.F.R. Section 73.3555 have, as of the date filing, existing authorizations for the following number of relevant broadcast stations. FM translator applicants should count all attributable full service radio stations, AM and FM, commercial and noncommercial and FM translator stations other than fill-in stations. (number of attributable commercial and non-commercial licenses and construction permits) b. (Fill-in Applicants Only.) By placing a number in the box, the applicant certifies that, in addition to the station identified in 5(a), it and any persons and organizations with attributable interests in the applicant pursuant to 47 C.F.R. Section 73.3555 have, as of the date filing, existing authorizations for the following number of FM translators.
6.	**Pending Applications**. a. By placing a number in the box, the applicant certifies that it and any persons and organizations with attributable interests in the applicant pursuant to 47 C.F.R. Section 73.3555 have, as of the date filing, pending applications for new or major changes to the following number of relevant broadcast stations, AM and FM, commercial and non-commercial and FM translator stations other than fill-in stations. (number of attributable commercial and non-commercial applications) b. (Fill-in Applicants Only.) By placing a number in the box, the applicant certifies that, in addition to the station identified in 5(a), it and any persons and organizations with attributable interests in the applicant pursuant to 47 C.F.R. Section 73.3555 have, as of the date of filing, existing authorizations for the following number of FM translators.

Section VI -- Certification

I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith. I acknowledge that all certifications and attached Exhibits are considered material representations. I hereby waive any claim to the use of any particular frequency as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and request an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)

Typed or Printed Name of Person Signing THOMAS J KIGIN	Typed or Printed Title of Person Signing EXECUTIVE VICE PRESIDENT
Signature	Date 4/2/2007

Exhibits

Exhibit 1
Description: ENGINEERING STATEMENT

ATTACHMENT 1 TO THIS EXHIBIT IS AN ENGINEERING STATEMENT DESCRIBING THE PROPOSED MODIFICATIONS TO CONSTRUCTION PERMIT BNPFT-20030828AEY.

Attachment 1

Description
Exhibit #1, Engineering Statement

Exhibit 12
Description: OVERLAP REQUIREMENTS

Attachment 12

Description
Exhibit #12, Overlap Requirements

Exhibit 16
Description: RF EMISSIONS COMPLIANCE STATEMENT

Attachment 16

Description
Exhibit #16, RF Emissions Compliance Statement

Doug Vernier
1600 Picturesque Drive
Cedar Falls, Iowa 50613
Telecommunication Consultants
dvernier@v-soft.com (319) 266-8402

EXHIBIT #1
ENGINEERING STATEMENT

Concerning the Application of
Minnesota Public Radio
To Make a Minor Modification to Translator Construction Permit
K276EW
BNPFT-20030828AEY
Serving Olivia, Minnesota

March 2007

Channel 276D **0.17 kW H & V**

This engineering statement supports the application filed by Minnesota Public Radio to make a minor modification to the construction permit for translator K276EW (BNPFT-20030828AEY) serving Olivia, Minnesota.

The applicant proposes to change transmitter location, increase antenna height above ground and mean sea level and increase ERP. A change area map which depicts the 60 dBu contour of the proposed facility, as well as the currently authorized construction permit is attached as Page #2 of this exhibit (Ex #1). The N.G.D.C. 30 sec terrain database was used for this and all other exhibits. Page #3 is a table of the distance to the 60 dBu F(50-50) contour along the 12 cardinal radials.

Exhibit #12 is a single channel, contour to contour, allocation study showing that interference is not caused to any FM radio station, translator, construction permit or application.

There are no pertinent I.F. relationships. The proposal is not within 320 kilometers of the U.S. border with Canada or Mexico, and is outside the protected zone of any AM station, Table Mountain, FCC monitoring stations and the West Virginia Quiet Zone.

Exhibit #16 shows compliance with the Commission's R.F. emission's standards.

Page #4 of this exhibit (Ex. # 1) is a declaration made by the preparer attesting to her qualifications.

K276EW(New) Proposed 60 dBu Change Area

K276EW(New)

Latitude: 44-45-33 N
Longitude: 094-52-23 W
ERP: 0.17 kW
Channel: 276
Frequency: 103.1 MHz
AMSL Height: 454.4 m
HAAT: 124.25 m
Horiz. Pattern: Omni
Vert. Pattern: No

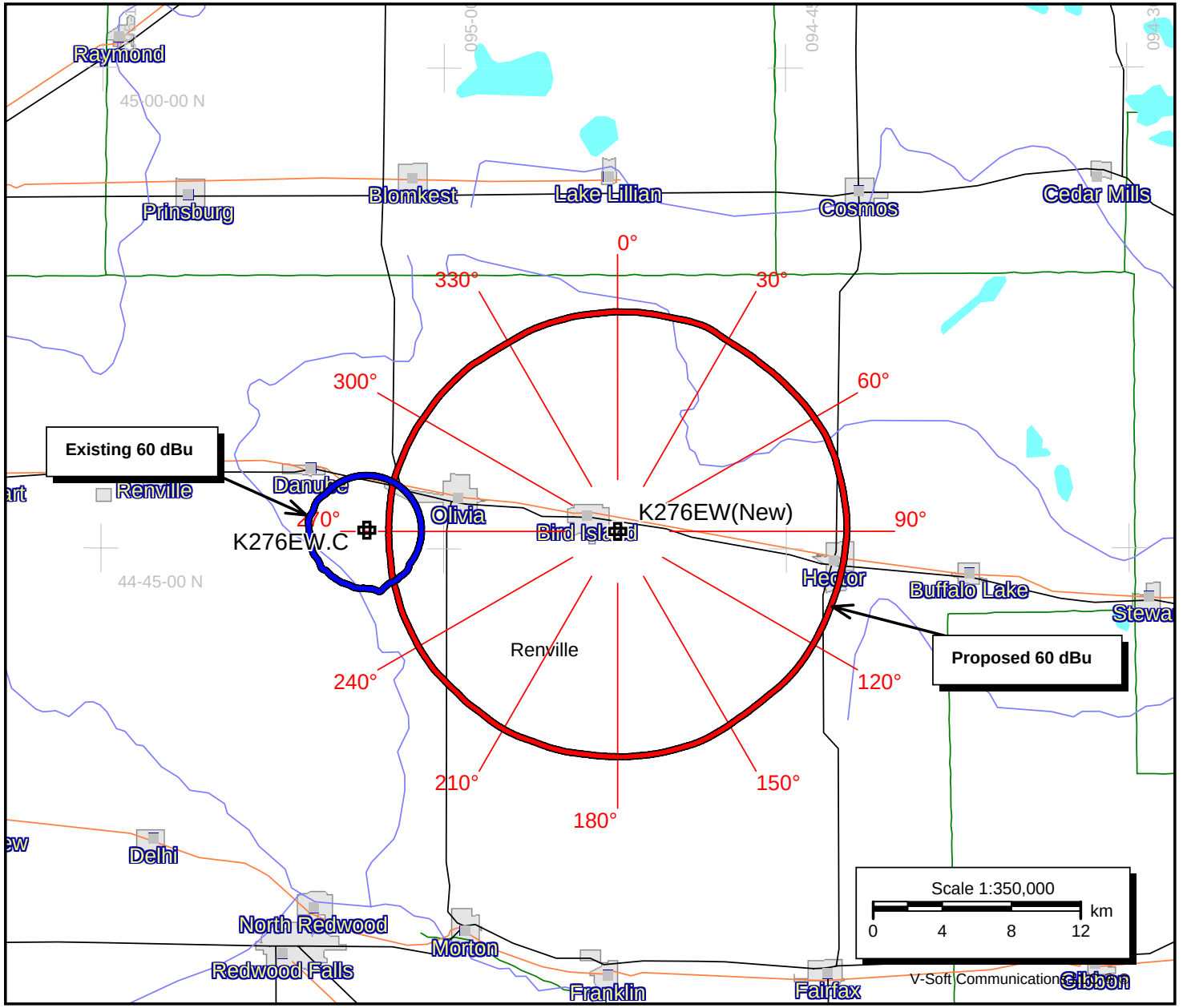
Pop = 6,180

K276EW.C
BNPFT20030828AEY
Latitude: 44-45-35 N
Longitude: 095-03-22 W
ERP: 0.01 kW
Channel: 276
Frequency: 103.1 MHz
AMSL Height: 354.0 m
HAAT: 0.0 m
Horiz. Pattern: Omni
Vert. Pattern: No

Pop = 118

3/20/2007

Doug Vernier
721 West 1st Street, Suite A
Cedar Falls, Iowa 50613
Telecommunications Consultants



N. Lat. = 444533.0 W. Lng. = 945223.0
HAAT and Distance to Contour - FCC Method - NGDC 30 SEC
K276EW (New) Distance to 60 dBu F(50-50) Contour

Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	336.2	118.2	0.1700	-7.70	1.000	12.68
030	335.6	118.8	0.1700	-7.70	1.000	12.71
060	327.4	127.0	0.1700	-7.70	1.000	13.12
090	325.0	129.4	0.1700	-7.70	1.000	13.24
120	329.0	125.4	0.1700	-7.70	1.000	13.04
150	331.6	122.8	0.1700	-7.70	1.000	12.91
180	329.4	125.0	0.1700	-7.70	1.000	13.02
210	326.1	128.3	0.1700	-7.70	1.000	13.19
240	324.3	130.1	0.1700	-7.70	1.000	13.28
270	325.4	129.0	0.1700	-7.70	1.000	13.22
300	330.0	124.4	0.1700	-7.70	1.000	12.99
330	338.0	116.4	0.1700	-7.70	1.000	12.60

Ave El= 329.83 M HAAT= 124.57 M AMSL= 454.4

Declaration:

I, Katherine A. Michler, have received a Bachelor of Science degree from the University of Northern Iowa, and;

That, I declare that I have received training as a technical consultant as a member of the staff of Doug Vernier Telecommunications Consultants, and;

That, I have been a member of the firm for over nine years, and;

That, my qualifications are a matter of record with the Federal Communications Commission, and;

That, I am an Associate Member (#20792) of the Society of Broadcast Engineers, Indianapolis, Indiana, and;

That, the consulting firm of Doug Vernier Telecommunications Consultants has been retained by Minnesota Public Radio, St. Paul, Minnesota, and;

That, I have personally prepared these engineering showings, the technical information contained in same and the facts stated within are true to my knowledge, and;

That, under penalty of perjury, I declare that the foregoing is correct.


_____ Katherine A. Michler

Executed on March 19, 2007

INTERFERENCE ANALYSIS
Channel 276
Minnesota Public Radio
K276EW

Olivia, MN
BNPFT-20030828AEY
ERP = 0.17 kW H & V

January 2007

Page #3 of this exhibit is a computer generated channel study, showing the contour relationship between the proposed translator and adjacent stations. Page #4 is an explanation of the methods used in preparing the study. This proposal causes 3rd adjacent contour overlap with local class C1 station, KQIC, Willmar, Minnesota.

Section 73.1204(a) of the Commissions Rules states that "an application for an FM translator station will not be accepted for filing if the proposed operation would involve overlap of predicted field strength contours with any other station, including commercial and noncommercial educational FM stations, FM translators and Class D (secondary) noncommercial educational FM stations." However, Section 74.1204(d) states that "the provisions of this section concerning prohibited overlap will not apply where the area of such overlap lies entirely over water. In addition, *an application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or other such factors as may be applicable."* (Emphasis added.)

Using the undesired-to-desired signal ratio method regarding interference to a second adjacent frequency[1], "interference is predicted to occur where the translator's undesired signal exceeds the protection station's desired signal by 40 dB or more."[2] The FCC F(50-50) curves were used to determine the signal strength, in dBu, of KQIC at the proposed translator's transmitter site. This signal strength was calculated to be 68.3 dBu, based KQIC's HAAT toward the reference of 263.4 meters, power of 100 kW and distance of 51.14 km. Incorporating the 40 dB U/D ratio, the resulting translator interference contour is the 108.3 dBu. (68.3 + 40 = 108.3 dBu) At an ERP of 0.17 kW, the 108.3 dBu interference contour of the proposed translator station extends only 340 meters. Since the proposed transmitting antenna will be 121.9 meters above the ground and the interference signal

[1] *Second Report and Order,* FCC 00-368 at 9 and 39.
[2] *Memorandum Opinion and Order*, FCC 02-244 at 5 and 6, (In response to application of Living Way Ministries, Inc., File No. BPFT-19981001ITA.

contour from the antenna to the ground travels 340 meters, using the Pythagorean Theorem one can determine that, at ground level, the 108.3 dBu contour travels 317.4 meters. Page # 5 of this exhibit is a scaled topographic map[3] showing the 317.4 meter distance. There are five structures located within the interference area, each depicted and designated with a location number on the map. Location #1 is a barn that was added to the map, from information gained from a satellite image of the area.

The applicant proposes to use Shively 6832, 4-bay antenna. The vertical elevation field of this antenna has been measured by the manufacturer. The graph and table of relative field values can be found on pages 6 and 7, respectively. By using the vertical elevation field values at the relevant depression angles, we have calculated the distance to the 108.3 dBu interference contour, using the free-space method, at the angle of each of the five buildings.

Location	Distance (m)	Depression °	Relative field	ERP (kW)	Distance to 108.3 dBu contour (m)
#1	160	53°	0.021	0.00007	50
#2	200	59°	0.077	0.00101	110
#3	220	61°	0.087	0.00129	120
#4	250	61°	0.087	0.00129	120
#5	275	66°	0.096	0.00157	140

At none of the locations does the interference contour reach the building. Therefore, the proposed facility complies with Section 74.1204(d).

Pages 8-11 are a map and FMOver table, depicting the relationship between the proposed translator and co-channel translator K276EV, Sleepy Eye, Minnesota, while pages 12-15 are the same information for the relationship with first-adjacent translator K277AT, Litchfield.

[3] www.topozone.com

Minnesota Public Radio
K276EW Minor Change

REFERENCE CH# 276D - 103.1 MHz, Pwr= 0.17 kW, HAAT=124.6 M, COR= 454.4 M DISPLAY DATES
44 45 33.0 N. Average Protected F(50-50)= 13.0 km DATA 01-30-07
94 52 23.0 W. SEARCH 01-30-07

CH CALL / CITY	TYPE	STATE	AZI. <--	DIST / FILE #	LAT. / LNG.	Pwr(kW) / HAAT(M)	INT(km) / COR(M)	PRO(km) / LICENSEE	*OUT* (Overlap in km)
276D K276EW	CP	C	270.3	14.49	44 45 35.0	0.010	10.2	3.2	-33.40<
Olivia		MN	90.2	BNPFT20030828AEY	95 03 22.0	27	354	Radio Assist Ministry, Inc	
273C1 KQIC	LIC	CN	341.2	51.14	45 11 40.0	100.000	9.5	69.4	-19.13*<
Willmar		MN	161.0	BLH19810522AG	95 05 01.0	263	609	Lakeland Broadcasting Comp	
276D K276EV	CP	C	166.5	49.36	44 19 38.0	0.008	14.7	4.7	0.43
Sleepy Eye		MN	346.6	BMPFT20061023AFV	94 43 41.0	73	372	Horizon Christian Fellowsh	
277D K277AT	CP	C	42.7	39.80	45 01 18.0	0.250	19.3	12.9	7.77
Litchfield		MN	222.9	BNPFT20030822ACK	94 31 49.0		442	Refuge Media Group	
276D AP2679	APP	C	321.9	65.45	45 13 15.0	0.250	34.2	10.2	11.99
Murdock		MN	141.5	BNPFT20030312AFO	95 23 18.0		390	Refuge Media Group	
275C0 WLTE	LIC	CN	75.8	142.06	45 03 30.0	100.000	107.0	73.8	48.42
Minneapolis		MN	257.0	BLH19910814KD	93 07 27.0	315	593	Cbs Radio Media Corporatio	
276D AP2009	APP	C	320.5	79.92	45 18 42.1	0.170	42.3	12.4	24.15
Benson		MN	140.1	BNPFT20030317HWG	95 31 19.9		437	Radio Assist Ministry, Inc	
278C1 KYSM-FM	LIC	CN	134.3	93.01	44 10 20.0	100.000	7.2	59.0	33.11
Mankato		MN	314.9	BLH19930802KD	94 02 23.0	165	453	Cc Licenses, Llc	
278C1 KYSM-FM	CP	NCX	134.3	93.01	44 10 20.0	100.000	7.2	59.0	33.11
Mankato		MN	314.9	BPH20040416ABM	94 02 23.0	165	453	Cc Licenses, Llc	
222D K222AE	LIC	CN	183.8	56.05	44 15 21.0	0.250	3.2	17.4 3.0R	53.1M
Springfield		MN	3.7	BLFT19950512TC	94 55 10.0	68	384	Prairie Light Christian Ra	
277D K277AI	LIC	CN	237.9	89.56	44 19 40.0	0.075	19.8	13.2	56.41
Russell		MN	57.2	BLFT19980622TF	95 49 30.0	130	552	Christian Heritage Broadca	
279C3 KLZZ	LIC	CX	30.8	96.20	45 30 02.0	9.000	3.2	32.6	62.66
Waite Park		MN	211.2	BMLH20021008ABS	94 14 31.0	126	455	Regent Licensee Of St. Clo	
276C2 KJAM-FM	LIC	CN	245.2	199.25	43 59 08.0	33.000	122.0	42.6	111.76
Madison		SD	63.6	BLH199601113K	97 07 42.0	93	614	Three Eagles Of Brookings,	
277D K277AS	CP	C	55.9	104.62	45 16 47.0	0.010	9.1	6.4	78.60
Big Lake		MN	236.7	BMPFT20050708AAG	93 46 02.0		423	Educational Media Foundati	
274D K274AL	LIC	C	136.2	96.83	44 07 43.0	0.250	1.1	12.3	83.59
Mankato		MN	316.7	BMLFT20040108AKM	94 02 01.0		366	Refuge Media Group	

Terrain database is NGDC 30 SEC
ERP and HAAT are on direct line to and from reference station.
Incoming contour overlap is ignored.
"*"affixed to 'IN' or 'Out' values = site inside protected contour. "<" = contour overlap

HOW TO READ THE FM COMPUTER PRINT-OUT

The computer printout should be self-explanatory for the most part. The parameters of the station being checked, (reference station) are printed in the heading. The 60 dBu protected contour is predicted from the Commission's F(50-50) table, while the 40, 54, 80 and 100 dBu contours are interference contours derived from the Commission's F(50-10) table. Contour distances are in kilometers and are predicted using spline interpolation from data points identical to those published in Report No. RS 76-01 by Gary C. Kalagian. Critical contour distances are determined using the Commission's TVFMINT FORTRAN subroutine. When interference contour distances are less than 16 kilometers the F(50-50) tables are used. If signal contour distances are less than 1.6 km the free-space equation is used.

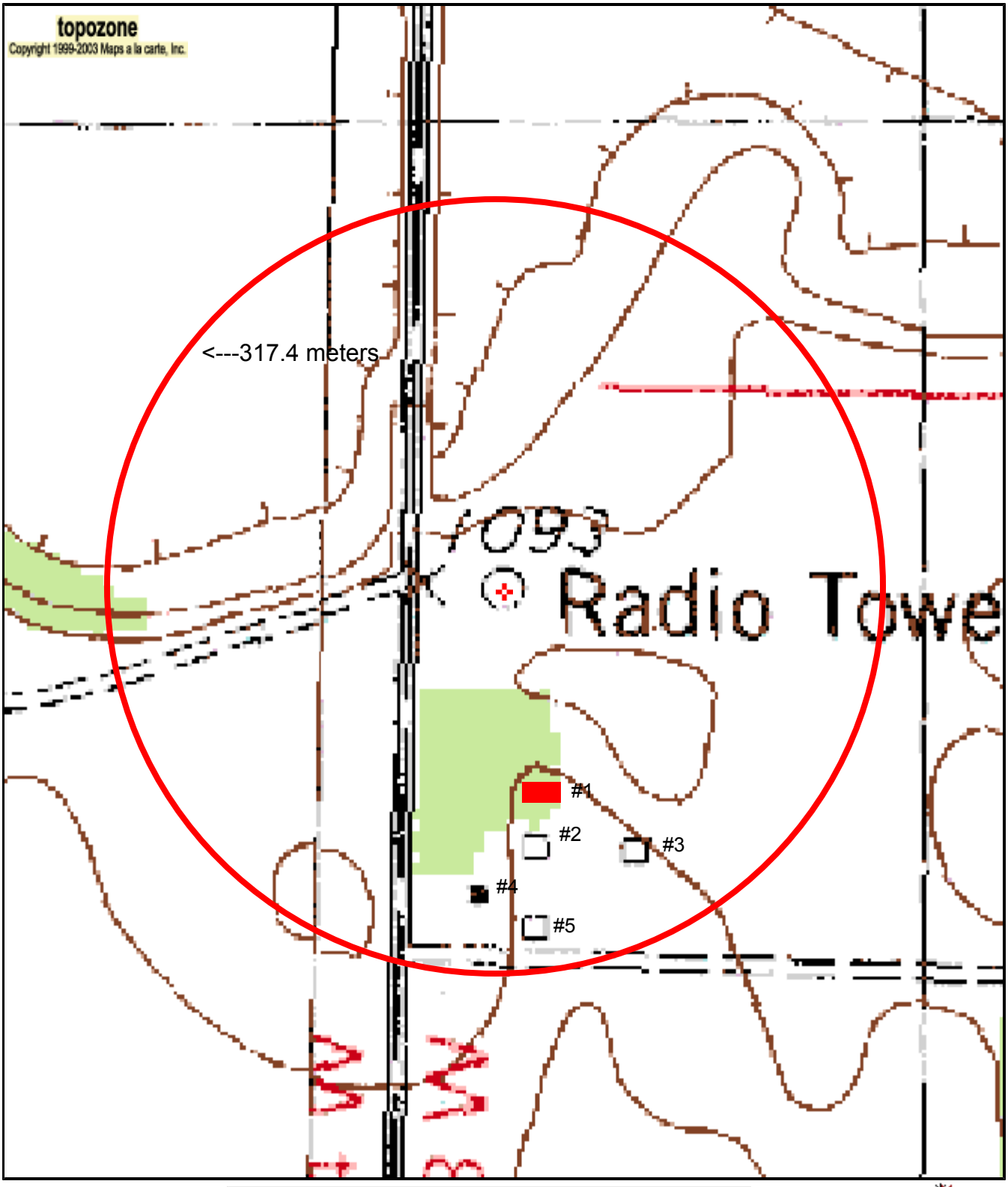
The column labeled "* OUT *" shows the distance in kilometers of overlap or clearance between the reference station's interference contour and the database station's protected contour. (All distances are derived by the method detailed in Sec. 73.208 of the Rules and Regulations as amended in Docket 80-90.) Therefore, the column is a measure of outgoing interference. Negative distance figures in this column indicate outgoing overlap interference. Listed antenna heights are the average heights of eight standard radials as found in the Commission's records unless otherwise noted, in which case the specific antenna heights and the DA power, if applicable, along the straight line azimuths between the reference station and the database station are used and visa versa.

Under the "AZIMUTH" column, the first row of numbers indicate the bearings from True North of the data base stations in relationship with the reference station, while the numbers in the second row indicate the reverse bearings from the database station to the reference station.

The columns labeled "INT" and "PRO" hold the distance in kilometers of the appropriate interference contour and the protected contour of a data base station.

The first three letters of the "TYPE" column identify the current FCC status of the stations. The fourth letter will be a "D" or "Z" (Sec. 73.215) if the facility is directional. The fifth letter will be an E, H or V depending on the type of antenna polarization. The sixth letter will be a "Y" if the antenna uses beam tilt.

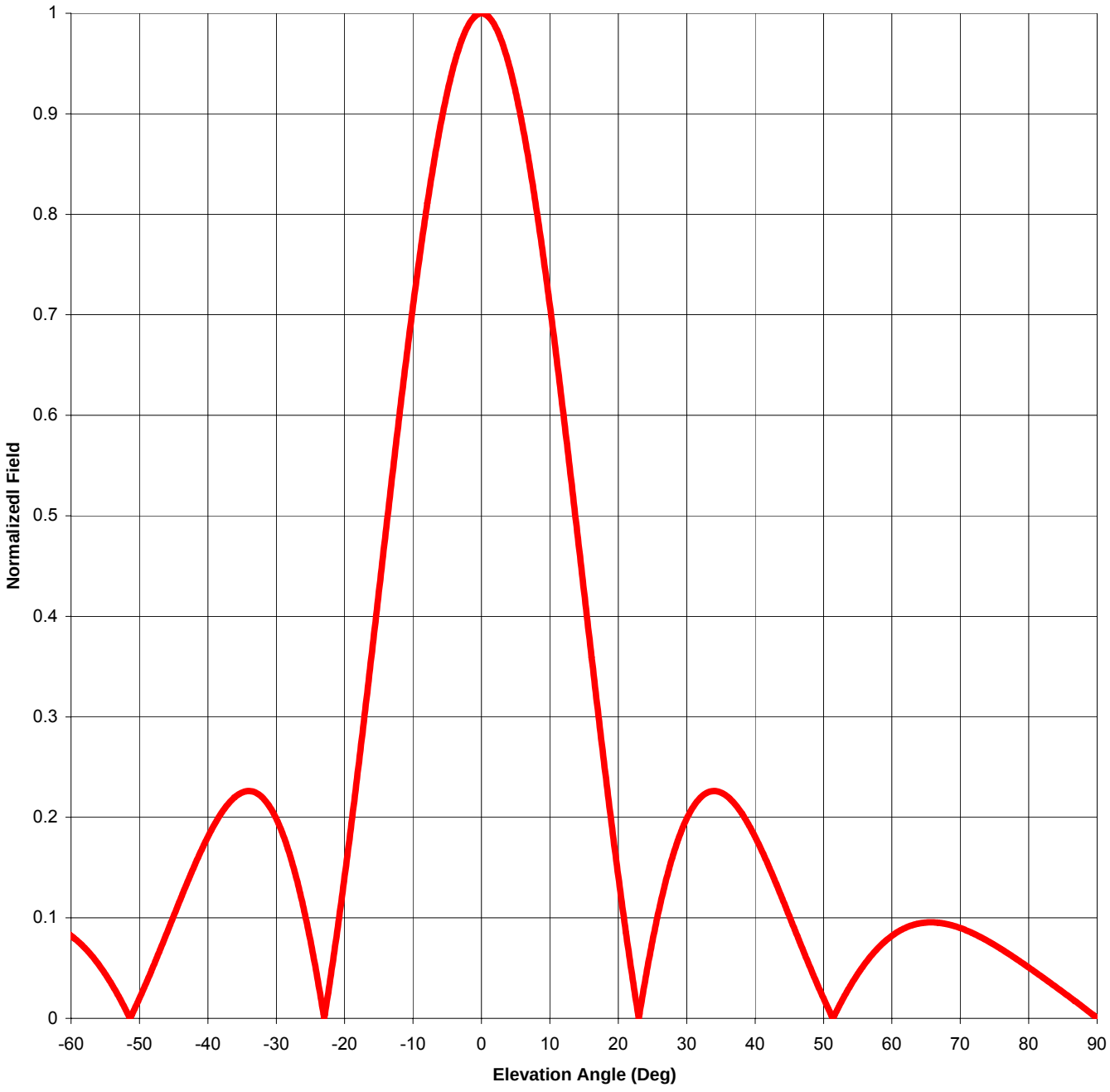
Ex #12, Pg #5



44° 45' 33"N, 94° 52' 23"W (NAD27)
USGS Olivia SE (MN) Quadrangle
Projection is UTM Zone 15 NAD83 Datum

Shively Labs®

Antenna Mfr.: Shively Labs **Date: 12/30/2004**
Antenna Type: 6832 4-Bay
Frequency: 98.1 **Gain (Max) 1.64 2.16 dB**



Elevation Pattern Tabulation, 6832 4-Bay

Relative Field at 0° Depression = 1.000

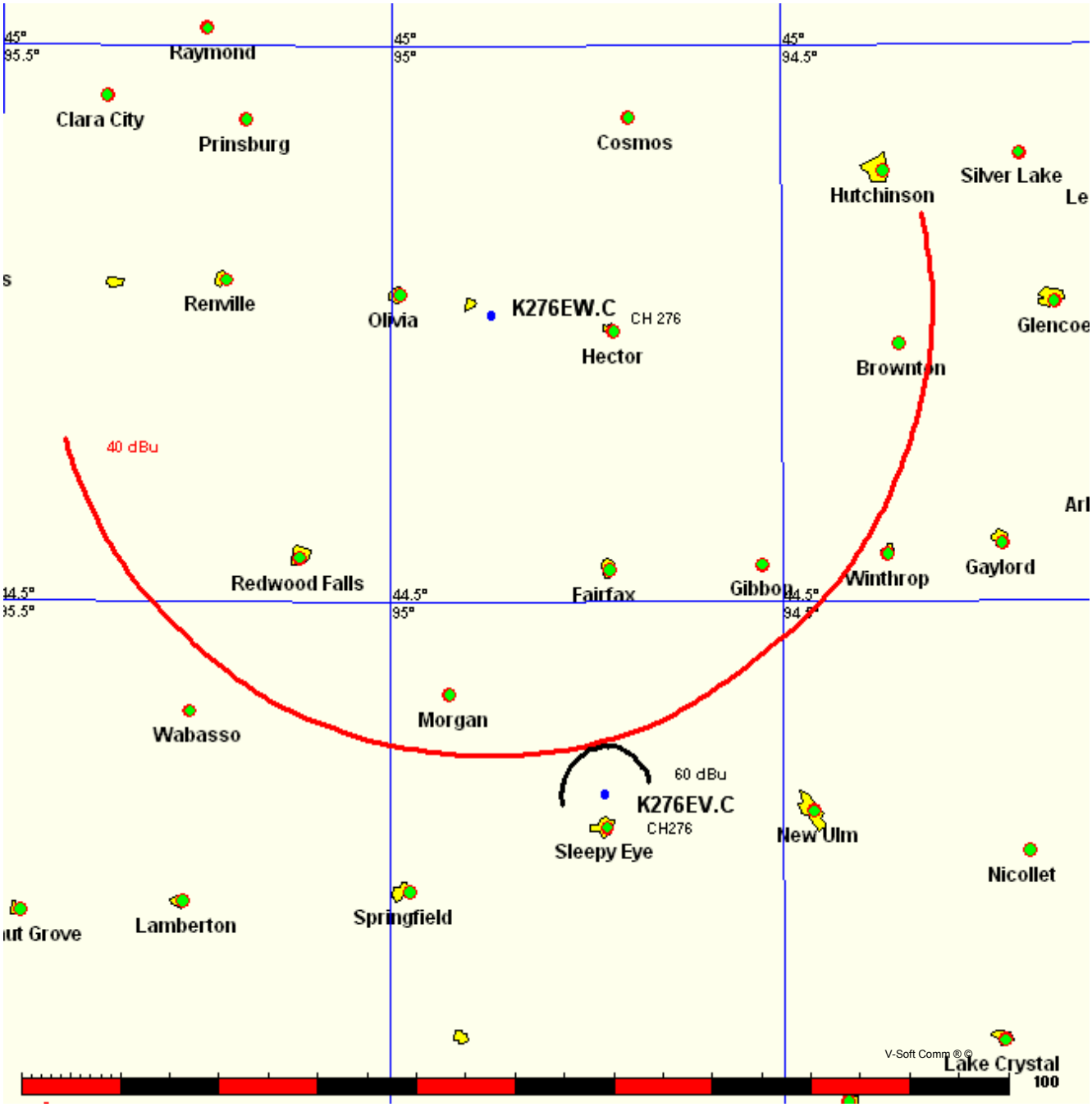
Degrees	Rel. Field	Degrees	Rel. Field	Degrees	Rel. Field	Degrees	Rel. Field	Degrees	Rel. Field
1	0.997	19	0.194	37	0.214	55	0.044	73	0.081
2	0.987	20	0.141	38	0.204	56	0.054	74	0.077
3	0.971	21	0.091	39	0.193	57	0.063	75	0.073
4	0.949	22	0.044	40	0.181	58	0.070	76	0.069
5	0.921	23	0.000	41	0.167	59	0.077	77	0.064
6	0.888	24	0.041	42	0.151	60	0.082	78	0.060
7	0.850	25	0.077	43	0.135	61	0.087	79	0.055
8	0.807	26	0.110	44	0.119	62	0.090	80	0.051
9	0.760	27	0.138	45	0.102	63	0.093	81	0.046
10	0.709	28	0.162	46	0.085	64	0.094	82	0.041
11	0.656	29	0.183	47	0.068	65	0.095	83	0.036
12	0.600	30	0.199	48	0.051	66	0.096	84	0.031
13	0.542	31	0.211	49	0.035	67	0.095	85	0.026
14	0.483	32	0.220	50	0.020	68	0.094	86	0.021
15	0.424	33	0.225	51	0.005	69	0.092	87	0.016
16	0.365	34	0.226	52	0.009	70	0.090	88	0.011
17	0.307	35	0.225	53	0.021	71	0.087	89	0.006
18	0.250	36	0.220	54	0.033	72	0.084	90	0.000

FMCommander Single Allocation Study
01-31-2007

K276EW.C CH 276 D
0.17 kW 454.4 M COR
Prot. = 60 dBu
Intef. = 40 dBu

K276EV.C CH 276 D BMPFT20061023AFV
0.008 kW, 372 M COR
Prot. = 60 dBu
Intef. = 40 dBu

Scale = 1:1,000,000



01-31-2007 30 Arc-Sec. Sec. Terrain Data

K276EV.C BMPFT20061023AFV
Channel = 276D
Max ERP = 0.008 kW
RCAMSL = 372 M
N. Lat. 44 19 38.0
W. Lng. 94 43 41.0
Protected
60 dBu

K276EW.C
Channel = 276D
Max ERP = 0.17 kW
RCAMSL = 454.4 M
N. Lat. 44 45 33.0
W. Lng. 94 52 23.0
Interfering
40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
287.0	000.0080	0059.5	004.3	170.9	000.1700	0125.2	047.3	38.75
288.0	000.0080	0059.8	004.3	170.9	000.1700	0125.2	047.3	38.78
289.0	000.0080	0060.1	004.3	170.9	000.1700	0125.2	047.2	38.81
290.0	000.0080	0060.5	004.3	170.9	000.1700	0125.2	047.1	38.83
291.0	000.0080	0060.6	004.3	170.8	000.1700	0125.2	047.1	38.86
292.0	000.0080	0060.6	004.3	170.8	000.1700	0125.2	047.0	38.89
293.0	000.0080	0060.4	004.3	170.7	000.1700	0125.2	046.9	38.91
294.0	000.0080	0060.2	004.3	170.7	000.1700	0125.2	046.9	38.93
295.0	000.0080	0060.0	004.3	170.6	000.1700	0125.2	046.8	38.96
296.0	000.0080	0059.8	004.3	170.5	000.1700	0125.2	046.8	38.98
297.0	000.0080	0059.8	004.3	170.5	000.1700	0125.3	046.7	39.01
298.0	000.0080	0059.8	004.3	170.4	000.1700	0125.3	046.6	39.03
299.0	000.0080	0060.0	004.3	170.4	000.1700	0125.3	046.6	39.05
300.0	000.0080	0060.1	004.3	170.3	000.1700	0125.3	046.5	39.08
301.0	000.0080	0060.3	004.3	170.3	000.1700	0125.3	046.5	39.10
302.0	000.0080	0060.5	004.3	170.2	000.1700	0125.3	046.4	39.13
303.0	000.0080	0060.7	004.3	170.2	000.1700	0125.3	046.3	39.15
304.0	000.0080	0060.9	004.3	170.1	000.1700	0125.3	046.3	39.17
305.0	000.0080	0061.2	004.3	170.0	000.1700	0125.3	046.2	39.20
306.0	000.0080	0061.4	004.3	170.0	000.1700	0125.3	046.2	39.22
307.0	000.0080	0061.7	004.3	169.9	000.1700	0125.3	046.1	39.25
308.0	000.0080	0062.0	004.3	169.9	000.1700	0125.3	046.0	39.27
309.0	000.0080	0062.3	004.4	169.8	000.1700	0125.3	046.0	39.29
310.0	000.0080	0062.5	004.4	169.7	000.1700	0125.3	045.9	39.31
311.0	000.0080	0062.7	004.4	169.7	000.1700	0125.3	045.9	39.33
312.0	000.0080	0062.8	004.4	169.6	000.1700	0125.3	045.8	39.35
313.0	000.0080	0062.9	004.4	169.5	000.1700	0125.3	045.8	39.37
314.0	000.0080	0063.0	004.4	169.4	000.1700	0125.3	045.7	39.39
315.0	000.0080	0063.0	004.4	169.4	000.1700	0125.3	045.7	39.41
316.0	000.0080	0063.1	004.4	169.3	000.1700	0125.3	045.6	39.43
317.0	000.0080	0063.2	004.4	169.2	000.1700	0125.3	045.6	39.45
318.0	000.0080	0063.2	004.4	169.1	000.1700	0125.3	045.6	39.46
319.0	000.0080	0063.3	004.4	169.0	000.1700	0125.3	045.5	39.48
320.0	000.0080	0063.3	004.4	169.0	000.1700	0125.3	045.5	39.50
321.0	000.0080	0063.4	004.4	168.9	000.1700	0125.3	045.4	39.51

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
322.0	000.0080	0063.6	004.4	168.8	000.1700	0125.3	045.4	39.53
323.0	000.0080	0063.7	004.4	168.7	000.1700	0125.3	045.4	39.54
324.0	000.0080	0063.8	004.4	168.6	000.1700	0125.3	045.3	39.56
325.0	000.0080	0063.9	004.4	168.5	000.1700	0125.3	045.3	39.57
326.0	000.0080	0063.9	004.4	168.5	000.1700	0125.2	045.3	39.58
327.0	000.0080	0064.0	004.4	168.4	000.1700	0125.2	045.2	39.59
328.0	000.0080	0064.2	004.4	168.3	000.1700	0125.2	045.2	39.61
329.0	000.0080	0064.4	004.4	168.2	000.1700	0125.2	045.2	39.62
330.0	000.0080	0064.5	004.4	168.1	000.1700	0125.2	045.1	39.63
331.0	000.0080	0064.8	004.4	168.0	000.1700	0125.2	045.1	39.65
332.0	000.0080	0065.1	004.4	167.9	000.1700	0125.2	045.1	39.66
333.0	000.0080	0065.3	004.4	167.8	000.1700	0125.2	045.1	39.67
334.0	000.0080	0065.6	004.4	167.7	000.1700	0125.2	045.0	39.68
335.0	000.0080	0065.8	004.5	167.6	000.1700	0125.2	045.0	39.69
336.0	000.0080	0066.0	004.5	167.5	000.1700	0125.2	045.0	39.70
337.0	000.0080	0066.5	004.5	167.4	000.1700	0125.2	045.0	39.71
338.0	000.0080	0067.9	004.5	167.4	000.1700	0125.2	044.9	39.73
339.0	000.0080	0069.6	004.6	167.3	000.1700	0125.2	044.8	39.76
340.0	000.0080	0071.1	004.6	167.2	000.1700	0125.2	044.8	39.78
341.0	000.0080	0072.4	004.7	167.1	000.1700	0125.2	044.7	39.81
342.0	000.0080	0073.6	004.7	167.0	000.1700	0125.2	044.7	39.82
343.0	000.0080	0074.0	004.7	166.9	000.1700	0125.2	044.6	39.83
344.0	000.0080	0073.6	004.7	166.8	000.1700	0125.2	044.7	39.83
345.0	000.0080	0073.5	004.7	166.7	000.1700	0125.2	044.7	39.83
346.0	000.0080	0073.3	004.7	166.6	000.1700	0125.2	044.7	39.83
347.0	000.0080	0072.7	004.7	166.5	000.1700	0125.1	044.7	39.82
348.0	000.0080	0071.9	004.7	166.3	000.1700	0125.1	044.7	39.80
349.0	000.0080	0071.6	004.6	166.2	000.1700	0125.1	044.7	39.80
350.0	000.0080	0071.4	004.6	166.1	000.1700	0125.1	044.7	39.79
351.0	000.0080	0071.1	004.6	166.0	000.1700	0125.1	044.7	39.79
352.0	000.0080	0071.2	004.6	165.9	000.1700	0125.1	044.8	39.79
353.0	000.0080	0071.8	004.7	165.8	000.1700	0125.1	044.7	39.79
354.0	000.0080	0072.6	004.7	165.7	000.1700	0125.1	044.7	39.80
355.0	000.0080	0073.6	004.7	165.6	000.1700	0125.1	044.7	39.81
356.0	000.0080	0074.7	004.7	165.5	000.1700	0125.1	044.7	39.81
357.0	000.0080	0076.4	004.8	165.4	000.1700	0125.1	044.6	39.83
358.0	000.0080	0078.2	004.9	165.3	000.1700	0125.1	044.6	39.84
359.0	000.0080	0078.6	004.9	165.1	000.1700	0125.1	044.6	39.84
000.0	000.0080	0078.4	004.9	165.0	000.1700	0125.1	044.6	39.83
001.0	000.0080	0078.3	004.9	164.9	000.1700	0125.1	044.7	39.82
002.0	000.0080	0076.9	004.8	164.9	000.1700	0125.1	044.7	39.79
003.0	000.0080	0075.5	004.8	164.8	000.1700	0125.1	044.8	39.76
004.0	000.0080	0074.3	004.7	164.7	000.1700	0125.1	044.9	39.74
005.0	000.0080	0074.2	004.7	164.6	000.1700	0125.1	044.9	39.73
006.0	000.0080	0075.7	004.8	164.5	000.1700	0125.1	044.9	39.73
007.0	000.0080	0077.4	004.8	164.3	000.1700	0125.1	044.9	39.74
008.0	000.0080	0078.6	004.9	164.2	000.1700	0125.1	044.9	39.74
009.0	000.0080	0079.0	004.9	164.1	000.1700	0125.1	044.9	39.73
010.0	000.0080	0078.8	004.9	164.0	000.1700	0125.1	044.9	39.71
011.0	000.0080	0079.3	004.9	163.9	000.1700	0125.1	045.0	39.70
012.0	000.0080	0079.9	004.9	163.8	000.1700	0125.1	045.0	39.69

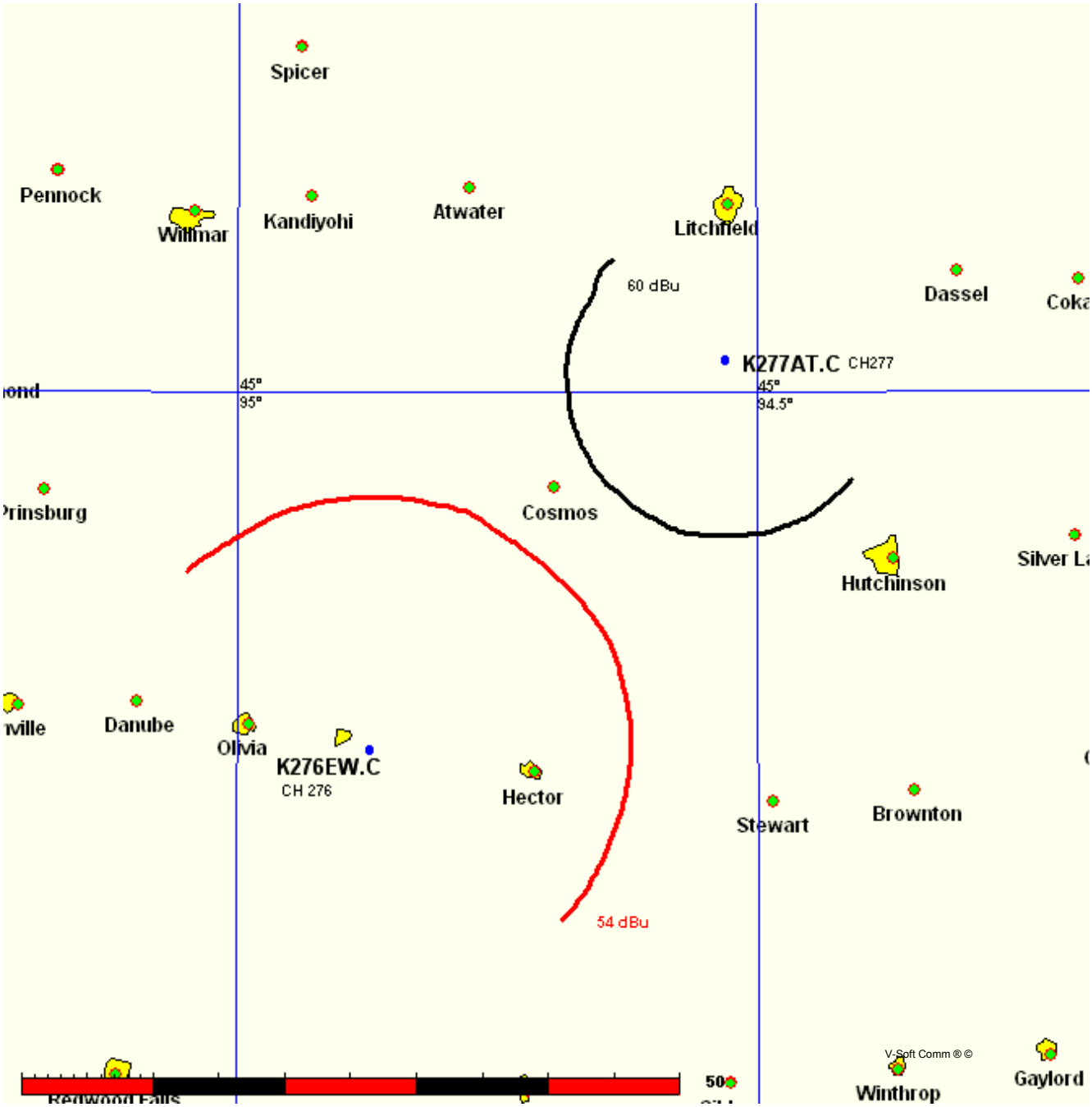
Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
013.0	000.0080	0080.5	004.9	163.7	000.1700	0125.1	045.0	39.68
014.0	000.0080	0080.6	004.9	163.6	000.1700	0125.1	045.0	39.67
015.0	000.0080	0080.1	004.9	163.5	000.1700	0125.1	045.1	39.64
016.0	000.0080	0079.6	004.9	163.4	000.1700	0125.1	045.2	39.62
017.0	000.0080	0079.7	004.9	163.3	000.1700	0125.1	045.2	39.60
018.0	000.0080	0080.1	004.9	163.2	000.1700	0125.1	045.2	39.59
019.0	000.0080	0080.2	004.9	163.2	000.1700	0125.1	045.3	39.57
020.0	000.0080	0080.0	004.9	163.1	000.1700	0125.1	045.3	39.54
021.0	000.0080	0079.5	004.9	163.0	000.1700	0125.1	045.4	39.52
022.0	000.0080	0078.8	004.9	162.9	000.1700	0125.1	045.5	39.49
023.0	000.0080	0078.2	004.9	162.9	000.1700	0125.1	045.5	39.46
024.0	000.0080	0077.7	004.8	162.8	000.1700	0125.1	045.6	39.43
025.0	000.0080	0077.5	004.8	162.7	000.1700	0125.1	045.7	39.41
026.0	000.0080	0077.0	004.8	162.7	000.1700	0125.1	045.7	39.38
027.0	000.0080	0076.5	004.8	162.6	000.1700	0125.1	045.8	39.35
028.0	000.0080	0076.3	004.8	162.5	000.1700	0125.1	045.9	39.33
029.0	000.0080	0076.4	004.8	162.5	000.1700	0125.2	045.9	39.31
030.0	000.0080	0076.4	004.8	162.4	000.1700	0125.2	046.0	39.28
031.0	000.0080	0076.2	004.8	162.3	000.1700	0125.2	046.1	39.26
032.0	000.0080	0075.8	004.8	162.3	000.1700	0125.2	046.1	39.23
033.0	000.0080	0075.8	004.8	162.2	000.1700	0125.2	046.2	39.20
034.0	000.0080	0076.2	004.8	162.1	000.1700	0125.2	046.3	39.18
035.0	000.0080	0076.9	004.8	162.0	000.1700	0125.2	046.3	39.16
036.0	000.0080	0077.6	004.8	161.9	000.1700	0125.2	046.4	39.14
037.0	000.0080	0078.1	004.9	161.9	000.1700	0125.2	046.4	39.11
038.0	000.0080	0078.2	004.9	161.8	000.1700	0125.2	046.5	39.08
039.0	000.0080	0077.9	004.9	161.8	000.1700	0125.2	046.6	39.05
040.0	000.0080	0077.6	004.8	161.7	000.1700	0125.2	046.6	39.02
041.0	000.0080	0077.3	004.8	161.7	000.1700	0125.2	046.7	38.99
042.0	000.0080	0076.8	004.8	161.6	000.1700	0125.2	046.8	38.96
043.0	000.0080	0076.1	004.8	161.6	000.1700	0125.2	046.9	38.93
044.0	000.0080	0075.3	004.8	161.6	000.1700	0125.2	047.0	38.89
045.0	000.0080	0074.6	004.7	161.6	000.1700	0125.2	047.1	38.86
046.0	000.0080	0074.2	004.7	161.5	000.1700	0125.2	047.1	38.83
047.0	000.0080	0073.9	004.7	161.5	000.1700	0125.2	047.2	38.80

FMCommander Single Allocation Study
01-31-2007

K276EW.C CH 276 D
0.17 kW 454.4 M COR
Prot. = 60 dBu
Intef. = 54 dBu

K277AT.C CH 277 D BNPFT20030822ACK
0.25 kW, 442 M COR
Prot. = 60 dBu
Intef. = 54 dBu

Scale = 1:750,000



01-31-2007 30 Arc-Sec. Sec. Terrain Data

K277AT.C BNPFT20030822ACK
Channel = 277D
Max ERP = 0.25 kW
RCAMSL = 442 M
N. Lat. 45 01 18.0
W. Lng. 94 31 49.0
Protected
60 dBu

K276EW.C
Channel = 276D
Max ERP = 0.17 kW
RCAMSL = 454.4 M
N. Lat. 44 45 33.0
W. Lng. 94 52 23.0
Interfering
54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
163.0	000.2500	0106.9	013.3	061.8	000.1700	0127.9	035.1	44.26
164.0	000.2500	0107.0	013.3	061.7	000.1700	0127.9	034.9	44.38
165.0	000.2500	0107.2	013.3	061.7	000.1700	0127.9	034.6	44.49
166.0	000.2500	0107.3	013.3	061.6	000.1700	0127.9	034.4	44.60
167.0	000.2500	0107.3	013.3	061.5	000.1700	0127.4	034.2	44.68
168.0	000.2500	0107.1	013.3	061.4	000.1700	0127.4	034.0	44.78
169.0	000.2500	0106.9	013.3	061.2	000.1700	0127.4	033.7	44.89
170.0	000.2500	0106.4	013.3	061.1	000.1700	0127.4	033.5	44.99
171.0	000.2500	0106.0	013.2	060.9	000.1700	0127.4	033.3	45.10
172.0	000.2500	0105.6	013.2	060.7	000.1700	0127.4	033.1	45.20
173.0	000.2500	0105.2	013.2	060.5	000.1700	0127.4	032.9	45.30
174.0	000.2500	0105.0	013.2	060.4	000.1700	0127.0	032.7	45.38
175.0	000.2500	0104.6	013.2	060.2	000.1700	0127.0	032.5	45.48
176.0	000.2500	0104.3	013.1	060.0	000.1700	0127.0	032.3	45.57
177.0	000.2500	0104.1	013.1	059.8	000.1700	0127.0	032.1	45.67
178.0	000.2500	0104.0	013.1	059.6	000.1700	0127.0	031.9	45.77
179.0	000.2500	0104.1	013.1	059.4	000.1700	0126.7	031.7	45.85
180.0	000.2500	0104.2	013.1	059.2	000.1700	0126.7	031.5	45.96
181.0	000.2500	0104.4	013.1	059.0	000.1700	0126.7	031.3	46.06
182.0	000.2500	0104.6	013.2	058.8	000.1700	0126.7	031.1	46.17
183.0	000.2500	0104.9	013.2	058.6	000.1700	0126.7	030.9	46.28
184.0	000.2500	0105.3	013.2	058.4	000.1700	0126.3	030.7	46.37
185.0	000.2500	0105.6	013.2	058.1	000.1700	0126.3	030.5	46.48
186.0	000.2500	0105.8	013.2	057.9	000.1700	0126.3	030.3	46.58
187.0	000.2500	0106.0	013.2	057.6	000.1700	0126.3	030.1	46.69
188.0	000.2500	0105.9	013.2	057.3	000.1700	0126.0	029.9	46.76
189.0	000.2500	0105.9	013.2	057.1	000.1700	0126.0	029.8	46.86
190.0	000.2500	0106.2	013.2	056.8	000.1700	0126.0	029.6	46.97
191.0	000.2500	0106.7	013.3	056.5	000.1700	0126.0	029.4	47.08
192.0	000.2500	0107.1	013.3	056.2	000.1700	0125.5	029.2	47.16
193.0	000.2500	0107.4	013.3	055.9	000.1700	0125.5	029.0	47.26
194.0	000.2500	0107.5	013.3	055.6	000.1700	0125.5	028.9	47.36
195.0	000.2500	0107.3	013.3	055.2	000.1700	0125.0	028.7	47.42
196.0	000.2500	0106.9	013.3	054.8	000.1700	0125.0	028.6	47.50
197.0	000.2500	0106.6	013.3	054.4	000.1700	0124.5	028.5	47.54

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
198.0	000.2500	0106.2	013.3	054.0	000.1700	0124.5	028.4	47.61
199.0	000.2500	0105.8	013.2	053.6	000.1700	0124.5	028.2	47.68
200.0	000.2500	0105.3	013.2	053.2	000.1700	0124.0	028.1	47.72
201.0	000.2500	0104.8	013.2	052.8	000.1700	0124.0	028.0	47.78
202.0	000.2500	0104.2	013.1	052.3	000.1700	0123.5	028.0	47.80
203.0	000.2500	0103.8	013.1	051.9	000.1700	0123.5	027.9	47.86
204.0	000.2500	0103.4	013.1	051.5	000.1700	0123.1	027.8	47.89
205.0	000.2500	0103.3	013.1	051.0	000.1700	0123.1	027.7	47.95
206.0	000.2500	0103.1	013.1	050.6	000.1700	0123.1	027.6	48.00
207.0	000.2500	0102.9	013.0	050.2	000.1700	0122.7	027.5	48.03
208.0	000.2500	0102.7	013.0	049.7	000.1700	0122.7	027.4	48.08
209.0	000.2500	0102.4	013.0	049.3	000.1700	0122.4	027.4	48.10
210.0	000.2500	0102.2	013.0	048.8	000.1700	0122.4	027.3	48.14
211.0	000.2500	0102.1	013.0	048.3	000.1700	0122.1	027.2	48.16
212.0	000.2500	0102.0	013.0	047.9	000.1700	0122.1	027.2	48.20
213.0	000.2500	0101.8	013.0	047.4	000.1700	0121.8	027.1	48.21
214.0	000.2500	0101.6	013.0	046.9	000.1700	0121.8	027.1	48.24
215.0	000.2500	0101.2	012.9	046.5	000.1700	0121.4	027.1	48.23
216.0	000.2500	0100.6	012.9	046.0	000.1700	0121.4	027.1	48.24
217.0	000.2500	0100.0	012.9	045.5	000.1700	0121.4	027.1	48.24
218.0	000.2500	0099.6	012.8	045.0	000.1700	0121.1	027.0	48.22
219.0	000.2500	0099.3	012.8	044.6	000.1700	0121.1	027.0	48.22
220.0	000.2500	0099.2	012.8	044.1	000.1700	0120.7	027.0	48.21
221.0	000.2500	0099.5	012.8	043.6	000.1700	0120.7	027.0	48.23
222.0	000.2500	0100.2	012.9	043.1	000.1700	0120.3	026.9	48.23
223.0	000.2500	0100.9	012.9	042.7	000.1700	0120.3	026.9	48.26
224.0	000.2500	0101.2	012.9	042.2	000.1700	0119.8	026.9	48.24
225.0	000.2500	0101.2	012.9	041.7	000.1700	0119.8	026.9	48.24
226.0	000.2500	0100.9	012.9	041.2	000.1700	0119.5	026.9	48.19
227.0	000.2500	0100.6	012.9	040.7	000.1700	0119.5	027.0	48.16
228.0	000.2500	0100.4	012.9	040.3	000.1700	0119.3	027.0	48.13
229.0	000.2500	0100.3	012.9	039.8	000.1700	0119.3	027.0	48.11
230.0	000.2500	0100.2	012.9	039.3	000.1700	0119.3	027.1	48.08
231.0	000.2500	0099.9	012.9	038.9	000.1700	0119.3	027.1	48.03
232.0	000.2500	0099.4	012.8	038.4	000.1700	0119.3	027.2	47.98
233.0	000.2500	0098.9	012.8	038.0	000.1700	0119.3	027.3	47.93
234.0	000.2500	0098.2	012.8	037.6	000.1700	0119.3	027.4	47.86
235.0	000.2500	0097.6	012.7	037.2	000.1700	0119.2	027.5	47.79
236.0	000.2500	0097.2	012.7	036.7	000.1700	0119.2	027.6	47.73
237.0	000.2500	0096.9	012.7	036.3	000.1700	0119.0	027.7	47.66
238.0	000.2500	0096.8	012.7	035.9	000.1700	0119.0	027.8	47.60
239.0	000.2500	0096.7	012.7	035.5	000.1700	0118.8	027.9	47.53
240.0	000.2500	0096.6	012.6	035.1	000.1700	0118.8	028.0	47.47
241.0	000.2500	0096.4	012.6	034.7	000.1700	0118.8	028.1	47.40
242.0	000.2500	0096.3	012.6	034.3	000.1700	0118.7	028.2	47.33
243.0	000.2500	0096.0	012.6	033.9	000.1700	0118.7	028.3	47.25
244.0	000.2500	0095.6	012.6	033.5	000.1700	0118.7	028.4	47.17
245.0	000.2500	0095.2	012.6	033.2	000.1700	0118.6	028.6	47.09
246.0	000.2500	0094.9	012.5	032.8	000.1700	0118.6	028.7	47.01
247.0	000.2500	0094.8	012.5	032.5	000.1700	0118.6	028.8	46.93
248.0	000.2500	0094.6	012.5	032.1	000.1700	0118.6	029.0	46.85

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
249.0	000.2500	0094.4	012.5	031.8	000.1700	0118.6	029.1	46.76
250.0	000.2500	0094.0	012.5	031.5	000.1700	0118.6	029.3	46.67
251.0	000.2500	0093.6	012.5	031.2	000.1700	0118.6	029.4	46.58
252.0	000.2500	0093.0	012.4	030.9	000.1700	0118.6	029.6	46.48
253.0	000.2500	0092.3	012.4	030.7	000.1700	0118.6	029.8	46.38
254.0	000.2500	0091.6	012.3	030.4	000.1700	0118.8	029.9	46.29
255.0	000.2500	0091.0	012.3	030.2	000.1700	0118.8	030.1	46.19
256.0	000.2500	0090.3	012.2	030.0	000.1700	0118.8	030.3	46.09
257.0	000.2500	0089.7	012.2	029.7	000.1700	0118.8	030.5	45.99
258.0	000.2500	0089.3	012.2	029.5	000.1700	0118.8	030.7	45.89
259.0	000.2500	0089.0	012.2	029.3	000.1700	0119.0	030.8	45.82
260.0	000.2500	0088.9	012.2	029.0	000.1700	0119.0	031.0	45.73
261.0	000.2500	0088.9	012.2	028.8	000.1700	0119.0	031.2	45.64
262.0	000.2500	0088.8	012.2	028.6	000.1700	0119.0	031.3	45.55
263.0	000.2500	0088.7	012.1	028.3	000.1700	0119.5	031.5	45.49
264.0	000.2500	0088.4	012.1	028.1	000.1700	0119.5	031.7	45.39
265.0	000.2500	0088.1	012.1	028.0	000.1700	0119.5	031.9	45.30
266.0	000.2500	0087.9	012.1	027.8	000.1700	0119.5	032.1	45.21
267.0	000.2500	0087.8	012.1	027.6	000.1700	0119.5	032.2	45.11
268.0	000.2500	0087.6	012.1	027.4	000.1700	0120.1	032.4	45.06
269.0	000.2500	0087.3	012.1	027.3	000.1700	0120.1	032.6	44.97
270.0	000.2500	0087.0	012.0	027.1	000.1700	0120.1	032.8	44.87
271.0	000.2500	0086.7	012.0	027.0	000.1700	0120.1	033.0	44.78
272.0	000.2500	0086.4	012.0	026.9	000.1700	0120.1	033.2	44.68
273.0	000.2500	0085.7	011.9	026.8	000.1700	0120.1	033.4	44.58
274.0	000.2500	0085.0	011.9	026.7	000.1700	0120.1	033.6	44.48
275.0	000.2500	0084.4	011.9	026.7	000.1700	0120.1	033.8	44.38
276.0	000.2500	0084.0	011.8	026.6	000.1700	0120.1	034.0	44.28
277.0	000.2500	0083.3	011.8	026.5	000.1700	0120.1	034.3	44.18
278.0	000.2500	0082.7	011.7	026.5	000.1700	0120.8	034.5	44.13
279.0	000.2500	0082.1	011.7	026.4	000.1700	0120.8	034.7	44.03
280.0	000.2500	0081.5	011.7	026.4	000.1700	0120.8	034.9	43.93
281.0	000.2500	0081.0	011.6	026.3	000.1700	0120.8	035.1	43.83
282.0	000.2500	0080.6	011.6	026.3	000.1700	0120.8	035.3	43.74
283.0	000.2500	0080.2	011.6	026.3	000.1700	0120.8	035.5	43.64

EXHIBIT #16

R.F. EMISSION COMPLIANCE STATEMENT

Minnesota Public Radio

K276EW
Olivia, MN
0.17 kW

The applicant proposed to diplex K276EW (0.17 kW) with translator K280ET, also with 0.17 kW ERP, for a total of 0.34 kW. The proposed four-bay, circularly polarized antenna will be energized such that it produces 0.34 kW effective radiated power from a center of radiation of 121.9 meters above ground. Using the formulas expressed in the OET Bulletin, No. 65, August 1997, "Evaluating Compliance with F.C.C. Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", published by the Federal Communication Commission's Office of Science and Engineering, and then by applying a combination of the element and array pattern as defined in E.P.A. study PB85-245868 ("**Engineering Assessment of the Potential Impact of the Federal Radiation Protection Guidance on the AM, FM and TV Broadcast Services**") the predicted level of RF non-ionization emissions at a position of 2 meters above ground (head-height) at the base of the tower for the proposed 4-bay Shively 6832 (Type #6) antenna is 0.00774 microwatts per square centimeter ($\mu W/cm^2$), which is 0.0008 percent of the maximum for a controlled area and 0.0039 percent of maximum for an uncontrolled area.

Since the predicted level of emissions is less than 1% of maximum, no further calculations were deemed necessary.

The applicant will protect workers on the tower by either reducing ERP or terminating transmission.

Consequently, it appears that the proposed FM translator will be in full compliance with the Commission's human exposure to radiofrequency electromagnetic field rules and regulations.