

Federal Communications Commission Washington, D.C. 20554	Approved by OMB 3060-0029 (December 2008)	FOR FCC USE ONLY
FCC 340		
APPLICATION FOR CONSTRUCTION PERMIT FOR RESERVED CHANNEL NONCOMMERCIAL EDUCATIONAL BROADCAST STATION		FOR COMMISSION USE ONLY FILE NO. BPED - 20100802AVM
Read INSTRUCTIONS Before Filling Out Form		

Section I - General Information

1.	Legal Name of the Licensee/Permittee MINNESOTA PUBLIC RADIO	
	Mailing Address 480 CEDAR STREET	
	City ST. PAUL	State or Country (if foreign address) MN
	Zip Code 55101 -	
	Telephone Number (include area code) 6512901259	E-Mail Address (if available) FCCFILING@MPR.ORG
	FCC Registration Number: 0002642510	Call Sign KNOW-FM
		Facility Identifier 42949
2.	Contact Representative (if other than licensee/Permittee) TODD M STANSBURY	Firm or Company Name WILEY REIN LLP
	Mailing Address 1776 K STREET NW SUITE 500	
	City WASHINGTON	State or Country (if foreign address) DC
	ZIP Code 20006 -	
	Telephone Number (include area code) 2027194948	E-Mail Address (if available) TSTANSBURY@WILEYREIN.COM
3.	Is this application being filed in response to a window? If Yes, specify closing date and/or window number:	<input type="radio"/> Yes <input checked="" type="radio"/> No
4.	Application Purpose	
	<input type="radio"/> New station	
	<input type="radio"/> Major Change in licensed facility	
	<input checked="" type="radio"/> Minor Change in licensed facility	
	<input type="radio"/> Major Modification of construction permit	
	<input type="radio"/> Minor Modification of construction permit	
	<input type="radio"/> Major Amendment to pending application	
	<input type="radio"/> Minor Amendment to pending application	
	(a) File number of original construction permit: -	
	(b) Service Type: <input checked="" type="radio"/> FM <input type="radio"/> TV <input type="radio"/> DTV <input type="radio"/> DTS	
	(c) DTV Type: <input type="radio"/> Pre-Transition <input type="radio"/> Post-Transition <input type="radio"/> Both	
	(d) Community of License:	
	City: MINNEAPOLIS-ST. PAUL	State: MN
	(e) Facility Type <input checked="" type="radio"/> Main <input type="radio"/> Auxiliary	
	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: The failure to include an explanatory providing full particulars in connection with a "No" response may result in dismissal of the application. See Instructions, paragraph L for additional information regarding completion of explanatory exhibits.

SECTION II - Legal and Financial

1.	<p>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.</p>	<p><input checked="" type="radio"/> Yes <input type="radio"/> No</p>
2.	<p>Eligibility. Each application must answer "Yes" to one and "No" to two of the three following certifications. An applicant should not submit an explanatory exhibit in connection with these Question 2 "No" responses.</p> <p>The applicant certifies that it is:</p> <p>a. a nonprofit educational institution; or</p> <p>b. a governmental entity other than a school; or</p> <p>c. a nonprofit educational organization, other than described in a. or b.</p>	<p><input type="radio"/> Yes <input type="radio"/> No</p> <p><input type="radio"/> Yes <input type="radio"/> No</p> <p><input checked="" type="radio"/> Yes <input type="radio"/> No</p>
3.	<p>For applicants checking "Yes" to question 2(c) and applying for a new noncommercial educational television station only, the applicant certifies that the applicant's officers, directors and members of its governing board are broadly representative of the educational, cultural, and civic segments of the principal community to be served.</p>	<p><input type="radio"/> Yes <input type="radio"/> No</p> <p><input checked="" type="radio"/> N/A</p>
4.	<p>a. The applicant certifies that the Commission has previously granted a broadcast application identified here by file number that found this applicant qualified as a noncommercial educational entity with a qualifying educational program, and that the applicant will use the proposed station to advance a program similar to that the Commission has found qualifying in applicant's previous application.</p> <p>b. Applicants who answered "No" to Question 4(a), must include an exhibit that describes the applicant's educational objective and how the proposed station will be used to advance an educational program that will further that objective according to 47 C.F.R. Section 73.503 (for radio applicants) and 47 C.F.R. Section 73.621 (for television applicants).</p>	<p><input type="radio"/> Yes <input type="radio"/> No</p> <p>FCC FileNumber</p> <p>-</p> <p>[Exhibit 2]</p>
5.	<p>The applicant certifies that its governing documents (e.g., articles of incorporation, by-laws, charter, enabling statute, and/or other pertinent organizational document) permit the applicant to advance an educational program and that there is no provision in any of those documents that would restrict the applicant from advancing an educational program or complying with any Commission rule, policy, or provision of the Communications Act of 1934, as amended.</p>	<p><input type="radio"/> Yes <input type="radio"/> No</p>
6.	<p>a. Parties to the Application. List separately each party to the application including, as applicable, the applicant, its officers, directors, five percent or greater stockholders, non-insulated partners, members, and all other persons and entities with attributable interests. If another entity hold an attributable interest in the applicant, list separately, as applicable, its officers, directors, five percent or greater stockholders, non-insulated partners, and board members. Create a separate row for each individual or entity. Attach additional pages if necessary.</p> <p>[Enter Parties/Owners Information]</p> <p>_____</p> <p>_____</p> <p>b. Applicant certifies that equity and financial interests not set forth above are non-attributable pursuant to 47 C.F.R. Section 73.3555 and that there are no agreements or understandings with any non-party that would give influence over the applicant's programming, personnel, or finances to that non-party.</p>	<p><input type="radio"/> Yes <input type="radio"/> No</p> <p>[Exhibit 3]</p>

7.	Other Authorizations. List call signs, locations, and facility identifiers of all other broadcast stations in which applicant or any party to the application has an attributable interest pursuant to the notes to 47 C.F.R. Section 73.3555.	<input type="checkbox"/> N/A [Exhibit 4]
8.	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.	<input type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 5]
9.	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 proceeding brought under the provisions of any law related to any of the following: any felony; mass media-related antitrust or unfair competition; fraudulent statements to another government 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 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 the date of filing; and (ii) the disposition of the previously reported matter.	<input type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 6]
10.	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.	<input type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 7]
11.	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.	<input type="radio"/> Yes <input type="radio"/> No
12.	Local Public Notice. Applicant certifies compliance with the public notice requirements of 47 C.F.R. Section 73.3580.	<input type="radio"/> Yes <input type="radio"/> No
13.	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.	<input checked="" type="radio"/> Yes <input type="radio"/> No
14.	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.	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> N/A

QUESTIONS 15, 16 AND 17 APPLY ONLY TO APPLICANTS FOR NEW STATIONS. OTHER APPLICANTS CAN PROCEED TO QUESTION 18.

15.	Financial. The applicant certifies that sufficient net liquid assets are on hand or that sufficient funds are available from committed sources to construct and operate the requested facilities for three months without revenue. If "No" to 15., answer question 16. and 17.	<input type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 8]
16.	Is this application contingent upon receipt of a grant from the National Telecommunications and Information Administration?	<input type="radio"/> Yes <input type="radio"/> No
17.	Is this application contingent upon receipt of a grant from a charitable organization, the approval of the budget of a school or university, or an appropriation from a state, county, municipality or other political subdivision?	<input type="radio"/> Yes <input type="radio"/> No

NOTE: If Yes to 16. or 17., the application cannot be granted unconditionally until all of the necessary funds are committed or appropriated. In the case of grants from the National Telecommunications and Information Administration, no further action on the applicant's part is required. If the applicant relies on funds from a source specified in Question 17., **the applicant must advise the**

Commission when the funds are committed or appropriated. This should be accomplished by letter amendment to the application. Applicants should take note that the Commission's construction period is not considered "tolled" by funding difficulties and that any permit granted conditionally on funding will expire if the station is not constructed for any reason, including lack of funding.

QUESTIONS 18 AND 19 DO NOT APPLY TO APPLICATIONS FOR NEW STATIONS. APPLICANTS FOR NEW FM STATIONS CAN PROCEED TO SECTION III. APPLICANTS FOR NEW TV STATIONS CAN PROCEED TO SECTION IV.

Holding Period.

18.	Applicant certifies that this application does not propose a modification to an authorization that was awarded on the basis of a preference for fair distribution of service pursuant to 47 U.S.C. Section 307(b). If "No," answer a. and b. below. If applicant answers "No" to 18. above and cannot answer "Yes" to either a. or b. below, the application is unacceptable.	<input checked="" type="radio"/> Yes <input type="radio"/> No
	a. Applicant certifies that the proposed modification will not downgrade service to the area on which the Section 307(b) preference was based.	<input type="radio"/> Yes <input type="radio"/> No
	b. Applicant certifies that although it proposes to downgrade service to the area on which the Section 307(b) preference was based, applicant has provided full service to that area for a period of four years of on-air operations.	<input type="radio"/> Yes <input type="radio"/> No
19.	Applicant certifies that this application does not propose a modification to an authorized station that received a credit for superior technical parameters under the point system selection method in 47 C.F.R. Section 73.7003. If "No," applicant must be able to answer "Yes" to a. below or provide an exhibit that makes a compelling showing that the downgrade would be in the public interest.	<input checked="" type="radio"/> Yes <input type="radio"/> No
	a. Applicant certifies that the population and area within the proposed service contour (60 dBu (FM) or grade B (TV)) are greater than or equivalent to those authorized.	<input type="radio"/> Yes <input type="radio"/> No [Exhibit 9]

Section III

Fair Distribution of Service Pursuant to 47 U.S.C. Section 307(b) (New and Major Changes to FM Radio Only) (Other applicants can proceed to Section IV).

1.	Applicant certifies that the proposed station will provide a first noncommercial educational aural service to (a) at least 10 percent of the people residing within the station's 60 dBu (1mV/m) service contour and (b) to a minimum of 2,000 people. Applicants answering "Yes" must provide an Exhibit.	<input type="radio"/> Yes <input type="radio"/> No [Exhibit 10]
2.	Applicant certifies that the proposed station will provide a second noncommercial educational aural service to (a) at least 10 percent of the people residing within the station's 60 dBu (1mV/m) service contour and (b) to a minimum of 2,000 people. Applicants answering "Yes" must provide an Exhibit.	<input type="radio"/> Yes <input type="radio"/> No [Exhibit 11]

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

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.	<input type="radio"/> Yes <input type="radio"/> No
2.	Diversity of Ownership: (a) Applicant certifies that the principal community (city grade) contour of the proposed station does not overlap the principal community contour of any other authorized station (comparing radio and television to television, including non-fill-in translator stations other than those identified in 2(b) below) in which any party to the application has an attributable interest as defined in 47	<input type="radio"/> Yes <input type="radio"/> No

<p>C.F.R. Section 73.3555, that its governing documents require that such diversity be maintained, and that it has placed documentation of its diversity qualification in a local public inspection file and has submitted to the Commission copies of the documentation.</p>	
<p>(b) Is the application's certification to 2(a) based on its exclusion of translator station(s) that will be replaced with a full service station pursuant to the authorization requested here?</p> <p>If Yes, applicant must include an exhibit identifying the translator station authorization for which it will request cancellation upon commencement of operation of the proposed full service station (i.e., upon its filing of a license application and receipt of program test authority).</p>	<p><input type="radio"/> Yes <input type="radio"/> No</p> <p>[Exhibit 12]</p>
<p>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.</p>	<p><input type="radio"/> Yes <input type="radio"/> No</p>
<p>4. Technical Parameters: Applicant certifies that the numbers in the boxes below accurately reflect the new area and population that its proposal would serve with a 60 dBu (FM) or Grade B (TV) signal measured in accordance with the standard predicted contours in 47 C.F.R. Section 73.713(c) (FM) and 73.683(TV) 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 any area already within the station's existing service area). (Points, if any, will be determined by FCC)</p>	<p><input type="radio"/> Yes <input type="radio"/> No</p>
<p>New area served in square kilometers (excluding areas of water):</p>	
<p>Population served based on the most recent census block data from the United States Bureau of Census using the centroid method:</p>	

SECTION V - Tie Breakers - New and Major Change Applications Only (used to choose among competing radio and television applications receiving the same number of points in Section IV)

<p>1. Existing Authorizations. By placing a number in the box, the applicant certifies that it and other parties to the application have, as of the date of filing and pursuant to 47 C.F.R. Section 73.3555, attributable interests in the stated number of relevant broadcast station authorizations. Radio applicants should count all attributable full service radio stations, AM and FM, commercial and noncommercial, and FM translator stations other than fill-in stations or those identified in IV (2)(b) above. TV applicants should count all attributable full service TV stations, commercial and noncommercial and TV translator stations other than fill-in stations or those identified in IV(2)(b) above. (number of commercial and non-commercial licenses and construction permits)</p>
<p>2. Pending Applications. By placing a number in the box, the applicant certifies that it and other parties to the application have, as of the date of filing and pursuant to 47 C.F.R. Section 73.3555, attributable interests in the stated number of pending applications for new or major changes to relevant broadcast stations. Radio applicants should count all attributable full service radio stations, AM and FM, commercial and noncommercial, and FM translator stations other than fill-in stations or those identified in IV(2)(b) above. TV applicants should count all attributable full service TV stations, commercial and noncommercial, and TV translator stations other than fill-in stations or those identified in IV(2)(b) above. (number of pending commercial and non-commercial applications)</p>

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.)

<p>Typed or Printed Name of Person Signing THOMAS J. KIGIN</p>	<p>Typed or Printed Title of Person Signing EXECUTIVE VICE PRESIDENT</p>
<p>Signature</p>	<p>Date 8/2/2010</p>

Section VII Preparer's Certification

I certify that I have prepared Section VII (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 THOMAS M. NELSON		Relationship to Applicant (e.g., Consulting Engineer) STAFF ENGINEER	
Signature		Date 7/13/2010	
Mailing Address 480 CEDAR ST			
City ST. PAUL		State or Country (if foreign address) MN	Zip Code 55101-
Telephone Number (include area code) 6512901312		E-Mail Address (if available) TNELSON@MPR.ORG	

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 VII - FM 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 Number: 216		
2.	Class (select one): <input type="radio"/> D <input type="radio"/> A <input type="radio"/> B1 <input type="radio"/> B <input type="radio"/> C3 <input type="radio"/> C2 <input type="radio"/> C1 <input checked="" type="radio"/> C0 <input type="radio"/> C		
3.	Antenna Location Coordinates: (NAD 27) Latitude: Degrees 45 Minutes 3 Seconds 44 <input checked="" type="radio"/> North <input type="radio"/> South Longitude: Degrees 93 Minutes 8 Seconds 21 <input checked="" type="radio"/> West <input type="radio"/> East		
4.	Proposed Assignment Coordinates: (NAD 27) - RESERVED CHANNELS ABOVE 220 ONLY <input checked="" type="checkbox"/> Not Applicable Latitude: Degrees Minutes Seconds <input type="radio"/> North <input type="radio"/> South Longitude: Degrees Minutes Seconds <input type="radio"/> West <input type="radio"/> East		
5.	Antenna Structure Registration Number: 1023882 <input type="checkbox"/> Not Applicable <input type="checkbox"/> Notification filed with FAA		
6.	Overall Tower Height Above Ground Level:	437.7 meters	
7.	Height of Radiation Center Above Mean Sea Level:	663.3 meters(H) 663.3 meters(V)	
8.	Height of Radiation Center Above Ground Level:	359.4 meters(H) 359.4 meters(V)	
9.	Height of Radiation Center Above Average Terrain:	388.5 meters(H) 388.5 meters(V)	
10.	Effective Radiated Power:	100 kW(H) 100 kW(V)	
11.	Maximum Effective Radiated Power: (Beam-Tilt Antenna ONLY)	<input checked="" type="checkbox"/> Not Applicable	kW(H) kW(V)
12.	Directional Antenna Relative Field Values: <input checked="" type="checkbox"/> Not applicable (Nondirectional) Rotation (Degrees): <input type="checkbox"/> 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](#)

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.

CERTIFICATION

AUXILIARY ANTENNA APPLICANTS ARE NOT REQUIRED TO RESPOND TO ITEMS 13-17. PROCEED TO ITEM 18.

13. **Main Studio Location.** The proposed main studio location complies with 47 C.F.R. Section 73.1125. Yes No
See Explanation in [Exhibit 13]

14. **Community Coverage.** The proposed facility complies with 47 C.F.R. Section 73.315. (Channels 221 and above) or 47 C.F.R. Section 73.515 (Channels 220 and below). Yes No
See Explanation in [Exhibit 14]

15. **Interference.** The proposed facility complies with all of the following applicable rule sections. Check all that apply: Yes No
See Explanation in [Exhibit 15]

Contour Overlap Requirements.

a. 47 C.F.R. Section 73.509 **Exhibit Required.** [Exhibit 16]

Spacing Requirements.

b. 47 C.F.R. Section 73.207 with respect to station(s)

Grandfathered Short-Spaced.

c. 47 C.F.R. Section 73.213(a) with respect to station(s) **Exhibit Required.** [Exhibit 17]

Contour Protection.

d. 47 C.F.R. Section 73.215(a) with respect to station(s) **Exhibit Required.** [Exhibit 18]

Television Channel 6 Protection.

e. 47 C.F.R. Section 73.525 with respect to station(s) **Exhibit Required.** [Exhibit 19]

16. **Reserved Channels Above 220.**

a. **Availability of Channels.** The proposed facility complies with the assignment requirements of 47 C.F.R. Section 73.203. Yes No
See Explanation in [Exhibit 20]

17. **International Borders.** The proposed antenna location is not within 320 kilometers of the common border between the United States and Canada or Mexico. Yes No
 Canada
 Mexico
[Exhibit 21]

If "No," specify the country and provide an exhibit of compliance with all provisions of the relevant International Agreement.

18.	<p>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 compliance through the use of the RF worksheets in Worksheet #7, an Exhibit is required.</p> <p>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.</p>	<p><input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p>See Explanation in [Exhibit 22]</p>
19.	<p>Community of License Change - Section 307(b). If the application is being submitted to change the facility's community of license, then the applicant certifies that it has attached an exhibit containing information demonstrating that the proposed community of license change comports with the fair distribution of service policies underlying Section 307(b) of the Communications Act of 1934, as amended (47 U.S.C. Section 307(b)).</p> <p>An exhibit is required unless this question is not applicable.</p>	<p><input type="radio"/> Yes <input checked="" type="radio"/> No</p> <p><input type="radio"/> N/A</p> <p>[Exhibit 23]</p>
PREPARER'S CERTIFICATION ON PAGE 8 MUST BE COMPLETED AND SIGNED.		

Exhibits

Exhibit 1

Description: BACKGROUND EXPLANATION TO MINOR MODIFICATION

ON JULY 19, 2000 MINNESOTA PUBLIC RADIO (MPR), THE APPLICANT, FILED ITS INITIAL REQUEST FOR SPECIAL TEMPORARY AUTHORITY (STA) TO OPERATE KNOW AT A LOWER HEIGHT ON THE TOWER THAN ITS LICENSED HEIGHT. THE MOVE DOWN ON THE TOWER WAS DUE TO MPR'S LOSS OF ITS HIGHER TOWER HEIGHT BECAUSE OF THE TOWER OWNER'S NEED TO BE HIGHER ON THE TOWER BECAUSE OF HDTV. THE STA WAS GRANTED AND RENEWED NUMEROUS TIMES THROUGHOUT THE YEARS. THE MOST CURRENT STA EXPIRES NOVEMBER 4, 2010.

MPR NOW HAS WORKED OUT A SOLUTION WITH THE TOWER OWNER AND IN THIS MINOR MODIFICATION APPLICATION PROPOSES TO MOVE THE KNOW ANTENNA UP HIGHER THAN THE LOWER HEIGHT IT HAS BEEN OPERATING AT PURSUANT TO THE STA, BUT AT A SLIGHTLY LOWER HEIGHT THAN ITS LICENSED PARAMETERS.

Attachment 1

Exhibit 14

Description: EXHIBIT #14 COMMUNITY LICENSE

THIS SHOWS THE CURRENT LICENSED 60 DBU AS WELL AS THE SLIGHTLY SMALLER CONTOUR FOR THE MINOR MODIFICATION LOWER ON THE TOWER.

Attachment 14

Description
<u>Exhibit #14 showing current & proposed 60 dBu</u>

Attachment 15

Exhibit 16

Description: CONTOUR OVERLAP REQUIREMENTS

PLEASE SEE ATTACHED EXHIBIT. PLEASE NOTE THE OVERLAP WITH STATION KXLC, LA CRESCENT. THIS OVERLAP IS HISTORICAL. THE INSTANT PROPOSAL TO REDUCE THE ANTENNA HEIGHT ABOVE GROUND, MEAN SEA LEVEL AND AVERAGE TERRAIN, WHILE MAINTAINING ERP OF 100 KW, WILL REDUCE THE AMOUNT OF OVERLAP.

Attachment 16

Description
Exhibit #16, Contour Overlap Requirements

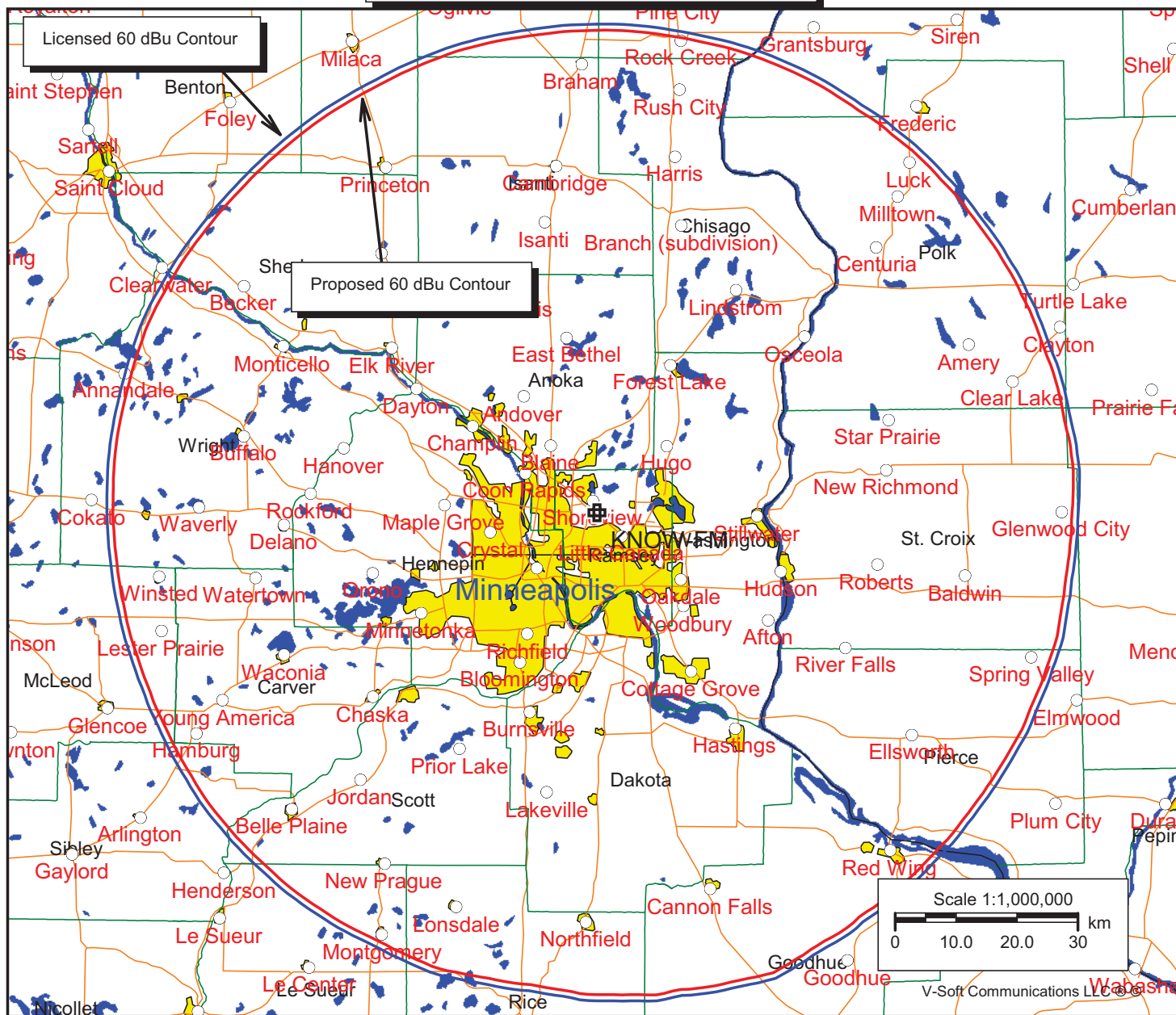
Attachment 22

Description
RFR certification

FCC 60 dBu F(50-50) Coverage Contour

KNOW-FM (Proposed)
 BMLED19940420KA
 Latitude: 45-03-44 N
 Longitude: 093-08-21 W
 ERP: 100.00 kW
 Channel: 216
 Frequency: 91.1 MHz
 AMSL Height: 663.3 m
 Elevation: 303.9 m
 Horiz. Pattern: Omni
 Vert. Pattern: No

KNOW-FM
 BMLED19940420KA
 Latitude: 45-03-44 N
 Longitude: 093-08-21 W
 ERP: 100.00 kW
 Channel: 216
 Frequency: 91.1 MHz
 AMSL Height: 677.0 m
 Elevation: 307.0 m
 Horiz. Pattern: Omni
 Vert. Pattern: No



Doug Vernier Telecommunications Consultants
401 Main Street Suite 213, Cedar Falls, IA 50613

Minnesota Public Radio
KNOW Reduce Antenna Height
Average Protected F(50-50)= 78.91 km
Omni-directional

REFERENCE
45 03 44.0 N.
93 08 21.0 W.

CH# 216C0 - 91.1 MHz, Pwr= 100 kW, HAAT= 388.5 M, COR= 663.3 M

DISPLAY DATES
DATA 07-29-10
SEARCH 07-29-10

CH CITY	CALL	TYPE	ANT STATE	AZI <--	DI ST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
216C	KNOW-FM Minneapolis-st. Paul	LIC	_CN MN	0.0 0.0	0.0 BLED19940420KA	45 03 44.0 93 08 21.0	100.000 400	183.2 677	80.1	-262.2*<	-262.1*<
216A	KXLC La Crescent	LIC	_CX MN	134.3 315.5	198.1 BLED20090730ACK	43 48 16.1 91 22 19.3	0.230 257	59.3 522	19.2	60.8	-2.6<
217A	WHEM Eau Claire	LIC	_CX WI	104.0 285.1	131.9 BLED20030715ABI	44 45 50.0 91 31 06.0	0.300 87	22.4 364	15.4	32.8	1.3
214A	WVSS Menomonie	LIC	DCX WI	100.7 281.4	85.2 BLED20020903AFN	44 54 56.0 92 04 34.0	0.590 130	1.6 449	14.8	5.7	59.2
218C3	1210394 Turtle Lake	APP	DVX WI	56.9 237.6	88.1 BNPED20071012AHI	45 29 27.0 92 11 33.0	20.000 100	3.7 473	31.3	6.6	45.6
215A	KKLW Willmar	LIC	_CX MN	276.7 95.4	142.8 BLED20040204ABY	45 11 52.0 94 56 58.0	0.400 129	24.4 491	16.3	39.0	8.5
216C	KTPR Fort Dodge	LIC	_CX IA	202.6 21.8	269.5 BLED20070911ABL	42 49 03.0 94 24 41.0	100.000 326	176.0 676	74.9	14.7	12.4
218C2	1224021 Barron	APP	_CX WI	62.3 243.1	95.9 BNPED20071015ABH	45 27 30.0 92 03 00.0	39.000 124	5.2 499	47.4	12.7	37.2
218C3	KCFB St. Cloud	LIC	_C_ MN	299.9 119.1	99.1 BLED19991213AAH	45 30 02.0 94 14 31.0	15.000 106	4.0 435	39.5	15.4	48.1
218C2	1243847 Rice Lake	APP	DCX WI	69.6 250.5	101.3 BNPED20071022AVW	45 22 23.2 91 55 22.4	55.000 144	5.9 503	51.2	17.6	38.8
218A	1212217 Turtle Lake	APP	_CX WI	58.3 239.1	98.1 BNPED20071018BAV	45 31 16.0 92 04 02.0	5.000 77	2.5 460	25.5	17.6	61.4
217C1	KUWS Superior	LIC	_CN WI	22.1 202.8	207.7 BLED19910122KA	46 47 21.0 92 06 51.0	83.000 197	104.0 501	71.7	24.8	19.1
217A	KMSK Austin	LIC	_CN MN	175.9 356.0	154.3 BLED19890831KA	43 40 39.0 93 00 04.0	0.135 59	11.7 436	8.6	63.1	28.2
217C0	KRSU Appleton	LIC	_CX MN	274.0 92.0	224.8 BLED20071206ACC	45 10 03.1 96 00 01.9	82.000 345	107.5 653	73.7	37.9	33.3
213C1	KGAC St. Peter	LIC	_CN MN	220.0 39.3	121.3 BLED19850401KB	44 13 20.0 94 07 03.0	75.000 216	8.3 504	61.6	33.9	48.3
218C2	KNGA St. Peter	LIC	_VN MN	220.0 39.3	121.3 BLED19920303KA	44 13 20.0 94 07 03.0	8.500 183	4.1 471	39.4	38.1	70.5

Terrain database is FCC NGDC 30 Sec , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
In & Out distances between contours are shown at closest points. Reference zone = 2, Co to 3rd adjacent.
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
"*"affixed to 'IN' or 'OUT' values = site inside protected contour.

HOW TO READ THE FM COMPUTER PRINT-OUT

Full Service Stations

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. Contour distances are in kilometers and are predicted 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 listed "IN " is the difference in kilometers between of the reference station's protected contour and the data file station's interference contour at the closest point between the contours. (All distances are derived by the method detailed in Sec. 73.208 of the Rules and Regulations as amended in Docket 80-90.) Therefore, "IN" column is a measure of incoming interference. Negative distances in this column indicate the presence of contour overlap. Listed antenna heights and power are those given in the FCC database. The column labeled "OUT " shows the greatest distance in kilometers of overlap or smallest of clearance between the reference station's interference contour and the database station's protected contour. Negative distance figures in this column indicate outgoing contour overlap.

Under the "AZI" column, the first row of numbers indicate the True North bearings from the reference station toward the database stations, while the numbers in the second row indicate the reverse bearings from the database stations to the reference station.

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

For I.F. relationships, some channel-six TV relationships and relationships with commercial channel stations providing clearance the minimum spacings values the "IN" and "OUT" columns can change their significance. The letter "R" stands for the minimum **required** distance in kilometers, while the letter "M" in the next column follows the **available clear space** (or lack of it) in kilometers. Minimum separation distances when displayed are taken from Sec 73.207 of the rules as amended. Canadian and Mexican separation distances, U/D ratios and protected contour values are from the US/Mexican Working Agreement and the US/Canada Working Agreement".

The call letters of stations meeting the minimum separation distances under the rules will be flagged by the characters "<<" appended to the right-hand side of the call sign. The "^" character appended to the call sign means the station has been "max-classed" according to the provisions of section 73.525 of the Rules.

The first three letters of the "TYPE" column identify the current FCC status of the stations. The fourth letter will be a "D" if the facility is directional. "Z" indicates a 73.215 directional. An "N" indicates it is a 73.215 station that operates with an omni-directional antenna. 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 or an "X" if the commission is not sure, otherwise it will be an "N" or left blank.

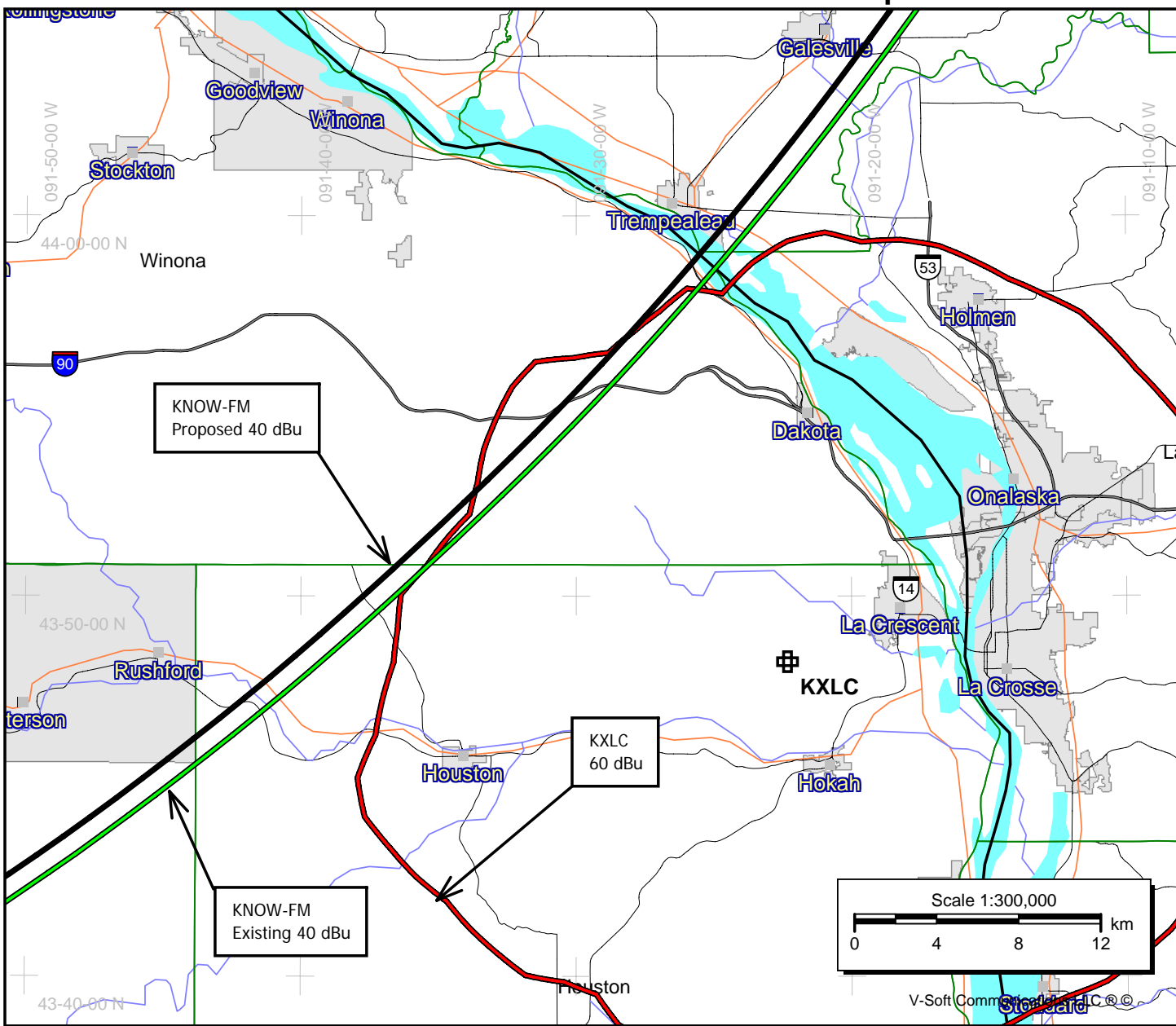
KNOW-FM - Overlap with station KXLC

KNOW-FM^{New}
 Latitude: 45-03-44 N
 Longitude: 093-08-21 W
 ERP: 100.00 kW
 Channel: 216
 Frequency: 91.1 MHz
 AMSL Height: 665.0 m
 HAAT: 389.49 m
 Horiz. Pattern: Omni

KNOW-FM
 BMLD19940420KA
 Latitude: 45-03-44 N
 Longitude: 093-08-21 W
 ERP: 100.00 kW
 Channel: 216
 Frequency: 91.1 MHz
 AMSL Height: 677.0 m
 HAAT: 400.0 m
 Horiz. Pattern: Omni

KXLC
 BLED20090730ACK
 Latitude: 43-48-16.10 N
 Longitude: 091-22-19.30 W
 ERP: 0.23 kW
 Channel: 216
 Frequency: 91.1 MHz
 AMSL Height: 522.0 m
 HAAT: 257.0 m
 Horiz. Pattern: Omni

7/29/2010



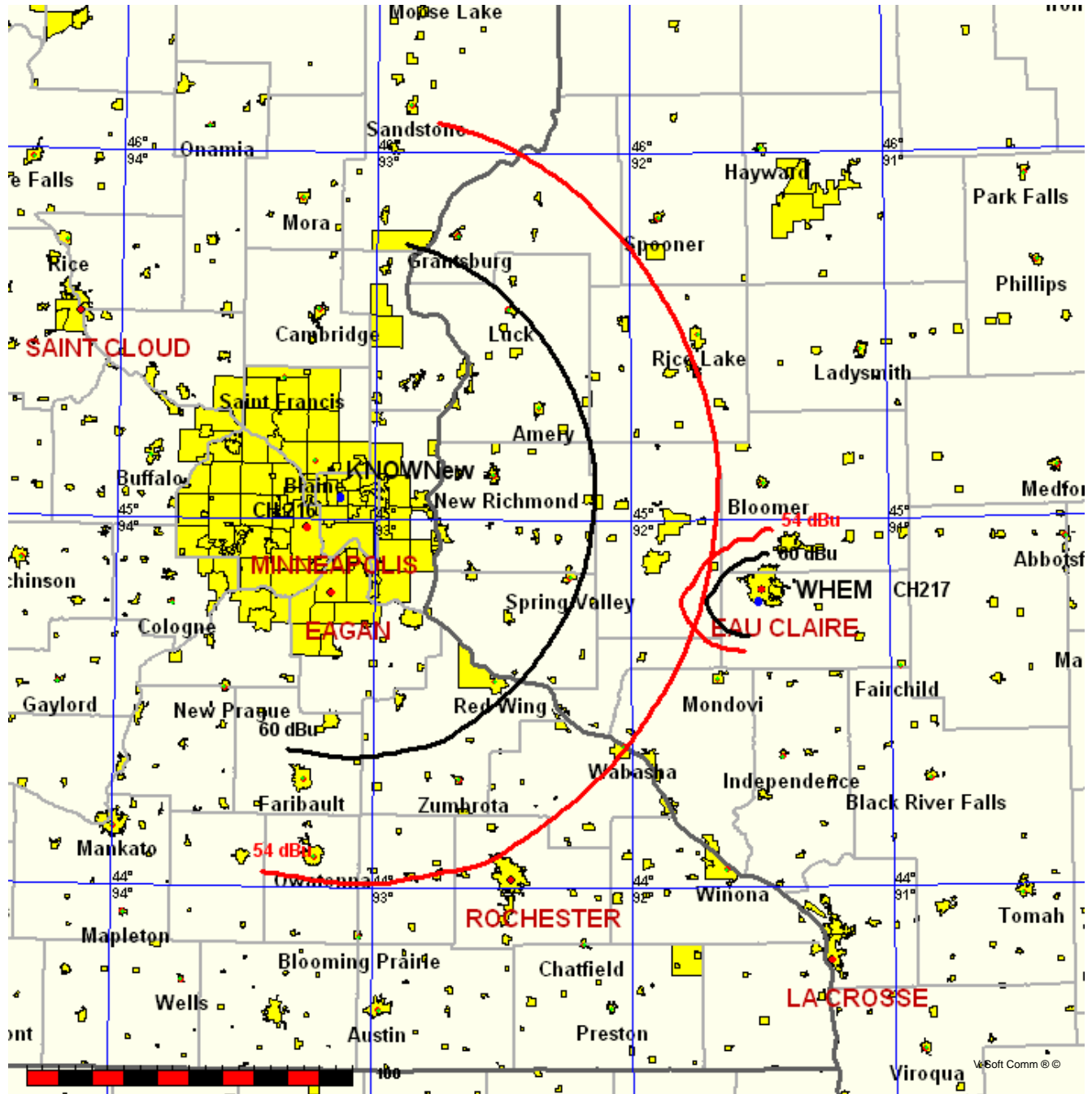
V-Soft Communication Consultants, LLC ©

Minnesota Public Radio
KNOW(New) vs. WHEM

FMCommander Single Allocation Study - 07-29-2010 - FCC NGDC 30 Sec
KNOWNew's Overlaps (In= 32.81 km, Out= 1.3 km)

KNOWNew CH 216 C0
Lat= 45 03 44.0, Lng= 93 08 21.0
100.0 kW 388.5 M HAAT, 663.3 M COR
Prot.= 60 dBu, Intef.= 54 dBu

WHEM CH 217 A BLED20030715ABI
Lat= 44 45 50.0, Lng= 91 31 06.0
0.3 kW 87 M HAAT, 364 M COR
Prot.= 60 dBu, Intef.= 54 dBu



KNOWNew

WHEM BLED20030715ABI

Channel = 216C0
 Max ERP = 100 kW
 RCAMSL = 663.3 M
 N. Lat. 45 03 44.0
 W. Lng. 93 08 21.0
 Protected
 60 dBu

Channel = 217A
 Max ERP = 0.3 kW
 RCAMSL = 364 M
 N. Lat. 44 45 50.0
 W. Lng. 91 31 06.0
 Interfering
 54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
044.0	100.0000	0382.4	078.5	321.2	000.3000	0090.3	115.6	20.13	
045.0	100.0000	0382.0	078.4	321.3	000.3000	0090.3	114.1	20.40	
046.0	100.0000	0381.9	078.4	321.4	000.3000	0090.3	112.7	20.64	
047.0	100.0000	0382.0	078.4	321.4	000.3000	0090.3	111.3	20.89	
048.0	100.0000	0381.9	078.4	321.5	000.3000	0090.3	110.0	21.15	
049.0	100.0000	0381.5	078.4	321.5	000.3000	0090.2	108.6	21.41	
050.0	100.0000	0380.7	078.3	321.5	000.3000	0090.3	107.3	21.68	
051.0	100.0000	0379.8	078.3	321.4	000.3000	0090.3	105.9	21.95	
052.0	100.0000	0378.9	078.2	321.4	000.3000	0090.3	104.5	22.22	
053.0	100.0000	0378.2	078.2	321.3	000.3000	0090.3	103.2	22.51	
054.0	100.0000	0377.6	078.1	321.2	000.3000	0090.3	101.8	22.79	
055.0	100.0000	0377.1	078.1	321.2	000.3000	0090.3	100.5	23.09	
056.0	100.0000	0376.8	078.0	321.1	000.3000	0090.3	099.1	23.39	
057.0	100.0000	0376.7	078.0	321.0	000.3000	0090.3	097.8	23.70	
058.0	100.0000	0376.7	078.0	320.9	000.3000	0090.3	096.5	24.02	
059.0	100.0000	0376.7	078.0	320.8	000.3000	0090.3	095.1	24.34	
060.0	100.0000	0376.8	078.0	320.6	000.3000	0090.3	093.8	24.67	
061.0	100.0000	0376.8	078.0	320.5	000.3000	0090.3	092.4	25.01	
062.0	100.0000	0376.7	078.0	320.3	000.3000	0090.4	091.1	25.35	
063.0	100.0000	0376.7	078.0	320.1	000.3000	0090.4	089.8	25.70	
064.0	100.0000	0376.7	078.0	319.9	000.3000	0090.5	088.5	26.05	
065.0	100.0000	0376.7	078.0	319.6	000.3000	0090.6	087.2	26.41	
066.0	100.0000	0376.6	078.0	319.4	000.3000	0090.7	085.9	26.77	
067.0	100.0000	0376.1	078.0	319.1	000.3000	0091.0	084.6	27.13	
068.0	100.0000	0375.4	077.9	318.7	000.3000	0091.3	083.3	27.49	
069.0	100.0000	0375.2	077.9	318.4	000.3000	0091.6	082.1	27.85	
070.0	100.0000	0375.3	077.9	318.0	000.3000	0091.8	080.8	28.21	
071.0	100.0000	0375.9	078.0	317.6	000.3000	0092.1	079.6	28.57	
072.0	100.0000	0376.6	078.0	317.3	000.3000	0092.3	078.3	28.92	
073.0	100.0000	0377.4	078.1	316.9	000.3000	0092.4	077.1	29.28	
074.0	100.0000	0377.9	078.1	316.4	000.3000	0092.5	075.8	29.62	
075.0	100.0000	0377.9	078.1	315.9	000.3000	0092.5	074.6	29.96	
076.0	100.0000	0377.7	078.1	315.4	000.3000	0092.5	073.5	30.28	
077.0	100.0000	0377.8	078.1	314.8	000.3000	0092.4	072.3	30.61	
078.0	100.0000	0378.2	078.2	314.2	000.3000	0092.3	071.2	30.93	
079.0	100.0000	0378.9	078.2	313.6	000.3000	0092.2	070.0	31.25	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
080.0	100.0000	0379.6	078.2	312.9	000.3000	0092.1	068.9	31.57
081.0	100.0000	0380.2	078.3	312.3	000.3000	0092.1	067.8	31.89
082.0	100.0000	0380.8	078.3	311.5	000.3000	0092.3	066.8	32.21
083.0	100.0000	0381.3	078.4	310.8	000.3000	0092.5	065.7	32.53
084.0	100.0000	0381.7	078.4	310.0	000.3000	0092.9	064.7	32.86
085.0	100.0000	0381.6	078.4	309.1	000.3000	0093.5	063.8	33.18
086.0	100.0000	0380.8	078.3	308.1	000.3000	0094.2	062.9	33.50
087.0	100.0000	0379.9	078.3	307.1	000.3000	0095.0	062.1	33.82
088.0	100.0000	0378.6	078.2	306.1	000.3000	0095.9	061.3	34.14
089.0	100.0000	0377.9	078.1	305.0	000.3000	0096.6	060.5	34.44
090.0	100.0000	0377.1	078.1	303.9	000.3000	0096.7	059.8	34.70
091.0	100.0000	0376.3	078.0	302.8	000.3000	0096.8	059.1	34.95
092.0	100.0000	0375.7	078.0	301.6	000.3000	0096.8	058.5	35.18
093.0	100.0000	0375.0	077.9	300.4	000.3000	0096.8	057.9	35.39
094.0	100.0000	0374.6	077.9	299.1	000.3000	0096.8	057.4	35.59
095.0	100.0000	0374.0	077.8	297.9	000.3000	0097.1	056.9	35.80
096.0	100.0000	0373.4	077.8	296.6	000.3000	0097.5	056.4	35.99
097.0	100.0000	0373.1	077.8	295.3	000.3000	0097.9	056.0	36.17
098.0	100.0000	0373.1	077.8	293.9	000.3000	0098.3	055.6	36.34
099.0	100.0000	0373.2	077.8	292.6	000.3000	0098.9	055.3	36.51
100.0	100.0000	0373.3	077.8	291.2	000.3000	0099.5	055.0	36.66
101.0	100.0000	0373.8	077.8	289.8	000.3000	0100.2	054.7	36.80
102.0	100.0000	0374.4	077.9	288.4	000.3000	0100.9	054.5	36.93
103.0	100.0000	0375.0	077.9	286.9	000.3000	0101.6	054.4	37.03
104.0	100.0000	0375.6	078.0	285.5	000.3000	0102.4	054.3	37.12
105.0	100.0000	0376.0	078.0	284.1	000.3000	0103.6	054.3	37.21
106.0	100.0000	0376.1	078.0	282.6	000.3000	0105.9	054.3	37.34
107.0	100.0000	0376.1	078.0	281.2	000.3000	0109.6	054.5	37.53
108.0	100.0000	0376.0	078.0	279.8	000.3000	0113.5	054.7	37.70
109.0	100.0000	0375.8	078.0	278.4	000.3000	0117.3	054.9	37.83
110.0	100.0000	0375.7	078.0	277.0	000.3000	0121.6	055.2	37.95
111.0	100.0000	0375.8	078.0	275.6	000.3000	0125.1	055.6	38.01
112.0	100.0000	0376.3	078.0	274.3	000.3000	0128.2	055.9	38.04
113.0	100.0000	0376.8	078.0	273.0	000.3000	0130.4	056.3	38.00
114.0	100.0000	0377.4	078.1	271.7	000.3000	0131.3	056.8	37.87
115.0	100.0000	0377.9	078.1	270.4	000.3000	0131.8	057.3	37.70
116.0	100.0000	0378.2	078.1	269.2	000.3000	0132.3	057.9	37.50
117.0	100.0000	0378.1	078.1	268.0	000.3000	0132.8	058.6	37.29
118.0	100.0000	0377.8	078.1	266.9	000.3000	0132.9	059.3	37.03
119.0	100.0000	0377.6	078.1	265.8	000.3000	0132.3	060.1	36.72
120.0	100.0000	0377.4	078.1	264.7	000.3000	0131.4	060.9	36.39
121.0	100.0000	0377.2	078.1	263.7	000.3000	0130.2	061.7	36.03
122.0	100.0000	0376.8	078.0	262.7	000.3000	0128.7	062.6	35.64
123.0	100.0000	0376.4	078.0	261.8	000.3000	0127.3	063.5	35.26
124.0	100.0000	0376.3	078.0	260.9	000.3000	0126.3	064.4	34.89
125.0	100.0000	0376.5	078.0	260.1	000.3000	0125.2	065.4	34.53
126.0	100.0000	0377.2	078.1	259.2	000.3000	0124.2	066.3	34.17
127.0	100.0000	0378.1	078.1	258.4	000.3000	0123.2	067.3	33.81
128.0	100.0000	0379.2	078.2	257.6	000.3000	0122.3	068.3	33.44
129.0	100.0000	0380.2	078.3	256.8	000.3000	0121.4	069.3	33.08
130.0	100.0000	0381.2	078.4	256.1	000.3000	0120.6	070.4	32.71

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
131.0	100.0000	0382.1	078.4	255.5	000.3000	0119.8	071.5	32.33
132.0	100.0000	0383.0	078.5	254.8	000.3000	0118.9	072.6	31.95
133.0	100.0000	0383.8	078.6	254.2	000.3000	0117.9	073.7	31.56
134.0	100.0000	0384.5	078.6	253.7	000.3000	0117.0	074.9	31.16
135.0	100.0000	0384.9	078.6	253.2	000.3000	0116.0	076.1	30.76
136.0	100.0000	0385.3	078.7	252.7	000.3000	0115.2	077.3	30.36
137.0	100.0000	0385.9	078.7	252.2	000.3000	0114.3	078.6	29.96
138.0	100.0000	0386.7	078.8	251.8	000.3000	0113.7	079.8	29.57
139.0	100.0000	0387.5	078.8	251.4	000.3000	0113.1	081.0	29.19
140.0	100.0000	0388.3	078.9	251.0	000.3000	0112.7	082.3	28.81
141.0	100.0000	0388.9	078.9	250.6	000.3000	0112.3	083.6	28.42
142.0	100.0000	0389.3	079.0	250.3	000.3000	0112.0	084.9	28.04
143.0	100.0000	0389.9	079.0	250.0	000.3000	0111.6	086.2	27.65
144.0	100.0000	0390.3	079.0	249.8	000.3000	0111.4	087.5	27.27
145.0	100.0000	0390.5	079.1	249.5	000.3000	0111.1	088.9	26.89
146.0	100.0000	0390.8	079.1	249.3	000.3000	0110.9	090.2	26.51
147.0	100.0000	0392.2	079.2	249.1	000.3000	0110.7	091.5	26.13
148.0	100.0000	0394.2	079.3	248.8	000.3000	0110.4	092.9	25.77
149.0	100.0000	0395.6	079.4	248.6	000.3000	0110.2	094.2	25.40
150.0	100.0000	0396.7	079.5	248.4	000.3000	0110.0	095.6	25.04
151.0	100.0000	0397.7	079.6	248.3	000.3000	0109.9	097.0	24.69
152.0	100.0000	0399.1	079.7	248.2	000.3000	0109.7	098.3	24.34
153.0	100.0000	0400.9	079.8	248.0	000.3000	0109.6	099.7	24.00
154.0	100.0000	0403.6	080.0	247.8	000.3000	0109.3	101.1	23.67
155.0	100.0000	0406.7	080.3	247.7	000.3000	0109.1	102.5	23.35
156.0	100.0000	0409.3	080.5	247.6	000.3000	0109.0	103.9	23.03
157.0	100.0000	0411.2	080.6	247.5	000.3000	0108.8	105.3	22.72
158.0	100.0000	0412.1	080.7	247.5	000.3000	0108.8	106.7	22.42
159.0	100.0000	0411.9	080.6	247.5	000.3000	0108.9	108.1	22.14
160.0	100.0000	0410.8	080.6	247.6	000.3000	0109.0	109.5	21.86
161.0	100.0000	0409.0	080.4	247.7	000.3000	0109.1	110.9	21.59
162.0	100.0000	0406.6	080.2	247.8	000.3000	0109.3	112.3	21.34
163.0	100.0000	0404.0	080.1	248.0	000.3000	0109.6	113.7	21.09

07-29-2010 FCC NGDC 30 Sec Terrain Data

WHEM BLED20030715ABI

KNOWNew

Channel = 217A
 Max ERP = 0.3 kW
 RCAMSL = 364 M
 N. Lat. 44 45 50.0
 W. Lng. 91 31 06.0
 Protected
 60 dBu

Channel = 216C0
 Max ERP = 100 kW
 RCAMSL = 663.3 M
 N. Lat. 45 03 44.0
 W. Lng. 93 08 21.0
 Interfering
 54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
225.0	000.3000	0088.2	012.7	109.0	100.0000	0375.8	126.0	51.33	
226.0	000.3000	0090.0	012.8	109.0	100.0000	0375.8	125.8	51.39	
227.0	000.3000	0091.2	012.9	109.0	100.0000	0375.8	125.5	51.45	
228.0	000.3000	0092.1	012.9	109.0	100.0000	0375.8	125.3	51.51	
229.0	000.3000	0092.8	013.0	108.9	100.0000	0375.9	125.1	51.56	
230.0	000.3000	0093.4	013.0	108.9	100.0000	0375.9	124.9	51.62	
231.0	000.3000	0093.9	013.0	108.9	100.0000	0375.9	124.7	51.67	
232.0	000.3000	0094.5	013.1	108.8	100.0000	0375.9	124.4	51.73	
233.0	000.3000	0095.4	013.1	108.8	100.0000	0375.9	124.2	51.78	
234.0	000.3000	0096.5	013.2	108.8	100.0000	0375.9	124.0	51.84	
235.0	000.3000	0097.4	013.3	108.7	100.0000	0375.9	123.8	51.90	
236.0	000.3000	0097.7	013.3	108.7	100.0000	0375.9	123.6	51.95	
237.0	000.3000	0097.7	013.3	108.6	100.0000	0375.9	123.4	52.00	
238.0	000.3000	0097.9	013.3	108.5	100.0000	0375.9	123.2	52.05	
239.0	000.3000	0098.5	013.3	108.5	100.0000	0375.9	123.0	52.10	
240.0	000.3000	0099.4	013.4	108.4	100.0000	0376.0	122.8	52.16	
241.0	000.3000	0100.4	013.5	108.4	100.0000	0376.0	122.5	52.21	
242.0	000.3000	0101.4	013.5	108.3	100.0000	0376.0	122.3	52.27	
243.0	000.3000	0102.4	013.6	108.3	100.0000	0376.0	122.1	52.32	
244.0	000.3000	0103.5	013.7	108.2	100.0000	0376.0	121.9	52.38	
245.0	000.3000	0104.9	013.8	108.2	100.0000	0376.0	121.6	52.44	
246.0	000.3000	0106.5	013.9	108.1	100.0000	0376.0	121.4	52.50	
247.0	000.3000	0108.1	014.0	108.1	100.0000	0376.0	121.2	52.56	
248.0	000.3000	0109.5	014.1	108.0	100.0000	0376.0	120.9	52.62	
249.0	000.3000	0110.6	014.2	108.0	100.0000	0376.0	120.7	52.68	
250.0	000.3000	0111.6	014.2	107.9	100.0000	0376.0	120.5	52.73	
251.0	000.3000	0112.7	014.3	107.8	100.0000	0376.0	120.3	52.79	
252.0	000.3000	0114.0	014.4	107.7	100.0000	0376.0	120.1	52.84	
253.0	000.3000	0115.7	014.5	107.7	100.0000	0376.1	119.8	52.90	
254.0	000.3000	0117.6	014.6	107.6	100.0000	0376.1	119.6	52.96	
255.0	000.3000	0119.2	014.7	107.5	100.0000	0376.1	119.4	53.02	
256.0	000.3000	0120.5	014.8	107.5	100.0000	0376.1	119.2	53.08	
257.0	000.3000	0121.6	014.9	107.4	100.0000	0376.1	119.0	53.13	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
258.0	000.3000	0122.7	014.9	107.3	100.0000	0376.1	118.8	53.18
259.0	000.3000	0124.0	015.0	107.2	100.0000	0376.1	118.6	53.23
260.0	000.3000	0125.2	015.1	107.1	100.0000	0376.1	118.4	53.27
261.0	000.3000	0126.3	015.1	107.0	100.0000	0376.1	118.2	53.32
262.0	000.3000	0127.6	015.2	106.9	100.0000	0376.1	118.0	53.37
263.0	000.3000	0129.1	015.3	106.8	100.0000	0376.1	117.8	53.42
264.0	000.3000	0130.6	015.4	106.7	100.0000	0376.1	117.6	53.47
265.0	000.3000	0131.7	015.5	106.6	100.0000	0376.1	117.4	53.52
266.0	000.3000	0132.4	015.5	106.5	100.0000	0376.1	117.3	53.56
267.0	000.3000	0132.9	015.6	106.4	100.0000	0376.1	117.2	53.59
268.0	000.3000	0132.8	015.6	106.2	100.0000	0376.1	117.1	53.61
269.0	000.3000	0132.4	015.5	106.1	100.0000	0376.1	117.0	53.62
270.0	000.3000	0131.9	015.5	106.0	100.0000	0376.1	117.0	53.64
271.0	000.3000	0131.5	015.5	105.8	100.0000	0376.1	116.9	53.65
272.0	000.3000	0131.2	015.5	105.7	100.0000	0376.1	116.9	53.66
273.0	000.3000	0130.3	015.4	105.6	100.0000	0376.1	116.8	53.67
274.0	000.3000	0128.7	015.3	105.4	100.0000	0376.1	116.9	53.66
275.0	000.3000	0126.7	015.2	105.3	100.0000	0376.1	117.0	53.64
276.0	000.3000	0124.2	015.0	105.2	100.0000	0376.0	117.1	53.61
277.0	000.3000	0121.6	014.9	105.0	100.0000	0376.0	117.2	53.58
278.0	000.3000	0118.5	014.7	104.9	100.0000	0376.0	117.3	53.54
279.0	000.3000	0115.6	014.5	104.7	100.0000	0375.9	117.5	53.50
280.0	000.3000	0112.9	014.3	104.6	100.0000	0375.9	117.6	53.46
281.0	000.3000	0110.1	014.1	104.5	100.0000	0375.8	117.8	53.42
282.0	000.3000	0107.5	014.0	104.4	100.0000	0375.8	117.9	53.38
283.0	000.3000	0105.2	013.8	104.2	100.0000	0375.7	118.1	53.34
284.0	000.3000	0103.7	013.7	104.1	100.0000	0375.7	118.2	53.32
285.0	000.3000	0102.7	013.6	104.0	100.0000	0375.6	118.2	53.30
286.0	000.3000	0102.1	013.6	103.9	100.0000	0375.5	118.3	53.28
287.0	000.3000	0101.6	013.6	103.8	100.0000	0375.5	118.3	53.27
288.0	000.3000	0101.1	013.5	103.7	100.0000	0375.4	118.4	53.26
289.0	000.3000	0100.6	013.5	103.5	100.0000	0375.3	118.4	53.24
290.0	000.3000	0100.1	013.5	103.4	100.0000	0375.3	118.5	53.23
291.0	000.3000	0099.6	013.4	103.3	100.0000	0375.2	118.5	53.21
292.0	000.3000	0099.1	013.4	103.2	100.0000	0375.2	118.6	53.19
293.0	000.3000	0098.7	013.4	103.1	100.0000	0375.1	118.6	53.18
294.0	000.3000	0098.3	013.3	103.0	100.0000	0375.0	118.7	53.16
295.0	000.3000	0098.0	013.3	102.9	100.0000	0375.0	118.8	53.14
296.0	000.3000	0097.7	013.3	102.8	100.0000	0374.9	118.8	53.12
297.0	000.3000	0097.4	013.3	102.7	100.0000	0374.9	118.9	53.10
298.0	000.3000	0097.1	013.3	102.6	100.0000	0374.8	119.0	53.08
299.0	000.3000	0096.9	013.2	102.5	100.0000	0374.7	119.0	53.06
300.0	000.3000	0096.8	013.2	102.4	100.0000	0374.7	119.1	53.04
301.0	000.3000	0096.8	013.2	102.2	100.0000	0374.6	119.2	53.02
302.0	000.3000	0096.8	013.2	102.1	100.0000	0374.5	119.3	53.00
303.0	000.3000	0096.8	013.2	102.0	100.0000	0374.5	119.3	52.98
304.0	000.3000	0096.7	013.2	101.9	100.0000	0374.4	119.4	52.95
305.0	000.3000	0096.6	013.2	101.8	100.0000	0374.3	119.5	52.93
306.0	000.3000	0096.0	013.2	101.7	100.0000	0374.3	119.6	52.89
307.0	000.3000	0095.1	013.1	101.7	100.0000	0374.2	119.8	52.85
308.0	000.3000	0094.3	013.1	101.6	100.0000	0374.1	119.9	52.81

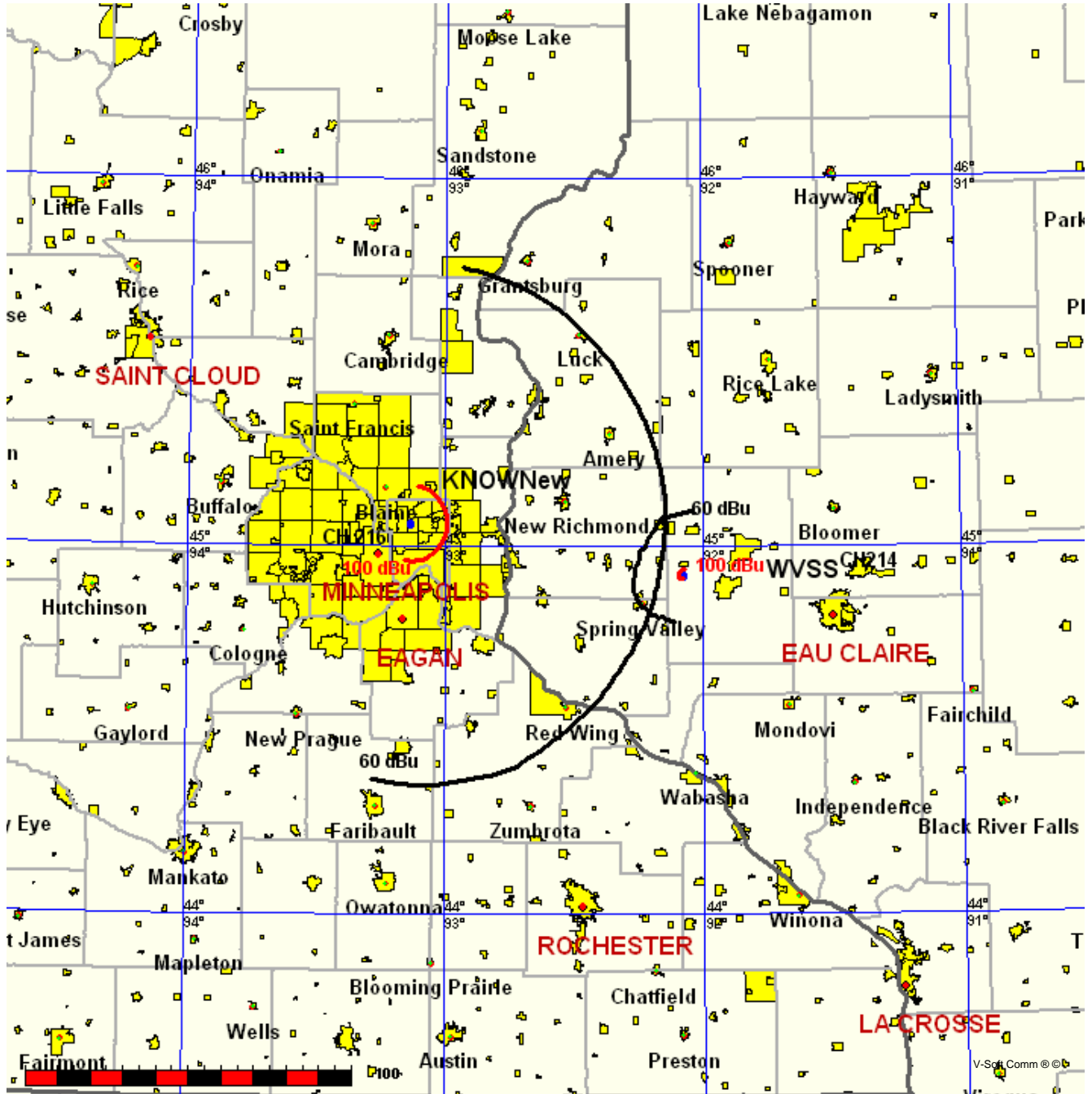
Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
309.0	000.3000	0093.5	013.0	101.5	100.0000	0374.1	120.1	52.78
310.0	000.3000	0092.9	013.0	101.4	100.0000	0374.0	120.2	52.74
311.0	000.3000	0092.4	012.9	101.3	100.0000	0374.0	120.4	52.70
312.0	000.3000	0092.2	012.9	101.2	100.0000	0373.9	120.5	52.67
313.0	000.3000	0092.1	012.9	101.1	100.0000	0373.9	120.6	52.64
314.0	000.3000	0092.2	012.9	101.0	100.0000	0373.8	120.7	52.61
315.0	000.3000	0092.4	012.9	100.9	100.0000	0373.7	120.8	52.58
316.0	000.3000	0092.5	012.9	100.8	100.0000	0373.7	120.9	52.54
317.0	000.3000	0092.4	012.9	100.8	100.0000	0373.6	121.1	52.51
318.0	000.3000	0091.8	012.9	100.7	100.0000	0373.6	121.2	52.47
319.0	000.3000	0091.0	012.8	100.6	100.0000	0373.6	121.4	52.42
320.0	000.3000	0090.5	012.8	100.5	100.0000	0373.5	121.6	52.38
321.0	000.3000	0090.3	012.8	100.5	100.0000	0373.5	121.7	52.34
322.0	000.3000	0090.2	012.8	100.4	100.0000	0373.5	121.9	52.30
323.0	000.3000	0090.0	012.8	100.3	100.0000	0373.4	122.0	52.26
324.0	000.3000	0089.8	012.8	100.2	100.0000	0373.4	122.2	52.22
325.0	000.3000	0089.6	012.7	100.2	100.0000	0373.4	122.4	52.17
326.0	000.3000	0089.2	012.7	100.1	100.0000	0373.4	122.5	52.13
327.0	000.3000	0088.6	012.7	100.0	100.0000	0373.3	122.7	52.08
328.0	000.3000	0088.0	012.6	100.0	100.0000	0373.3	122.9	52.03
329.0	000.3000	0087.4	012.6	099.9	100.0000	0373.3	123.1	51.98
330.0	000.3000	0086.9	012.6	099.9	100.0000	0373.3	123.3	51.94
331.0	000.3000	0087.1	012.6	099.8	100.0000	0373.3	123.4	51.90
332.0	000.3000	0087.5	012.6	099.7	100.0000	0373.3	123.6	51.86
333.0	000.3000	0088.3	012.7	099.6	100.0000	0373.3	123.7	51.82
334.0	000.3000	0089.2	012.7	099.6	100.0000	0373.2	123.9	51.79
335.0	000.3000	0090.0	012.8	099.5	100.0000	0373.2	124.0	51.75
336.0	000.3000	0090.9	012.8	099.4	100.0000	0373.2	124.2	51.71
337.0	000.3000	0092.0	012.9	099.3	100.0000	0373.2	124.3	51.67
338.0	000.3000	0093.1	013.0	099.2	100.0000	0373.2	124.5	51.64
339.0	000.3000	0093.8	013.0	099.1	100.0000	0373.2	124.6	51.59
340.0	000.3000	0094.2	013.1	099.1	100.0000	0373.2	124.8	51.55
341.0	000.3000	0094.2	013.1	099.0	100.0000	0373.2	125.0	51.50
342.0	000.3000	0094.1	013.0	099.0	100.0000	0373.2	125.2	51.45
343.0	000.3000	0093.8	013.0	098.9	100.0000	0373.2	125.4	51.39
344.0	000.3000	0093.3	013.0	098.9	100.0000	0373.2	125.6	51.34

Minnesota Public Radio
KNOW(New) vs. WVSS

FMCommander Single Allocation Study - 07-29-2010 - FCC NGDC 30 Sec
KNOWNew's Overlaps (In= 5.75 km, Out= 59.21 km)

KNOWNew CH 216 C0
Lat= 45 03 44.0, Lng= 93 08 21.0
100.0 kW 388.5 M HAAT, 663.3 M COR
Prot.= 60 dBu, Intef.= 100 dBu

WVSS CH 214 A DA BLED20020903AFN
Lat= 44 54 56.0, Lng= 92 04 34.0
0.59 kW 130 M HAAT, 449 M COR
Prot.= 60 dBu, Intef.= 100 dBu



KNOWNew

WVSS BLED20020903AFN

Channel = 216C0
 Max ERP = 100 kW
 RCAMSL = 663.3 M
 N. Lat. 45 03 44.0
 W. Lng. 93 08 21.0
 Protected
 60 dBu

Channel = 214A
 Max ERP = 0.59 kW
 RCAMSL = 449 M
 N. Lat. 44 54 56.0
 W. Lng. 92 04 34.0
 Interfering
 100 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
041.0	100.0000	0385.0	078.6	337.2	000.5900	0125.9	082.2	32.39	
042.0	100.0000	0383.9	078.6	337.7	000.5900	0127.2	080.8	32.85	
043.0	100.0000	0383.1	078.5	338.1	000.5900	0128.0	079.5	33.26	
044.0	100.0000	0382.4	078.5	338.5	000.5900	0128.5	078.3	33.66	
045.0	100.0000	0382.0	078.4	338.9	000.5900	0129.0	077.0	34.06	
046.0	100.0000	0381.9	078.4	339.3	000.5900	0129.4	075.8	34.45	
047.0	100.0000	0382.0	078.4	339.7	000.5900	0129.6	074.5	34.84	
048.0	100.0000	0381.9	078.4	340.0	000.5900	0129.8	073.2	35.24	
049.0	100.0000	0381.5	078.4	340.4	000.5900	0129.9	072.0	35.64	
050.0	100.0000	0380.7	078.3	340.7	000.5900	0130.0	070.7	36.04	
051.0	100.0000	0379.8	078.3	341.1	000.5900	0129.8	069.4	36.44	
052.0	100.0000	0378.9	078.2	341.4	000.5900	0129.5	068.1	36.83	
053.0	100.0000	0378.2	078.2	341.7	000.5900	0129.0	066.8	37.22	
054.0	100.0000	0377.6	078.1	342.0	000.5900	0128.3	065.5	37.61	
055.0	100.0000	0377.1	078.1	342.4	000.5900	0127.6	064.1	37.99	
056.0	100.0000	0376.8	078.0	342.7	000.5900	0126.8	062.8	38.38	
057.0	100.0000	0376.7	078.0	343.0	000.5900	0126.0	061.5	38.79	
058.0	100.0000	0376.7	078.0	343.4	000.5900	0125.2	060.2	39.21	
059.0	100.0000	0376.7	078.0	343.7	000.5900	0124.5	058.9	39.65	
060.0	100.0000	0376.8	078.0	344.0	000.5900	0123.8	057.6	40.10	
061.0	100.0000	0376.8	078.0	344.3	000.5900	0123.2	056.3	40.57	
062.0	100.0000	0376.7	078.0	344.6	000.5900	0122.6	054.9	41.05	
063.0	100.0000	0376.7	078.0	344.9	000.5900	0122.1	053.6	41.54	
064.0	100.0000	0376.7	078.0	345.2	000.5900	0121.7	052.3	42.03	
065.0	100.0000	0376.7	078.0	345.5	000.5900	0121.4	050.9	42.54	
066.0	100.0000	0376.6	078.0	345.7	000.5900	0121.2	049.6	43.05	
067.0	100.0000	0376.1	078.0	345.9	000.5900	0121.1	048.3	43.57	
068.0	100.0000	0375.4	077.9	346.1	000.5900	0121.1	046.9	44.10	
069.0	100.0000	0375.2	077.9	346.3	000.5900	0121.3	045.6	44.65	
070.0	100.0000	0375.3	077.9	346.5	000.5900	0121.6	044.2	45.22	
071.0	100.0000	0375.9	078.0	346.7	000.5900	0122.1	042.9	45.81	
072.0	100.0000	0376.6	078.0	346.9	000.5900	0122.6	041.5	46.42	
073.0	100.0000	0377.4	078.1	347.1	000.5900	0123.2	040.2	47.05	
074.0	100.0000	0377.9	078.1	347.3	000.5900	0123.6	038.8	47.68	
075.0	100.0000	0377.9	078.1	347.4	000.5900	0123.9	037.4	48.31	
076.0	100.0000	0377.7	078.1	347.4	000.5900	0123.9	036.1	48.95	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
077.0	100.0000	0377.8	078.1	347.4	000.5900	0124.0	034.7	49.60
078.0	100.0000	0378.2	078.2	347.5	000.5900	0124.1	033.4	50.27
079.0	100.0000	0378.9	078.2	347.5	000.5900	0124.1	032.0	50.95
080.0	100.0000	0379.6	078.2	347.5	000.5900	0124.1	030.6	51.66
081.0	100.0000	0380.2	078.3	347.4	000.5900	0123.9	029.3	52.43
082.0	100.0000	0380.8	078.3	347.3	000.5900	0123.6	027.9	53.24
083.0	100.0000	0381.3	078.4	347.1	000.5900	0123.0	026.5	54.09
084.0	100.0000	0381.7	078.4	346.8	000.5900	0122.2	025.2	54.96
085.0	100.0000	0381.6	078.4	346.3	000.5900	0121.3	023.8	55.87
086.0	100.0000	0380.8	078.3	345.5	000.5900	0121.3	022.5	56.86
087.0	100.0000	0379.9	078.3	344.6	000.5900	0122.6	021.2	57.95
088.0	100.0000	0378.6	078.2	343.5	000.5900	0125.0	019.9	59.14
089.0	100.0000	0377.9	078.1	342.2	000.5900	0128.0	018.6	60.38
090.0	100.0000	0377.1	078.1	340.6	000.5900	0130.0	017.3	61.56
091.0	100.0000	0376.3	078.0	338.8	000.5900	0128.9	016.0	62.52
092.0	100.0000	0375.7	078.0	336.5	000.5900	0123.6	014.8	63.11
093.0	100.0000	0375.0	077.9	333.8	000.5900	0116.0	013.6	63.98
094.0	100.0000	0374.6	077.9	330.5	000.5900	0109.6	012.5	65.04
095.0	100.0000	0374.0	077.8	326.5	000.5900	0102.9	011.4	66.11
096.0	100.0000	0373.4	077.8	321.5	000.5900	0098.1	010.4	67.33
097.0	100.0000	0373.1	077.8	315.7	000.5900	0093.5	009.5	68.50
098.0	100.0000	0373.1	077.8	308.6	000.5900	0085.4	008.8	69.13
099.0	100.0000	0373.2	077.8	300.4	000.5900	0087.2	008.2	70.47
100.0	100.0000	0373.3	077.8	291.0	000.5900	0082.7	007.8	70.76
101.0	100.0000	0373.8	077.8	281.0	000.5900	0085.8	007.6	71.44
102.0	100.0000	0374.4	077.9	270.8	000.5900	0086.9	007.7	71.35
103.0	100.0000	0375.0	077.9	261.3	000.5900	0095.3	008.1	71.46
104.0	100.0000	0375.6	078.0	252.9	000.5812	0099.5	008.7	70.62
105.0	100.0000	0376.0	078.0	245.7	000.5523	0100.7	009.4	69.05
106.0	100.0000	0376.1	078.0	239.9	000.5210	0103.3	010.4	67.35
107.0	100.0000	0376.1	078.0	235.2	000.4953	0107.1	011.4	65.73
108.0	100.0000	0376.0	078.0	231.5	000.4714	0107.7	012.5	63.88
109.0	100.0000	0375.8	078.0	228.4	000.4524	0103.6	013.7	61.78
110.0	100.0000	0375.7	078.0	226.0	000.4372	0104.5	014.9	60.28
111.0	100.0000	0375.8	078.0	223.9	000.4245	0107.8	016.1	59.49
112.0	100.0000	0376.3	078.0	222.1	000.4139	0111.6	017.4	58.63
113.0	100.0000	0376.8	078.0	220.6	000.4051	0112.3	018.7	57.54
114.0	100.0000	0377.4	078.1	219.4	000.3978	0111.7	020.0	56.38
115.0	100.0000	0377.9	078.1	218.3	000.3919	0111.4	021.3	55.26
116.0	100.0000	0378.2	078.1	217.5	000.3873	0111.4	022.6	54.19
117.0	100.0000	0378.1	078.1	216.9	000.3839	0111.5	024.0	53.16
118.0	100.0000	0377.8	078.1	216.5	000.3814	0111.5	025.3	52.18
119.0	100.0000	0377.6	078.1	216.1	000.3794	0111.6	026.7	51.24
120.0	100.0000	0377.4	078.1	215.9	000.3778	0111.6	028.1	50.35
121.0	100.0000	0377.2	078.1	215.7	000.3767	0111.5	029.4	49.51
122.0	100.0000	0376.8	078.0	215.5	000.3760	0111.4	030.8	48.73
123.0	100.0000	0376.4	078.0	215.5	000.3756	0111.4	032.1	48.02
124.0	100.0000	0376.3	078.0	215.4	000.3753	0111.4	033.5	47.36
125.0	100.0000	0376.5	078.0	215.4	000.3750	0111.4	034.9	46.70
126.0	100.0000	0377.2	078.1	215.3	000.3747	0111.4	036.2	46.07
127.0	100.0000	0378.1	078.1	215.3	000.3744	0111.4	037.6	45.44

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
128.0	100.0000	0379.2	078.2	215.2	000.3743	0111.4	039.0	44.83
129.0	100.0000	0380.2	078.3	215.3	000.3744	0111.4	040.4	44.23
130.0	100.0000	0381.2	078.4	215.3	000.3747	0111.4	041.7	43.65
131.0	100.0000	0382.1	078.4	215.4	000.3752	0111.4	043.1	43.08
132.0	100.0000	0383.0	078.5	215.5	000.3758	0111.4	044.5	42.53
133.0	100.0000	0383.8	078.6	215.7	000.3766	0111.5	045.8	41.99
134.0	100.0000	0384.5	078.6	215.8	000.3777	0111.6	047.2	41.47
135.0	100.0000	0384.9	078.6	216.1	000.3789	0111.6	048.6	40.96
136.0	100.0000	0385.3	078.7	216.3	000.3802	0111.5	049.9	40.45
137.0	100.0000	0385.9	078.7	216.5	000.3816	0111.5	051.3	39.93
138.0	100.0000	0386.7	078.8	216.8	000.3829	0111.5	052.7	39.41
139.0	100.0000	0387.5	078.8	217.0	000.3843	0111.5	054.0	38.90
140.0	100.0000	0388.3	078.9	217.3	000.3858	0111.4	055.4	38.39
141.0	100.0000	0388.9	078.9	217.6	000.3874	0111.4	056.7	37.89
142.0	100.0000	0389.3	079.0	217.9	000.3892	0111.5	058.1	37.41
143.0	100.0000	0389.9	079.0	218.2	000.3909	0111.4	059.4	36.93
144.0	100.0000	0390.3	079.0	218.5	000.3928	0111.4	060.8	36.47
145.0	100.0000	0390.5	079.1	218.8	000.3949	0111.5	062.1	36.03
146.0	100.0000	0390.8	079.1	219.2	000.3968	0111.6	063.4	35.62
147.0	100.0000	0392.2	079.2	219.5	000.3985	0111.7	064.8	35.21
148.0	100.0000	0394.2	079.3	219.7	000.4000	0111.9	066.1	34.80
149.0	100.0000	0395.6	079.4	220.0	000.4018	0112.0	067.5	34.41
150.0	100.0000	0396.7	079.5	220.4	000.4038	0112.1	068.8	34.03
151.0	100.0000	0397.7	079.6	220.7	000.4057	0112.3	070.2	33.66
152.0	100.0000	0399.1	079.7	221.0	000.4077	0112.4	071.5	33.28
153.0	100.0000	0400.9	079.8	221.4	000.4095	0112.4	072.8	32.89
154.0	100.0000	0403.6	080.0	221.6	000.4111	0112.1	074.2	32.49
155.0	100.0000	0406.7	080.3	221.9	000.4127	0111.9	075.6	32.09
156.0	100.0000	0409.3	080.5	222.2	000.4144	0111.5	076.9	31.69
157.0	100.0000	0411.2	080.6	222.5	000.4164	0110.8	078.3	31.29
158.0	100.0000	0412.1	080.7	222.9	000.4188	0110.1	079.6	30.91
159.0	100.0000	0411.9	080.6	223.4	000.4215	0109.0	080.9	30.52
160.0	100.0000	0410.8	080.6	223.9	000.4244	0107.9	082.1	30.15

07-29-2010 FCC NGDC 30 Sec Terrain Data

WVSS BLED20020903AFN

KNOWNew

Channel = 214A
 Max ERP = 0.59 kW
 RCAMSL = 449 M
 N. Lat. 44 54 56.0
 W. Lng. 92 04 34.0
 Protected
 60 dBu

Channel = 216C0
 Max ERP = 100 kW
 RCAMSL = 663.3 M
 N. Lat. 45 03 44.0
 W. Lng. 93 08 21.0
 Interfering
 100 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
221.0	000.4074	0112.4	015.5	110.5	100.0000	0375.7	078.7	64.84	
222.0	000.4133	0111.8	015.5	110.5	100.0000	0375.7	078.4	64.93	
223.0	000.4193	0109.9	015.4	110.3	100.0000	0375.7	078.2	65.00	
224.0	000.4253	0107.6	015.3	110.2	100.0000	0375.7	078.0	65.07	
225.0	000.4313	0105.7	015.2	110.0	100.0000	0375.7	077.8	65.14	
226.0	000.4374	0104.5	015.2	109.9	100.0000	0375.7	077.6	65.22	
227.0	000.4435	0103.7	015.2	109.8	100.0000	0375.7	077.3	65.30	
228.0	000.4497	0103.6	015.2	109.8	100.0000	0375.7	077.1	65.39	
229.0	000.4559	0103.8	015.3	109.7	100.0000	0375.7	076.8	65.48	
230.0	000.4621	0104.9	015.4	109.7	100.0000	0375.7	076.5	65.59	
231.0	000.4684	0106.9	015.7	109.8	100.0000	0375.7	076.2	65.71	
232.0	000.4747	0108.4	015.9	109.8	100.0000	0375.7	075.8	65.82	
233.0	000.4811	0108.5	015.9	109.7	100.0000	0375.7	075.5	65.92	
234.0	000.4875	0107.9	015.9	109.6	100.0000	0375.7	075.3	66.00	
235.0	000.4940	0107.2	015.9	109.5	100.0000	0375.7	075.1	66.08	
236.0	000.4994	0107.1	016.0	109.4	100.0000	0375.7	074.8	66.17	
237.0	000.5048	0106.7	016.0	109.3	100.0000	0375.8	074.6	66.25	
238.0	000.5103	0105.6	015.9	109.1	100.0000	0375.8	074.4	66.32	
239.0	000.5158	0104.1	015.9	108.9	100.0000	0375.9	074.2	66.38	
240.0	000.5213	0103.3	015.8	108.8	100.0000	0375.9	074.1	66.45	
241.0	000.5269	0103.3	015.9	108.7	100.0000	0375.9	073.8	66.53	
242.0	000.5325	0103.6	016.0	108.6	100.0000	0375.9	073.6	66.62	
243.0	000.5381	0103.7	016.0	108.4	100.0000	0376.0	073.3	66.71	
244.0	000.5437	0102.9	016.0	108.3	100.0000	0376.0	073.1	66.77	
245.0	000.5494	0101.6	015.9	108.1	100.0000	0376.0	073.0	66.82	
246.0	000.5534	0100.5	015.8	107.9	100.0000	0376.0	072.8	66.87	
247.0	000.5574	0100.3	015.8	107.7	100.0000	0376.1	072.7	66.94	
248.0	000.5614	0100.8	015.9	107.6	100.0000	0376.1	072.4	67.02	
249.0	000.5655	0101.4	016.0	107.5	100.0000	0376.1	072.2	67.11	
250.0	000.5695	0101.8	016.1	107.3	100.0000	0376.1	071.9	67.19	
251.0	000.5736	0101.4	016.1	107.2	100.0000	0376.1	071.8	67.25	
252.0	000.5777	0100.4	016.0	107.0	100.0000	0376.1	071.7	67.29	
253.0	000.5818	0099.3	015.9	106.7	100.0000	0376.1	071.6	67.33	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
254.0	000.5859	0098.1	015.9	106.5	100.0000	0376.1	071.5	67.36
255.0	000.5900	0097.3	015.8	106.3	100.0000	0376.1	071.4	67.39
256.0	000.5900	0096.8	015.8	106.1	100.0000	0376.1	071.3	67.43
257.0	000.5900	0096.7	015.8	105.9	100.0000	0376.1	071.1	67.48
258.0	000.5900	0096.6	015.8	105.7	100.0000	0376.1	071.0	67.52
259.0	000.5900	0096.3	015.7	105.5	100.0000	0376.1	070.9	67.56
260.0	000.5900	0096.0	015.7	105.3	100.0000	0376.1	070.8	67.59
261.0	000.5900	0095.5	015.7	105.1	100.0000	0376.0	070.7	67.62
262.0	000.5900	0094.8	015.6	104.8	100.0000	0376.0	070.7	67.63
263.0	000.5900	0093.8	015.5	104.6	100.0000	0375.9	070.7	67.63
264.0	000.5900	0092.8	015.4	104.4	100.0000	0375.8	070.6	67.64
265.0	000.5900	0092.5	015.4	104.2	100.0000	0375.7	070.6	67.66
266.0	000.5900	0092.0	015.3	104.0	100.0000	0375.6	070.5	67.67
267.0	000.5900	0091.1	015.2	103.7	100.0000	0375.4	070.5	67.67
268.0	000.5900	0090.0	015.1	103.5	100.0000	0375.3	070.6	67.65
269.0	000.5900	0088.9	015.0	103.3	100.0000	0375.2	070.6	67.64
270.0	000.5900	0087.7	014.9	103.0	100.0000	0375.1	070.6	67.62
271.0	000.5900	0086.9	014.8	102.8	100.0000	0374.9	070.6	67.61
272.0	000.5900	0087.1	014.9	102.6	100.0000	0374.8	070.6	67.63
273.0	000.5900	0087.4	014.9	102.4	100.0000	0374.7	070.5	67.66
274.0	000.5900	0087.7	014.9	102.2	100.0000	0374.6	070.4	67.68
275.0	000.5900	0087.8	014.9	102.0	100.0000	0374.4	070.4	67.69
276.0	000.5900	0088.0	014.9	101.8	100.0000	0374.3	070.3	67.70
277.0	000.5900	0088.1	014.9	101.6	100.0000	0374.2	070.3	67.71
278.0	000.5900	0088.1	014.9	101.4	100.0000	0374.0	070.3	67.71
279.0	000.5900	0087.6	014.9	101.2	100.0000	0373.9	070.3	67.70
280.0	000.5900	0086.8	014.8	100.9	100.0000	0373.7	070.4	67.68
281.0	000.5900	0085.8	014.7	100.7	100.0000	0373.6	070.5	67.64
282.0	000.5900	0084.8	014.7	100.5	100.0000	0373.5	070.5	67.61
283.0	000.5900	0084.2	014.6	100.3	100.0000	0373.4	070.6	67.58
284.0	000.5900	0083.7	014.5	100.1	100.0000	0373.4	070.7	67.56
285.0	000.5900	0083.3	014.5	099.9	100.0000	0373.3	070.7	67.54
286.0	000.5900	0083.0	014.5	099.7	100.0000	0373.3	070.8	67.52
287.0	000.5900	0082.5	014.4	099.5	100.0000	0373.2	070.8	67.49
288.0	000.5900	0082.3	014.4	099.3	100.0000	0373.2	070.9	67.48
289.0	000.5900	0082.3	014.4	099.1	100.0000	0373.2	070.9	67.46
290.0	000.5900	0082.4	014.4	098.9	100.0000	0373.2	071.0	67.45
291.0	000.5900	0082.7	014.5	098.7	100.0000	0373.2	071.0	67.44
292.0	000.5900	0083.1	014.5	098.5	100.0000	0373.1	071.0	67.43
293.0	000.5900	0084.2	014.6	098.3	100.0000	0373.1	071.0	67.45
294.0	000.5900	0086.0	014.8	098.0	100.0000	0373.1	070.9	67.48
295.0	000.5900	0088.0	014.9	097.8	100.0000	0373.1	070.8	67.52
296.0	000.5900	0089.7	015.1	097.6	100.0000	0373.1	070.7	67.54
297.0	000.5900	0090.6	015.2	097.3	100.0000	0373.1	070.7	67.54
298.0	000.5900	0090.5	015.2	097.1	100.0000	0373.1	070.8	67.51
299.0	000.5900	0089.4	015.1	097.0	100.0000	0373.1	071.0	67.44
300.0	000.5900	0087.8	014.9	096.8	100.0000	0373.1	071.2	67.36
301.0	000.5900	0086.1	014.8	096.7	100.0000	0373.1	071.4	67.27
302.0	000.5900	0084.8	014.6	096.5	100.0000	0373.2	071.7	67.20
303.0	000.5900	0083.8	014.6	096.4	100.0000	0373.2	071.9	67.13
304.0	000.5900	0082.8	014.5	096.2	100.0000	0373.2	072.1	67.06

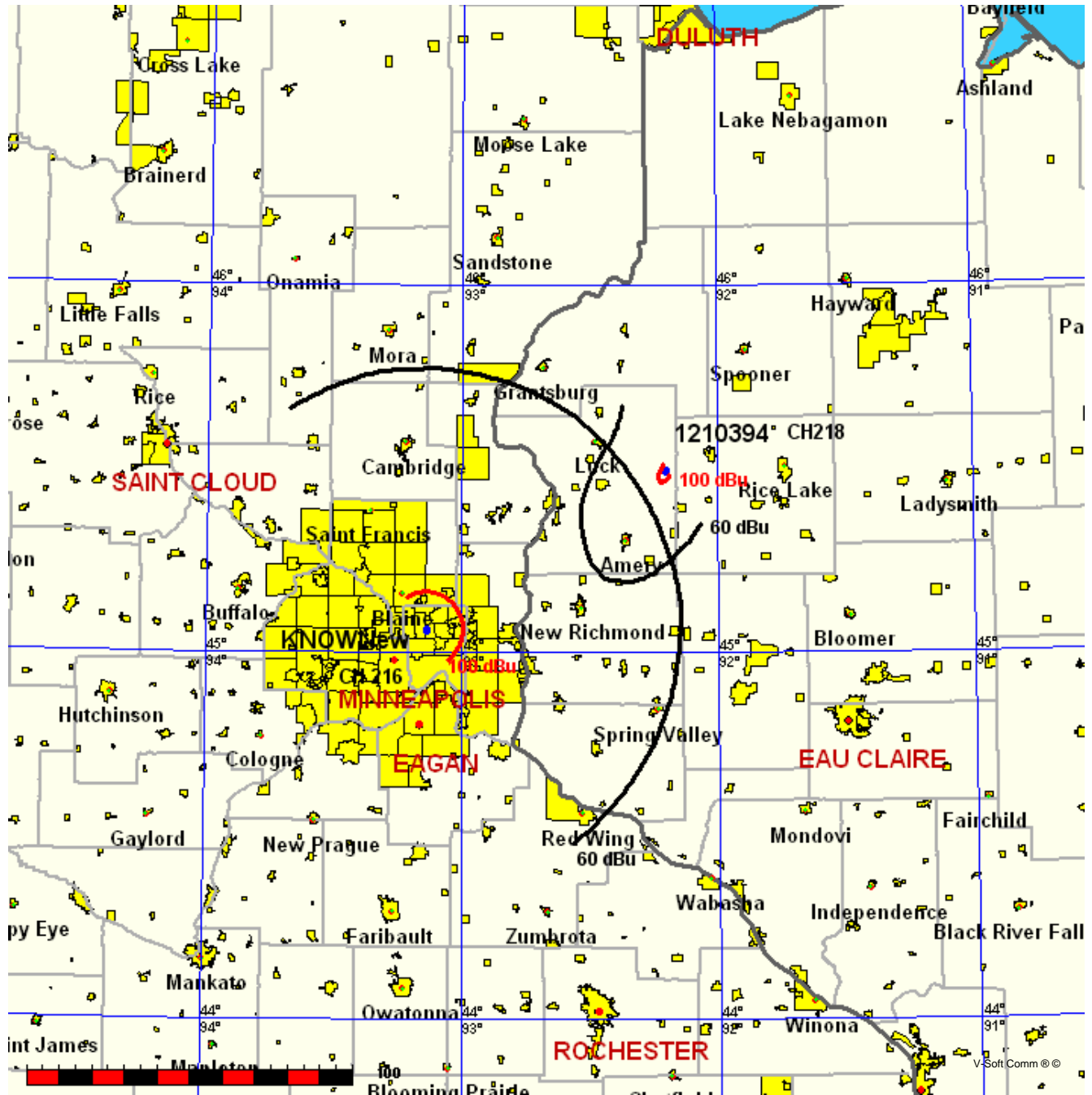
Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
305.0	000.5900	0082.0	014.4	096.1	100.0000	0373.3	072.2	67.00
306.0	000.5900	0081.8	014.4	095.9	100.0000	0373.4	072.4	66.96
307.0	000.5900	0082.6	014.5	095.7	100.0000	0373.5	072.4	66.94
308.0	000.5900	0084.1	014.6	095.5	100.0000	0373.7	072.4	66.94
309.0	000.5900	0086.0	014.8	095.2	100.0000	0373.8	072.4	66.95
310.0	000.5900	0087.6	014.9	095.0	100.0000	0374.0	072.5	66.95
311.0	000.5900	0088.9	015.0	094.8	100.0000	0374.1	072.5	66.93
312.0	000.5900	0090.0	015.1	094.6	100.0000	0374.2	072.6	66.91
313.0	000.5900	0090.9	015.2	094.4	100.0000	0374.4	072.7	66.88
314.0	000.5900	0091.8	015.3	094.1	100.0000	0374.5	072.8	66.85
315.0	000.5900	0092.8	015.4	093.9	100.0000	0374.6	072.9	66.82
316.0	000.5900	0093.9	015.5	093.7	100.0000	0374.7	073.0	66.79
317.0	000.5900	0094.7	015.6	093.5	100.0000	0374.8	073.1	66.75
318.0	000.5900	0095.1	015.6	093.3	100.0000	0374.9	073.2	66.69
319.0	000.5900	0095.4	015.6	093.2	100.0000	0375.0	073.4	66.64
320.0	000.5900	0096.2	015.7	093.0	100.0000	0375.1	073.6	66.59
321.0	000.5900	0097.4	015.8	092.8	100.0000	0375.2	073.7	66.55
322.0	000.5900	0098.7	016.0	092.6	100.0000	0375.3	073.8	66.51
323.0	000.5900	0099.9	016.1	092.4	100.0000	0375.4	073.9	66.47
324.0	000.5900	0100.7	016.2	092.2	100.0000	0375.6	074.1	66.42
325.0	000.5900	0101.4	016.2	092.0	100.0000	0375.7	074.3	66.36
326.0	000.5900	0102.4	016.3	091.8	100.0000	0375.8	074.5	66.30
327.0	000.5900	0103.6	016.4	091.6	100.0000	0375.9	074.6	66.25
328.0	000.5900	0105.1	016.6	091.4	100.0000	0376.1	074.8	66.20
329.0	000.5900	0106.7	016.7	091.2	100.0000	0376.2	074.9	66.15
330.0	000.5900	0108.5	016.9	090.9	100.0000	0376.4	075.1	66.10
331.0	000.5900	0110.7	017.1	090.7	100.0000	0376.6	075.3	66.05
332.0	000.5900	0112.7	017.2	090.5	100.0000	0376.7	075.4	66.00
333.0	000.5900	0114.6	017.4	090.3	100.0000	0376.9	075.6	65.93
334.0	000.5900	0116.5	017.6	090.1	100.0000	0377.1	075.8	65.87
335.0	000.5900	0118.9	017.7	089.8	100.0000	0377.2	076.0	65.81
336.0	000.5900	0122.0	018.0	089.6	100.0000	0377.4	076.2	65.75
337.0	000.5900	0125.2	018.2	089.3	100.0000	0377.6	076.4	65.69
338.0	000.5900	0127.7	018.4	089.1	100.0000	0377.8	076.6	65.62
339.0	000.5900	0129.1	018.5	088.9	100.0000	0377.9	076.9	65.53
340.0	000.5900	0129.8	018.5	088.8	100.0000	0378.0	077.2	65.43

Minnesota Public Radio
KNOW(New) vs. Turtle Lake Application

FMCommander Single Allocation Study - 07-29-2010 - FCC NGDC 30 Sec
KNOWNew's Overlaps (In= 6.55 km, Out= 45.62 km)

KNOWNew CH 216 C0
Lat= 45 03 44.0, Lng= 93 08 21.0
100.0 kW 388.5 M HAAT, 663.3 M COR
Prot.= 60 dBu, Intef.= 100 dBu

1210394 CH 218 C3 DA BNPED20071012AHI
Lat= 45 29 27.0, Lng= 92 11 33.0
20.0 kW 99.6 M HAAT, 473.2 M COR
Prot.= 60 dBu, Intef.= 100 dBu



KNOWNew

1210394 BNPED20071012AHI

Channel = 216C0
 Max ERP = 100 kW
 RCAMSL = 663.3 M
 N. Lat. 45 03 44.0
 W. Lng. 93 08 21.0
 Protected
 60 dBu

Channel = 218C3
 Max ERP = 20 kW
 RCAMSL = 473.2 M
 N. Lat. 45 29 27.0
 W. Lng. 92 11 33.0
 Interfering
 100 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
357.0	100.0000	0389.4	079.0	292.3	001.0651	0107.7	083.7	33.67	
358.0	100.0000	0389.3	079.0	292.6	001.0648	0107.2	082.5	33.99	
359.0	100.0000	0389.2	079.0	293.0	001.0644	0106.8	081.3	34.33	
000.0	100.0000	0390.3	079.0	293.5	001.0640	0106.3	080.0	34.65	
001.0	100.0000	0391.8	079.1	293.9	001.0636	0105.9	078.8	34.98	
002.0	100.0000	0392.9	079.2	294.3	001.0632	0105.6	077.6	35.31	
003.0	100.0000	0392.7	079.2	294.7	001.0629	0105.3	076.3	35.66	
004.0	100.0000	0392.1	079.2	295.0	001.0626	0105.0	075.0	36.03	
005.0	100.0000	0391.8	079.2	295.4	001.0623	0104.7	073.7	36.39	
006.0	100.0000	0391.7	079.1	295.7	001.0619	0104.4	072.4	36.75	
007.0	100.0000	0391.4	079.1	296.1	001.0616	0104.2	071.1	37.12	
008.0	100.0000	0390.9	079.1	296.4	001.0613	0104.1	069.7	37.50	
009.0	100.0000	0390.4	079.0	296.7	001.0610	0103.9	068.4	37.89	
010.0	100.0000	0390.1	079.0	297.0	001.0607	0103.8	067.1	38.28	
011.0	100.0000	0389.6	079.0	297.3	001.0605	0103.6	065.8	38.68	
012.0	100.0000	0389.1	079.0	297.6	001.0602	0103.5	064.4	39.08	
013.0	100.0000	0388.7	078.9	297.9	001.0599	0103.4	063.1	39.50	
014.0	100.0000	0388.4	078.9	298.2	001.0597	0103.4	061.8	39.94	
015.0	100.0000	0388.3	078.9	298.5	001.0594	0103.4	060.4	40.40	
016.0	100.0000	0388.4	078.9	298.8	001.0591	0103.4	059.1	40.87	
017.0	100.0000	0388.5	078.9	299.0	001.0589	0103.5	057.8	41.37	
018.0	100.0000	0388.8	078.9	299.3	001.0586	0103.6	056.4	41.87	
019.0	100.0000	0389.1	079.0	299.6	001.0584	0103.6	055.1	42.38	
020.0	100.0000	0389.5	079.0	299.9	001.0581	0103.7	053.7	42.90	
021.0	100.0000	0389.8	079.0	300.1	001.0616	0103.7	052.4	43.43	
022.0	100.0000	0389.9	079.0	300.4	001.0678	0103.7	051.0	43.98	
023.0	100.0000	0389.9	079.0	300.6	001.0734	0103.7	049.7	44.52	
024.0	100.0000	0389.8	079.0	300.7	001.0783	0103.7	048.3	45.06	
025.0	100.0000	0389.7	079.0	300.9	001.0827	0103.6	046.9	45.59	
026.0	100.0000	0389.6	079.0	301.0	001.0865	0103.6	045.6	46.14	
027.0	100.0000	0389.4	079.0	301.1	001.0896	0103.6	044.2	46.69	
028.0	100.0000	0389.2	079.0	301.2	001.0919	0103.6	042.8	47.25	
029.0	100.0000	0389.0	078.9	301.3	001.0933	0103.5	041.5	47.82	
030.0	100.0000	0388.8	078.9	301.3	001.0940	0103.5	040.1	48.40	
031.0	100.0000	0388.7	078.9	301.3	001.0938	0103.5	038.7	49.00	
032.0	100.0000	0388.6	078.9	301.3	001.0928	0103.6	037.3	49.60	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
033.0	100.0000	0388.6	078.9	301.2	001.0909	0103.6	036.0	50.21
034.0	100.0000	0388.6	078.9	301.1	001.0881	0103.6	034.6	50.83
035.0	100.0000	0388.8	078.9	300.9	001.0843	0103.6	033.2	51.46
036.0	100.0000	0388.9	078.9	300.7	001.0785	0103.7	031.9	52.10
037.0	100.0000	0388.7	078.9	300.4	001.0700	0103.7	030.5	52.78
038.0	100.0000	0388.2	078.9	300.0	001.0584	0103.7	029.2	53.50
039.0	100.0000	0387.4	078.8	299.4	001.0585	0103.6	027.8	54.31
040.0	100.0000	0386.2	078.7	298.7	001.0592	0103.4	026.5	55.15
041.0	100.0000	0385.0	078.6	297.9	001.0600	0103.5	025.2	56.05
042.0	100.0000	0383.9	078.6	296.9	001.0609	0103.8	023.9	57.02
043.0	100.0000	0383.1	078.5	295.8	001.0619	0104.4	022.6	58.03
044.0	100.0000	0382.4	078.5	294.5	001.0631	0105.4	021.3	59.10
045.0	100.0000	0382.0	078.4	293.1	001.0644	0106.7	020.0	60.21
046.0	100.0000	0381.9	078.4	291.4	001.0659	0108.6	018.8	61.38
047.0	100.0000	0382.0	078.4	289.5	001.0710	0110.7	017.6	62.57
048.0	100.0000	0381.9	078.4	287.3	001.0902	0112.2	016.4	63.74
049.0	100.0000	0381.5	078.4	284.5	001.1137	0113.5	015.3	64.88
050.0	100.0000	0380.7	078.3	281.1	001.1426	0115.5	014.2	66.13
051.0	100.0000	0379.8	078.3	277.1	001.2227	0118.3	013.2	67.84
052.0	100.0000	0378.9	078.2	272.4	001.3408	0120.3	012.3	69.60
053.0	100.0000	0378.2	078.2	267.1	001.6279	0121.4	011.6	71.68
054.0	100.0000	0377.6	078.1	261.0	002.1437	0121.3	010.9	73.91
055.0	100.0000	0377.1	078.1	254.1	002.9539	0121.3	010.4	76.13
056.0	100.0000	0376.8	078.0	246.8	004.1425	0124.9	010.1	78.40
057.0	100.0000	0376.7	078.0	239.1	005.8716	0120.3	010.0	79.85
058.0	100.0000	0376.7	078.0	231.3	008.4067	0115.2	010.0	80.93
059.0	100.0000	0376.7	078.0	223.8	011.9505	0111.0	010.3	81.68
060.0	100.0000	0376.8	078.0	216.8	014.9371	0110.4	010.8	81.83
061.0	100.0000	0376.8	078.0	210.5	016.7666	0111.6	011.4	81.41
062.0	100.0000	0376.7	078.0	205.1	014.7504	0111.8	012.1	79.69
063.0	100.0000	0376.7	078.0	200.4	012.8112	0114.3	013.0	78.02
064.0	100.0000	0376.7	078.0	196.3	010.8191	0115.3	014.0	76.12
065.0	100.0000	0376.7	078.0	192.9	009.2214	0116.0	015.0	74.43
066.0	100.0000	0376.6	078.0	190.0	007.9826	0115.2	016.1	72.80
067.0	100.0000	0376.1	078.0	187.6	007.2270	0113.1	017.3	71.25
068.0	100.0000	0375.4	077.9	185.7	006.6282	0110.2	018.5	69.65
069.0	100.0000	0375.2	077.9	183.9	006.1233	0108.9	019.8	68.20
070.0	100.0000	0375.3	077.9	182.4	005.6895	0108.9	021.0	66.91
071.0	100.0000	0375.9	078.0	181.0	005.3111	0108.1	022.3	65.58
072.0	100.0000	0376.6	078.0	179.8	005.0005	0107.4	023.5	64.31
073.0	100.0000	0377.4	078.1	178.8	004.7865	0106.7	024.8	63.13
074.0	100.0000	0377.9	078.1	177.9	004.6168	0106.2	026.1	62.02
075.0	100.0000	0377.9	078.1	177.3	004.4904	0105.7	027.5	60.99
076.0	100.0000	0377.7	078.1	176.8	004.3925	0105.5	028.8	60.05
077.0	100.0000	0377.8	078.1	176.3	004.3034	0105.1	030.1	59.15
078.0	100.0000	0378.2	078.2	175.9	004.2241	0104.7	031.5	58.31
079.0	100.0000	0378.9	078.2	175.5	004.1529	0104.3	032.8	57.54
080.0	100.0000	0379.6	078.2	175.2	004.0951	0103.9	034.2	56.81
081.0	100.0000	0380.2	078.3	175.0	004.0503	0103.6	035.5	56.10
082.0	100.0000	0380.8	078.3	174.8	004.0162	0103.3	036.9	55.42
083.0	100.0000	0381.3	078.4	174.6	003.9922	0103.0	038.3	54.77

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
084.0	100.0000	0381.7	078.4	174.6	003.9796	0102.9	039.6	54.16
085.0	100.0000	0381.6	078.4	174.6	003.9835	0103.0	041.0	53.58
086.0	100.0000	0380.8	078.3	174.7	004.0049	0103.2	042.4	53.05
087.0	100.0000	0379.9	078.3	174.9	004.0334	0103.4	043.7	52.55
088.0	100.0000	0378.6	078.2	175.1	004.0715	0103.7	045.1	52.07
089.0	100.0000	0377.9	078.1	175.2	004.1052	0103.9	046.4	51.59
090.0	100.0000	0377.1	078.1	175.4	004.1420	0104.2	047.8	51.13
091.0	100.0000	0376.3	078.0	175.7	004.1821	0104.4	049.2	50.68
092.0	100.0000	0375.7	078.0	175.9	004.2237	0104.7	050.5	50.22
093.0	100.0000	0375.0	077.9	176.1	004.2681	0104.9	051.9	49.76
094.0	100.0000	0374.6	077.9	176.3	004.3129	0105.1	053.2	49.30
095.0	100.0000	0374.0	077.8	176.6	004.3621	0105.3	054.5	48.85
096.0	100.0000	0373.4	077.8	176.9	004.4139	0105.6	055.9	48.41
097.0	100.0000	0373.1	077.8	177.1	004.4632	0105.7	057.2	47.96
098.0	100.0000	0373.1	077.8	177.4	004.5116	0105.8	058.5	47.52
099.0	100.0000	0373.2	077.8	177.6	004.5610	0106.0	059.9	47.10
100.0	100.0000	0373.3	077.8	177.9	004.6119	0106.1	061.2	46.69
101.0	100.0000	0373.8	077.8	178.1	004.6615	0106.3	062.5	46.29
102.0	100.0000	0374.4	077.9	178.4	004.7109	0106.5	063.9	45.91
103.0	100.0000	0375.0	077.9	178.6	004.7631	0106.7	065.2	45.55
104.0	100.0000	0375.6	078.0	178.9	004.8184	0106.8	066.5	45.21
105.0	100.0000	0376.0	078.0	179.2	004.8773	0107.1	067.9	44.87
106.0	100.0000	0376.1	078.0	179.5	004.9428	0107.3	069.2	44.54
107.0	100.0000	0376.1	078.0	179.9	005.0102	0107.5	070.5	44.22
108.0	100.0000	0376.0	078.0	180.2	005.0915	0107.7	071.8	43.91
109.0	100.0000	0375.8	078.0	180.5	005.1843	0107.9	073.1	43.62
110.0	100.0000	0375.7	078.0	180.9	005.2790	0108.1	074.3	43.33
111.0	100.0000	0375.8	078.0	181.2	005.3715	0108.3	075.6	43.04
112.0	100.0000	0376.3	078.0	181.6	005.4622	0108.5	076.9	42.75
113.0	100.0000	0376.8	078.0	181.9	005.5535	0108.7	078.2	42.46
114.0	100.0000	0377.4	078.1	182.3	005.6470	0108.8	079.5	42.17
115.0	100.0000	0377.9	078.1	182.6	005.7441	0109.0	080.8	41.89
116.0	100.0000	0378.2	078.1	183.0	005.8460	0109.0	082.0	41.61

07-29-2010 FCC NGDC 30 Sec Terrain Data

1210394 BNPED20071012AHI

KNOWNew

Channel = 218C3
 Max ERP = 20 kW
 RCAMSL = 473.2 M
 N. Lat. 45 29 27.0
 W. Lng. 92 11 33.0
 Protected
 60 dBu

Channel = 216C0
 Max ERP = 100 kW
 RCAMSL = 663.3 M
 N. Lat. 45 03 44.0
 W. Lng. 93 08 21.0
 Interfering
 100 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
178.0	004.6349	0106.2	027.5	074.6	100.0000	0378.0	077.8	65.20	
179.0	004.8354	0106.9	027.8	074.8	100.0000	0378.0	077.3	65.39	
180.0	005.0401	0107.5	028.1	074.9	100.0000	0378.0	076.7	65.58	
181.0	005.3045	0108.1	028.5	075.1	100.0000	0377.9	076.2	65.77	
182.0	005.5757	0108.7	028.9	075.3	100.0000	0377.9	075.6	65.98	
183.0	005.8536	0109.0	029.3	075.5	100.0000	0377.8	075.0	66.18	
184.0	006.1383	0108.9	029.6	075.6	100.0000	0377.8	074.4	66.38	
185.0	006.4298	0109.5	030.0	075.7	100.0000	0377.7	073.8	66.59	
186.0	006.7280	0110.6	030.4	075.9	100.0000	0377.7	073.2	66.81	
187.0	007.0330	0112.1	030.9	076.2	100.0000	0377.7	072.5	67.05	
188.0	007.3447	0113.6	031.5	076.4	100.0000	0377.7	071.8	67.29	
189.0	007.6632	0114.6	031.9	076.6	100.0000	0377.7	071.1	67.53	
190.0	007.9885	0115.2	032.3	076.7	100.0000	0377.8	070.5	67.76	
191.0	008.4085	0115.8	032.8	076.9	100.0000	0377.8	069.7	68.01	
192.0	008.8392	0116.3	033.3	077.1	100.0000	0377.8	069.0	68.27	
193.0	009.2807	0115.9	033.6	077.1	100.0000	0377.9	068.4	68.50	
194.0	009.7329	0115.3	033.9	077.1	100.0000	0377.9	067.7	68.73	
195.0	010.1959	0115.0	034.2	077.1	100.0000	0377.9	067.0	68.97	
196.0	010.6697	0115.2	034.6	077.2	100.0000	0377.9	066.3	69.22	
197.0	011.1542	0115.5	035.0	077.2	100.0000	0377.9	065.6	69.48	
198.0	011.6495	0115.4	035.3	077.2	100.0000	0377.9	064.9	69.72	
199.0	012.1555	0115.0	035.6	077.1	100.0000	0377.9	064.2	69.96	
200.0	012.6723	0114.5	035.9	077.1	100.0000	0377.8	063.6	70.20	
201.0	013.0702	0114.0	036.0	076.9	100.0000	0377.8	063.0	70.42	
202.0	013.4743	0113.4	036.2	076.7	100.0000	0377.7	062.3	70.64	
203.0	013.8844	0112.7	036.3	076.4	100.0000	0377.7	061.8	70.85	
204.0	014.3008	0112.0	036.5	076.2	100.0000	0377.7	061.2	71.07	
205.0	014.7233	0111.8	036.7	076.0	100.0000	0377.7	060.5	71.30	
206.0	015.1519	0111.8	036.9	075.8	100.0000	0377.7	059.9	71.54	
207.0	015.5867	0111.9	037.1	075.5	100.0000	0377.8	059.3	71.78	
208.0	016.0277	0111.9	037.4	075.3	100.0000	0377.9	058.6	72.01	
209.0	016.4748	0111.9	037.6	075.0	100.0000	0377.9	058.0	72.24	
210.0	016.9280	0111.7	037.8	074.7	100.0000	0378.0	057.4	72.47	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
211.0	016.6276	0111.5	037.6	074.1	100.0000	0378.0	057.1	72.59
212.0	016.3299	0111.2	037.4	073.5	100.0000	0377.7	056.8	72.71
213.0	016.0348	0111.0	037.2	072.9	100.0000	0377.3	056.5	72.81
214.0	015.7425	0110.7	037.1	072.2	100.0000	0376.8	056.2	72.89
215.0	015.4528	0110.5	036.9	071.6	100.0000	0376.3	055.9	72.97
216.0	015.1659	0110.3	036.7	071.0	100.0000	0375.8	055.7	73.05
217.0	014.8816	0110.4	036.6	070.3	100.0000	0375.4	055.4	73.13
218.0	014.6000	0110.9	036.5	069.7	100.0000	0375.2	055.2	73.23
219.0	014.3211	0111.5	036.4	069.1	100.0000	0375.1	054.9	73.33
220.0	014.0449	0111.9	036.3	068.5	100.0000	0375.3	054.7	73.42
221.0	013.4743	0111.8	036.0	067.8	100.0000	0375.6	054.7	73.43
222.0	012.9155	0111.6	035.6	067.0	100.0000	0376.1	054.7	73.42
223.0	012.3685	0111.2	035.2	066.2	100.0000	0376.5	054.8	73.40
224.0	011.8334	0110.9	034.8	065.5	100.0000	0376.7	054.9	73.36
225.0	011.3101	0111.1	034.5	064.8	100.0000	0376.7	055.0	73.32
226.0	010.7986	0111.7	034.2	064.1	100.0000	0376.7	055.1	73.30
227.0	010.2990	0112.6	034.0	063.4	100.0000	0376.6	055.2	73.27
228.0	009.8112	0113.5	033.7	062.8	100.0000	0376.7	055.2	73.24
229.0	009.3352	0114.2	033.4	062.1	100.0000	0376.7	055.4	73.19
230.0	008.8711	0114.7	033.1	061.4	100.0000	0376.8	055.6	73.12
231.0	008.5099	0115.1	032.8	060.8	100.0000	0376.8	055.7	73.06
232.0	008.1562	0115.4	032.5	060.2	100.0000	0376.8	055.9	72.98
233.0	007.8100	0115.7	032.2	059.6	100.0000	0376.8	056.2	72.90
234.0	007.4713	0116.3	031.9	059.0	100.0000	0376.7	056.4	72.82
235.0	007.1401	0116.9	031.7	058.4	100.0000	0376.7	056.6	72.74
236.0	006.8164	0117.6	031.4	057.8	100.0000	0376.7	056.8	72.65
237.0	006.5003	0118.3	031.1	057.3	100.0000	0376.7	057.1	72.55
238.0	006.1916	0119.2	030.9	056.7	100.0000	0376.7	057.3	72.46
239.0	005.8905	0120.3	030.6	056.2	100.0000	0376.8	057.6	72.36
240.0	005.5968	0121.3	030.4	055.7	100.0000	0376.9	057.9	72.26
241.0	005.3686	0122.1	030.2	055.2	100.0000	0377.1	058.1	72.17
242.0	005.1450	0122.8	029.9	054.7	100.0000	0377.3	058.4	72.07
243.0	004.9263	0123.3	029.7	054.2	100.0000	0377.5	058.7	71.96
244.0	004.7123	0123.9	029.4	053.7	100.0000	0377.8	059.1	71.85
245.0	004.5030	0124.5	029.2	053.3	100.0000	0378.0	059.4	71.73
246.0	004.2985	0124.9	028.9	052.9	100.0000	0378.3	059.8	71.60
247.0	004.0987	0124.8	028.6	052.5	100.0000	0378.5	060.2	71.46
248.0	003.9037	0124.5	028.3	052.1	100.0000	0378.8	060.6	71.29
249.0	003.7135	0123.9	027.9	051.8	100.0000	0379.1	061.1	71.12
250.0	003.5280	0123.0	027.5	051.4	100.0000	0379.4	061.6	70.94
251.0	003.3850	0122.3	027.2	051.1	100.0000	0379.7	062.1	70.79
252.0	003.2450	0121.7	026.9	050.8	100.0000	0380.0	062.5	70.63
253.0	003.1079	0121.5	026.6	050.5	100.0000	0380.3	063.0	70.49
254.0	002.9737	0121.3	026.3	050.2	100.0000	0380.5	063.4	70.34
255.0	002.8426	0121.0	026.1	049.9	100.0000	0380.7	063.8	70.18
256.0	002.7144	0120.9	025.8	049.7	100.0000	0381.0	064.3	70.03
257.0	002.5891	0120.9	025.5	049.4	100.0000	0381.2	064.7	69.88
258.0	002.4668	0121.1	025.3	049.2	100.0000	0381.3	065.2	69.73
259.0	002.3475	0121.1	025.0	049.0	100.0000	0381.5	065.6	69.58
260.0	002.2311	0121.2	024.7	048.7	100.0000	0381.6	066.1	69.42
261.0	002.1399	0121.3	024.5	048.5	100.0000	0381.7	066.5	69.27

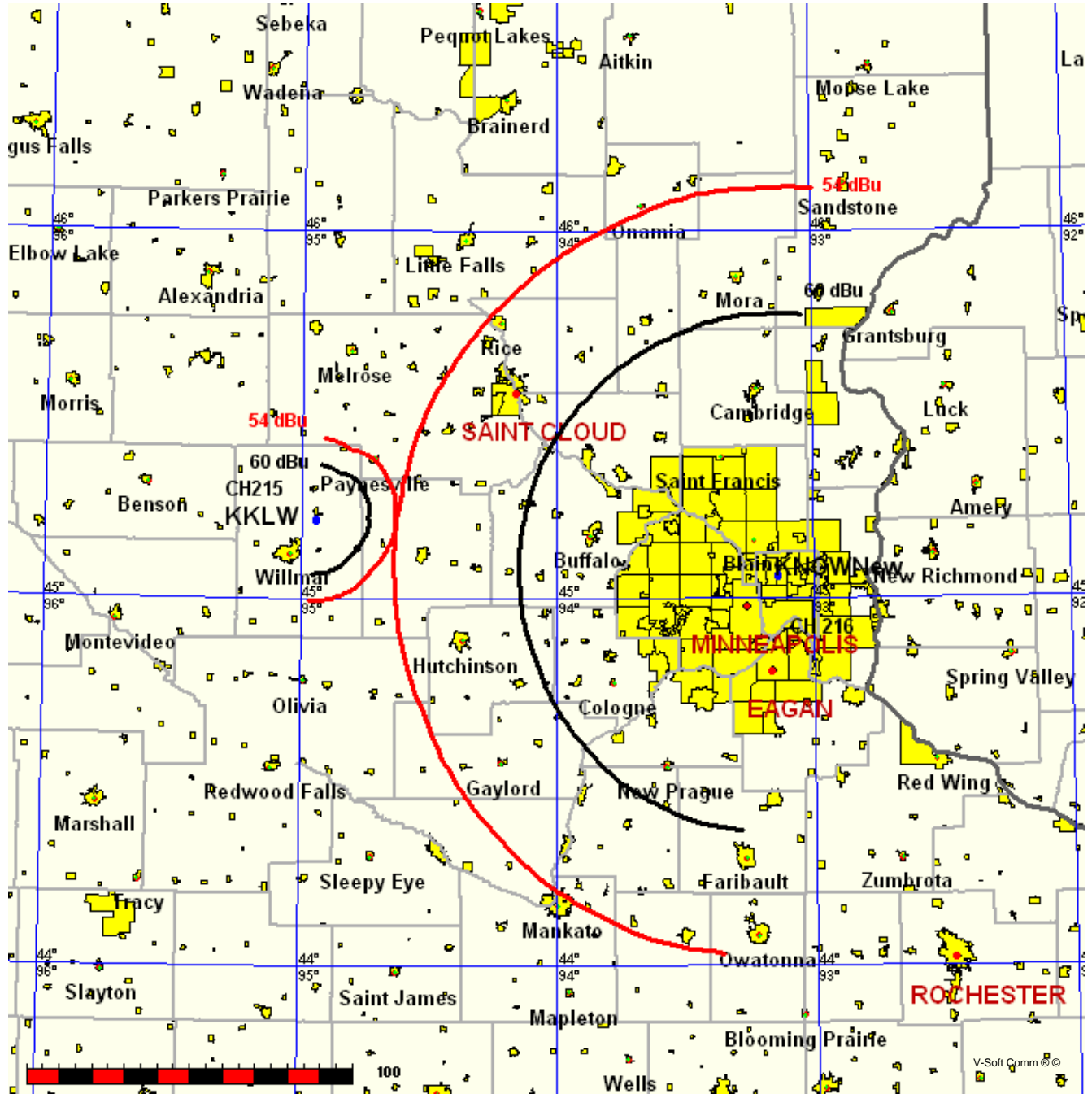
Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
262.0	002.0506	0121.5	024.3	048.3	100.0000	0381.7	066.9	69.13
263.0	001.9631	0121.5	024.0	048.1	100.0000	0381.8	067.3	68.98
264.0	001.8776	0121.6	023.8	048.0	100.0000	0381.9	067.7	68.83
265.0	001.7940	0121.6	023.5	047.8	100.0000	0381.9	068.2	68.68
266.0	001.7123	0121.5	023.3	047.7	100.0000	0381.9	068.6	68.52
267.0	001.6325	0121.4	023.0	047.5	100.0000	0381.9	069.1	68.36
268.0	001.5546	0121.3	022.8	047.4	100.0000	0382.0	069.5	68.20
269.0	001.4786	0121.2	022.5	047.3	100.0000	0382.0	070.0	68.04
270.0	001.4045	0121.1	022.2	047.2	100.0000	0382.0	070.5	67.88
271.0	001.3781	0121.0	022.1	047.0	100.0000	0382.0	070.8	67.76
272.0	001.3520	0120.6	022.0	046.9	100.0000	0382.0	071.2	67.63
273.0	001.3261	0120.1	021.8	046.8	100.0000	0382.0	071.5	67.51
274.0	001.3005	0119.6	021.7	046.6	100.0000	0382.0	071.9	67.38
275.0	001.2751	0119.2	021.6	046.5	100.0000	0382.0	072.3	67.25
276.0	001.2500	0118.8	021.4	046.4	100.0000	0381.9	072.6	67.12
277.0	001.2251	0118.3	021.3	046.3	100.0000	0381.9	073.0	66.99
278.0	001.2005	0117.8	021.2	046.2	100.0000	0381.9	073.4	66.86
279.0	001.1761	0117.3	021.0	046.1	100.0000	0381.9	073.8	66.73
280.0	001.1520	0116.5	020.8	046.0	100.0000	0381.9	074.2	66.59
281.0	001.1434	0115.6	020.7	045.9	100.0000	0381.9	074.5	66.47
282.0	001.1348	0114.7	020.6	045.8	100.0000	0381.9	074.9	66.34
283.0	001.1262	0114.2	020.5	045.7	100.0000	0381.9	075.2	66.23
284.0	001.1177	0113.7	020.4	045.6	100.0000	0381.9	075.6	66.11
285.0	001.1092	0113.3	020.4	045.5	100.0000	0381.9	075.9	65.99
286.0	001.1007	0112.9	020.3	045.5	100.0000	0381.9	076.3	65.87
287.0	001.0923	0112.4	020.2	045.4	100.0000	0382.0	076.6	65.75
288.0	001.0839	0111.8	020.1	045.3	100.0000	0382.0	076.9	65.63
289.0	001.0756	0111.2	020.0	045.3	100.0000	0382.0	077.3	65.51
290.0	001.0672	0110.3	019.9	045.2	100.0000	0382.0	077.7	65.39
291.0	001.0663	0109.2	019.8	045.2	100.0000	0382.0	078.0	65.27
292.0	001.0654	0108.0	019.7	045.2	100.0000	0382.0	078.4	65.14
293.0	001.0644	0106.8	019.6	045.1	100.0000	0382.0	078.7	65.02
294.0	001.0635	0105.8	019.5	045.1	100.0000	0382.0	079.1	64.90
295.0	001.0626	0105.0	019.4	045.1	100.0000	0382.0	079.4	64.78
296.0	001.0617	0104.3	019.3	045.0	100.0000	0382.0	079.8	64.67
297.0	001.0608	0103.8	019.3	045.0	100.0000	0382.0	080.1	64.55

Minnesota Public Radio
KNOW(New) vs. KKLW

FMCommander Single Allocation Study - 07-29-2010 - FCC NGDC 30 Sec
KNOWNew's Overlaps (In= 39.01 km, Out= 8.46 km)

KNOWNew CH 216 C0
Lat= 45 03 44.0, Lng= 93 08 21.0
100.0 kW 388.5 M HAAT, 663.3 M COR
Prot.= 60 dBu, Intef.= 54 dBu

KKLW CH 215 A BLED20040204ABY
Lat= 45 11 52.0, Lng= 94 56 58.0
0.4 kW 129 M HAAT, 491 M COR
Prot.= 60 dBu, Intef.= 54 dBu



KNOWNew

KKLW BLED20040204ABY

Channel = 216C0
 Max ERP = 100 kW
 RCAMSL = 663.3 M
 N. Lat. 45 03 44.0
 W. Lng. 93 08 21.0
 Protected
 60 dBu

Channel = 215A
 Max ERP = 0.4 kW
 RCAMSL = 491 M
 N. Lat. 45 11 52.0
 W. Lng. 94 56 58.0
 Interfering
 54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
217.0	100.0000	0393.8	079.3	129.2	000.4000	0111.4	123.1	20.74	
218.0	100.0000	0393.6	079.3	129.1	000.4000	0111.5	121.9	20.95	
219.0	100.0000	0392.9	079.2	129.1	000.4000	0111.5	120.5	21.19	
220.0	100.0000	0392.2	079.2	129.1	000.4000	0111.5	119.1	21.43	
221.0	100.0000	0391.7	079.1	129.1	000.4000	0111.5	117.7	21.68	
222.0	100.0000	0391.4	079.1	129.0	000.4000	0111.5	116.3	21.92	
223.0	100.0000	0391.3	079.1	129.0	000.4000	0111.5	115.0	22.17	
224.0	100.0000	0390.9	079.1	128.9	000.4000	0111.5	113.6	22.42	
225.0	100.0000	0390.7	079.1	128.9	000.4000	0111.5	112.2	22.67	
226.0	100.0000	0390.6	079.1	128.8	000.4000	0111.5	110.8	22.94	
227.0	100.0000	0390.5	079.1	128.7	000.4000	0111.6	109.5	23.21	
228.0	100.0000	0390.2	079.0	128.6	000.4000	0111.6	108.1	23.48	
229.0	100.0000	0389.8	079.0	128.5	000.4000	0111.7	106.7	23.77	
230.0	100.0000	0389.8	079.0	128.3	000.4000	0111.7	105.4	24.06	
231.0	100.0000	0390.3	079.0	128.2	000.4000	0111.8	104.0	24.35	
232.0	100.0000	0391.1	079.1	128.1	000.4000	0111.8	102.6	24.66	
233.0	100.0000	0391.5	079.1	127.9	000.4000	0111.9	101.3	24.97	
234.0	100.0000	0391.2	079.1	127.7	000.4000	0112.0	099.9	25.29	
235.0	100.0000	0390.6	079.1	127.4	000.4000	0112.1	098.6	25.61	
236.0	100.0000	0390.4	079.0	127.2	000.4000	0112.2	097.3	25.95	
237.0	100.0000	0390.5	079.1	126.9	000.4000	0112.4	096.0	26.28	
238.0	100.0000	0390.6	079.1	126.7	000.4000	0112.5	094.7	26.63	
239.0	100.0000	0390.5	079.1	126.4	000.4000	0112.7	093.4	26.97	
240.0	100.0000	0390.3	079.0	126.0	000.4000	0112.8	092.1	27.32	
241.0	100.0000	0390.0	079.0	125.7	000.4000	0113.0	090.9	27.67	
242.0	100.0000	0389.6	079.0	125.3	000.4000	0113.2	089.6	28.02	
243.0	100.0000	0389.2	079.0	124.9	000.4000	0113.4	088.4	28.37	
244.0	100.0000	0388.7	078.9	124.4	000.4000	0113.7	087.2	28.71	
245.0	100.0000	0387.9	078.9	123.9	000.4000	0113.9	086.0	29.05	
246.0	100.0000	0386.8	078.8	123.4	000.4000	0114.1	084.9	29.39	
247.0	100.0000	0385.9	078.7	122.9	000.4000	0114.3	083.8	29.72	
248.0	100.0000	0385.7	078.7	122.3	000.4000	0114.6	082.6	30.06	
249.0	100.0000	0386.0	078.7	121.8	000.4000	0114.8	081.5	30.39	
250.0	100.0000	0386.8	078.8	121.2	000.4000	0115.1	080.4	30.73	
251.0	100.0000	0387.9	078.9	120.7	000.4000	0115.4	079.2	31.07	
252.0	100.0000	0388.8	078.9	120.0	000.4000	0115.8	078.1	31.41	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
253.0	100.0000	0389.5	079.0	119.4	000.4000	0116.3	077.1	31.74
254.0	100.0000	0390.1	079.0	118.7	000.4000	0116.8	076.0	32.07
255.0	100.0000	0390.6	079.1	118.0	000.4000	0117.3	075.0	32.39
256.0	100.0000	0391.3	079.1	117.2	000.4000	0117.6	074.1	32.70
257.0	100.0000	0392.3	079.2	116.4	000.4000	0117.7	073.1	32.99
258.0	100.0000	0393.2	079.3	115.6	000.4000	0117.8	072.2	33.27
259.0	100.0000	0394.1	079.3	114.8	000.4000	0117.8	071.3	33.55
260.0	100.0000	0394.7	079.4	113.9	000.4000	0117.7	070.4	33.80
261.0	100.0000	0394.9	079.4	113.0	000.4000	0117.8	069.6	34.05
262.0	100.0000	0394.9	079.4	112.0	000.4000	0118.2	068.9	34.29
263.0	100.0000	0394.7	079.4	111.0	000.4000	0118.9	068.2	34.54
264.0	100.0000	0394.6	079.4	109.9	000.4000	0119.9	067.6	34.79
265.0	100.0000	0394.4	079.3	108.9	000.4000	0120.7	067.0	35.03
266.0	100.0000	0394.3	079.3	107.8	000.4000	0121.4	066.4	35.23
267.0	100.0000	0394.2	079.3	106.7	000.4000	0122.0	065.9	35.42
268.0	100.0000	0394.5	079.4	105.5	000.4000	0122.8	065.4	35.63
269.0	100.0000	0395.2	079.4	104.4	000.4000	0123.8	065.0	35.83
270.0	100.0000	0395.8	079.4	103.2	000.4000	0124.6	064.6	36.00
271.0	100.0000	0396.5	079.5	102.0	000.4000	0124.8	064.2	36.13
272.0	100.0000	0397.1	079.5	100.8	000.4000	0124.7	063.9	36.22
273.0	100.0000	0397.6	079.6	099.6	000.4000	0124.7	063.7	36.30
274.0	100.0000	0397.7	079.6	098.3	000.4000	0124.8	063.5	36.36
275.0	100.0000	0397.8	079.6	097.1	000.4000	0124.6	063.4	36.39
276.0	100.0000	0397.9	079.6	095.8	000.4000	0123.9	063.3	36.37
277.0	100.0000	0397.8	079.6	094.6	000.4000	0123.1	063.4	36.32
278.0	100.0000	0397.7	079.6	093.3	000.4000	0122.3	063.4	36.25
279.0	100.0000	0397.6	079.6	092.1	000.4000	0122.1	063.6	36.20
280.0	100.0000	0397.5	079.6	090.8	000.4000	0121.9	063.7	36.13
281.0	100.0000	0397.4	079.6	089.6	000.4000	0121.7	064.0	36.04
282.0	100.0000	0397.6	079.6	088.4	000.4000	0121.6	064.2	35.95
283.0	100.0000	0397.7	079.6	087.2	000.4000	0122.0	064.5	35.87
284.0	100.0000	0397.9	079.6	086.0	000.4000	0122.5	064.9	35.78
285.0	100.0000	0398.1	079.6	084.8	000.4000	0123.3	065.3	35.69
286.0	100.0000	0398.4	079.6	083.7	000.4000	0124.3	065.8	35.59
287.0	100.0000	0398.8	079.7	082.6	000.4000	0124.9	066.3	35.47
288.0	100.0000	0399.3	079.7	081.5	000.4000	0125.4	066.8	35.32
289.0	100.0000	0399.8	079.7	080.4	000.4000	0125.9	067.4	35.16
290.0	100.0000	0400.1	079.8	079.4	000.4000	0126.5	068.1	34.99
291.0	100.0000	0400.3	079.8	078.3	000.4000	0127.1	068.8	34.80
292.0	100.0000	0400.4	079.8	077.4	000.4000	0127.7	069.5	34.60
293.0	100.0000	0400.5	079.8	076.4	000.4000	0128.9	070.3	34.42
294.0	100.0000	0400.5	079.8	075.5	000.4000	0130.3	071.1	34.23
295.0	100.0000	0400.3	079.8	074.7	000.4000	0131.5	072.0	34.02
296.0	100.0000	0400.0	079.8	073.8	000.4000	0132.4	072.9	33.79
297.0	100.0000	0399.7	079.7	073.0	000.4000	0133.1	073.9	33.53
298.0	100.0000	0399.2	079.7	072.3	000.4000	0133.6	074.8	33.25
299.0	100.0000	0398.8	079.7	071.6	000.4000	0134.0	075.8	32.97
300.0	100.0000	0398.4	079.6	070.9	000.4000	0134.3	076.9	32.67
301.0	100.0000	0398.0	079.6	070.2	000.4000	0134.5	077.9	32.36
302.0	100.0000	0397.6	079.6	069.6	000.4000	0134.6	079.0	32.04
303.0	100.0000	0397.0	079.5	069.0	000.4000	0134.8	080.2	31.71

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
304.0	100.0000	0396.3	079.5	068.5	000.4000	0134.9	081.3	31.37
305.0	100.0000	0395.6	079.4	067.9	000.4000	0134.9	082.5	31.03
306.0	100.0000	0395.1	079.4	067.4	000.4000	0134.9	083.6	30.68
307.0	100.0000	0394.6	079.4	067.0	000.4000	0134.9	084.8	30.33
308.0	100.0000	0394.2	079.3	066.5	000.4000	0134.8	086.0	29.97
309.0	100.0000	0393.8	079.3	066.1	000.4000	0134.6	087.3	29.61
310.0	100.0000	0393.3	079.3	065.7	000.4000	0134.5	088.5	29.25
311.0	100.0000	0392.6	079.2	065.3	000.4000	0134.4	089.8	28.89
312.0	100.0000	0391.7	079.1	065.0	000.4000	0134.2	091.0	28.52
313.0	100.0000	0391.1	079.1	064.7	000.4000	0134.1	092.3	28.16
314.0	100.0000	0390.7	079.1	064.4	000.4000	0134.0	093.6	27.80
315.0	100.0000	0390.7	079.1	064.1	000.4000	0134.0	094.9	27.45
316.0	100.0000	0390.8	079.1	063.8	000.4000	0133.9	096.2	27.10
317.0	100.0000	0390.9	079.1	063.6	000.4000	0133.9	097.5	26.75
318.0	100.0000	0390.8	079.1	063.3	000.4000	0133.9	098.8	26.41
319.0	100.0000	0390.8	079.1	063.1	000.4000	0133.9	100.1	26.08
320.0	100.0000	0390.6	079.1	062.9	000.4000	0133.9	101.4	25.75
321.0	100.0000	0390.3	079.0	062.8	000.4000	0134.0	102.8	25.43
322.0	100.0000	0390.0	079.0	062.6	000.4000	0134.0	104.1	25.12
323.0	100.0000	0389.8	079.0	062.5	000.4000	0134.0	105.5	24.81
324.0	100.0000	0389.6	079.0	062.3	000.4000	0134.0	106.8	24.51
325.0	100.0000	0389.5	079.0	062.2	000.4000	0134.1	108.2	24.22
326.0	100.0000	0389.5	079.0	062.1	000.4000	0134.1	109.5	23.93
327.0	100.0000	0389.5	079.0	062.1	000.4000	0134.1	110.9	23.66
328.0	100.0000	0389.5	079.0	062.0	000.4000	0134.1	112.2	23.39
329.0	100.0000	0389.3	079.0	061.9	000.4000	0134.1	113.6	23.13
330.0	100.0000	0389.1	079.0	061.9	000.4000	0134.1	115.0	22.87
331.0	100.0000	0388.8	078.9	061.9	000.4000	0134.1	116.4	22.62
332.0	100.0000	0388.5	078.9	061.9	000.4000	0134.1	117.7	22.37
333.0	100.0000	0388.1	078.9	061.9	000.4000	0134.1	119.1	22.12
334.0	100.0000	0388.0	078.9	061.9	000.4000	0134.1	120.5	21.88
335.0	100.0000	0387.9	078.9	061.9	000.4000	0134.1	121.8	21.63
336.0	100.0000	0388.0	078.9	061.9	000.4000	0134.1	123.2	21.38

07-29-2010 FCC NGDC 30 Sec Terrain Data

KKLW BLED20040204ABY

KNOWNew

Channel = 215A
 Max ERP = 0.4 kW
 RCAMSL = 491 M
 N. Lat. 45 11 52.0
 W. Lng. 94 56 58.0
 Protected
 60 dBu

Channel = 216C0
 Max ERP = 100 kW
 RCAMSL = 663.3 M
 N. Lat. 45 03 44.0
 W. Lng. 93 08 21.0
 Interfering
 54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
035.0	000.4000	0128.1	016.6	282.8	100.0000	0397.7	135.4	49.59	
036.0	000.4000	0128.7	016.6	282.8	100.0000	0397.7	135.2	49.66	
037.0	000.4000	0129.2	016.6	282.7	100.0000	0397.7	134.9	49.73	
038.0	000.4000	0129.8	016.7	282.7	100.0000	0397.7	134.6	49.80	
039.0	000.4000	0130.8	016.8	282.7	100.0000	0397.7	134.3	49.88	
040.0	000.4000	0132.2	016.8	282.6	100.0000	0397.7	134.0	49.95	
041.0	000.4000	0133.6	017.0	282.6	100.0000	0397.7	133.7	50.03	
042.0	000.4000	0134.9	017.0	282.6	100.0000	0397.7	133.4	50.11	
043.0	000.4000	0136.0	017.1	282.6	100.0000	0397.7	133.1	50.18	
044.0	000.4000	0136.8	017.2	282.5	100.0000	0397.7	132.8	50.25	
045.0	000.4000	0137.3	017.2	282.4	100.0000	0397.7	132.5	50.32	
046.0	000.4000	0137.6	017.2	282.4	100.0000	0397.7	132.3	50.39	
047.0	000.4000	0137.9	017.3	282.3	100.0000	0397.6	132.0	50.45	
048.0	000.4000	0138.2	017.3	282.2	100.0000	0397.6	131.8	50.52	
049.0	000.4000	0138.4	017.3	282.2	100.0000	0397.6	131.5	50.58	
050.0	000.4000	0138.5	017.3	282.1	100.0000	0397.6	131.3	50.64	
051.0	000.4000	0138.3	017.3	282.0	100.0000	0397.6	131.1	50.70	
052.0	000.4000	0138.0	017.3	281.9	100.0000	0397.6	130.9	50.75	
053.0	000.4000	0137.6	017.2	281.8	100.0000	0397.5	130.7	50.80	
054.0	000.4000	0137.2	017.2	281.7	100.0000	0397.5	130.5	50.85	
055.0	000.4000	0136.6	017.2	281.6	100.0000	0397.5	130.3	50.90	
056.0	000.4000	0136.0	017.1	281.5	100.0000	0397.5	130.1	50.95	
057.0	000.4000	0135.6	017.1	281.4	100.0000	0397.5	129.9	50.99	
058.0	000.4000	0135.1	017.1	281.3	100.0000	0397.4	129.7	51.04	
059.0	000.4000	0134.7	017.0	281.2	100.0000	0397.4	129.5	51.08	
060.0	000.4000	0134.4	017.0	281.1	100.0000	0397.4	129.4	51.12	
061.0	000.4000	0134.2	017.0	281.0	100.0000	0397.4	129.2	51.17	
062.0	000.4000	0134.1	017.0	280.9	100.0000	0397.4	129.0	51.21	
063.0	000.4000	0133.9	017.0	280.8	100.0000	0397.4	128.9	51.26	
064.0	000.4000	0133.9	017.0	280.6	100.0000	0397.4	128.7	51.30	
065.0	000.4000	0134.2	017.0	280.5	100.0000	0397.4	128.5	51.35	
066.0	000.4000	0134.6	017.0	280.4	100.0000	0397.4	128.3	51.39	
067.0	000.4000	0134.9	017.0	280.3	100.0000	0397.5	128.1	51.44	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
068.0	000.4000	0134.9	017.0	280.2	100.0000	0397.5	128.0	51.48
069.0	000.4000	0134.8	017.0	280.1	100.0000	0397.5	127.8	51.51
070.0	000.4000	0134.5	017.0	280.0	100.0000	0397.5	127.7	51.55
071.0	000.4000	0134.2	017.0	279.9	100.0000	0397.5	127.6	51.58
072.0	000.4000	0133.7	017.0	279.7	100.0000	0397.5	127.5	51.60
073.0	000.4000	0133.1	016.9	279.6	100.0000	0397.5	127.4	51.63
074.0	000.4000	0132.3	016.9	279.5	100.0000	0397.5	127.3	51.65
075.0	000.4000	0131.0	016.8	279.3	100.0000	0397.6	127.3	51.65
076.0	000.4000	0129.6	016.7	279.2	100.0000	0397.6	127.3	51.66
077.0	000.4000	0128.1	016.6	279.1	100.0000	0397.6	127.3	51.66
078.0	000.4000	0127.2	016.5	278.9	100.0000	0397.6	127.2	51.67
079.0	000.4000	0126.7	016.5	278.8	100.0000	0397.6	127.2	51.69
080.0	000.4000	0126.1	016.4	278.7	100.0000	0397.6	127.1	51.70
081.0	000.4000	0125.6	016.4	278.5	100.0000	0397.6	127.1	51.71
082.0	000.4000	0125.1	016.3	278.4	100.0000	0397.6	127.0	51.72
083.0	000.4000	0124.7	016.3	278.3	100.0000	0397.6	127.0	51.74
084.0	000.4000	0124.0	016.3	278.2	100.0000	0397.7	127.0	51.74
085.0	000.4000	0123.2	016.2	278.0	100.0000	0397.7	127.0	51.74
086.0	000.4000	0122.5	016.2	277.9	100.0000	0397.7	126.9	51.74
087.0	000.4000	0122.1	016.1	277.8	100.0000	0397.7	126.9	51.75
088.0	000.4000	0121.7	016.1	277.6	100.0000	0397.7	126.9	51.75
089.0	000.4000	0121.6	016.1	277.5	100.0000	0397.7	126.9	51.76
090.0	000.4000	0121.8	016.1	277.4	100.0000	0397.8	126.8	51.77
091.0	000.4000	0121.9	016.1	277.3	100.0000	0397.8	126.8	51.78
092.0	000.4000	0122.1	016.1	277.1	100.0000	0397.8	126.8	51.79
093.0	000.4000	0122.2	016.1	277.0	100.0000	0397.8	126.7	51.80
094.0	000.4000	0122.8	016.2	276.9	100.0000	0397.8	126.7	51.81
095.0	000.4000	0123.4	016.2	276.8	100.0000	0397.8	126.6	51.83
096.0	000.4000	0124.0	016.3	276.6	100.0000	0397.8	126.6	51.84
097.0	000.4000	0124.6	016.3	276.5	100.0000	0397.8	126.6	51.85
098.0	000.4000	0124.8	016.3	276.4	100.0000	0397.8	126.6	51.85
099.0	000.4000	0124.7	016.3	276.2	100.0000	0397.9	126.6	51.84
100.0	000.4000	0124.7	016.3	276.1	100.0000	0397.9	126.6	51.84
101.0	000.4000	0124.7	016.3	276.0	100.0000	0397.9	126.6	51.83
102.0	000.4000	0124.8	016.3	275.9	100.0000	0397.9	126.7	51.82
103.0	000.4000	0124.6	016.3	275.7	100.0000	0397.8	126.7	51.81
104.0	000.4000	0124.1	016.3	275.6	100.0000	0397.8	126.8	51.79
105.0	000.4000	0123.3	016.2	275.5	100.0000	0397.8	126.9	51.76
106.0	000.4000	0122.4	016.2	275.4	100.0000	0397.8	127.0	51.73
107.0	000.4000	0121.8	016.1	275.2	100.0000	0397.8	127.1	51.71
108.0	000.4000	0121.3	016.1	275.1	100.0000	0397.8	127.2	51.68
109.0	000.4000	0120.7	016.0	275.0	100.0000	0397.8	127.3	51.65
110.0	000.4000	0119.8	016.0	274.9	100.0000	0397.8	127.5	51.62
111.0	000.4000	0118.9	015.9	274.8	100.0000	0397.8	127.6	51.58
112.0	000.4000	0118.2	015.9	274.7	100.0000	0397.8	127.7	51.55
113.0	000.4000	0117.8	015.8	274.6	100.0000	0397.8	127.8	51.52
114.0	000.4000	0117.7	015.8	274.4	100.0000	0397.8	127.9	51.49
115.0	000.4000	0117.8	015.8	274.3	100.0000	0397.8	128.0	51.47
116.0	000.4000	0117.8	015.8	274.2	100.0000	0397.8	128.2	51.44
117.0	000.4000	0117.7	015.8	274.1	100.0000	0397.8	128.3	51.41
118.0	000.4000	0117.3	015.8	274.0	100.0000	0397.7	128.4	51.38

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
119.0	000.4000	0116.6	015.7	273.9	100.0000	0397.7	128.6	51.34
120.0	000.4000	0115.9	015.7	273.8	100.0000	0397.7	128.7	51.29
121.0	000.4000	0115.2	015.6	273.7	100.0000	0397.7	128.9	51.25
122.0	000.4000	0114.7	015.6	273.6	100.0000	0397.7	129.1	51.21
123.0	000.4000	0114.3	015.6	273.5	100.0000	0397.7	129.2	51.16
124.0	000.4000	0113.8	015.5	273.4	100.0000	0397.6	129.4	51.12
125.0	000.4000	0113.4	015.5	273.3	100.0000	0397.6	129.6	51.08
126.0	000.4000	0112.9	015.4	273.2	100.0000	0397.6	129.8	51.03
127.0	000.4000	0112.3	015.4	273.1	100.0000	0397.6	130.0	50.98
128.0	000.4000	0111.9	015.4	273.1	100.0000	0397.6	130.1	50.93
129.0	000.4000	0111.5	015.3	273.0	100.0000	0397.5	130.3	50.89
130.0	000.4000	0111.3	015.3	272.9	100.0000	0397.5	130.5	50.84
131.0	000.4000	0111.2	015.3	272.8	100.0000	0397.5	130.7	50.80
132.0	000.4000	0111.1	015.3	272.7	100.0000	0397.4	130.8	50.75
133.0	000.4000	0111.1	015.3	272.6	100.0000	0397.4	131.0	50.71
134.0	000.4000	0111.3	015.3	272.5	100.0000	0397.4	131.2	50.66
135.0	000.4000	0111.8	015.4	272.4	100.0000	0397.3	131.3	50.62
136.0	000.4000	0112.4	015.4	272.3	100.0000	0397.3	131.5	50.58
137.0	000.4000	0112.8	015.4	272.2	100.0000	0397.2	131.7	50.53
138.0	000.4000	0113.0	015.5	272.1	100.0000	0397.2	131.9	50.49
139.0	000.4000	0113.6	015.5	272.1	100.0000	0397.1	132.0	50.44
140.0	000.4000	0114.4	015.6	272.0	100.0000	0397.1	132.2	50.40
141.0	000.4000	0114.9	015.6	271.9	100.0000	0397.0	132.4	50.35
142.0	000.4000	0115.2	015.6	271.8	100.0000	0397.0	132.6	50.30
143.0	000.4000	0115.6	015.7	271.7	100.0000	0396.9	132.8	50.25
144.0	000.4000	0116.1	015.7	271.6	100.0000	0396.9	133.0	50.20
145.0	000.4000	0116.6	015.7	271.5	100.0000	0396.8	133.2	50.14
146.0	000.4000	0117.2	015.8	271.5	100.0000	0396.7	133.4	50.09
147.0	000.4000	0118.1	015.8	271.4	100.0000	0396.7	133.5	50.04
148.0	000.4000	0119.3	015.9	271.3	100.0000	0396.6	133.7	49.99
149.0	000.4000	0120.1	016.0	271.2	100.0000	0396.6	133.9	49.94
150.0	000.4000	0120.3	016.0	271.1	100.0000	0396.5	134.2	49.88
151.0	000.4000	0120.3	016.0	271.1	100.0000	0396.5	134.4	49.81
152.0	000.4000	0120.4	016.0	271.0	100.0000	0396.5	134.7	49.75
153.0	000.4000	0120.7	016.0	270.9	100.0000	0396.4	134.9	49.69
154.0	000.4000	0120.9	016.0	270.9	100.0000	0396.4	135.1	49.63

Non-Ionizing Radiation Compliance Statement

The following engineering statement has been prepared for **Minnesota Public Radio**, and pertain to non-ionizing radiation compliance for station KNOW(FM)¹. The data contained in this report was acquired on Wednesday June 16, 2010.

Measurements were performed using a Narda 8718 Broadband Radiation Survey System with a model 8742D isotropic electric field probe. The probe utilized is frequency shaped and provides a value that is a percentage of the occupational / controlled environment condition of the IEEE C95.1-1991 standard.

At the time of the survey, all broadcast facilities were known to be operational into their main antenna systems at full power. The acquired measurements therefore represent the normal operating conditions of the site. Survey measurements were performed both within the transmitter building and on the grounds outside the building.

Within the shared transmitter building housing KNOW(FM) transmission equipment, measurements were performed in areas under and immediately adjacent to transmitter and transmission line². No locations within these areas were identified where the measured power density exceeded the uncontrolled environment condition of the applicable safety standard.

Additional measurements were performed outside the transmitter buildings within the fenced compound. Within these measurements, performed within an approximate radius of 200 meters

¹ KNOW(FM) has a Facility ID of 42949 and operates from the Telefarm, Inc. tower assigned ASRN 10223882.

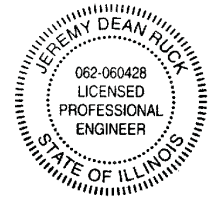
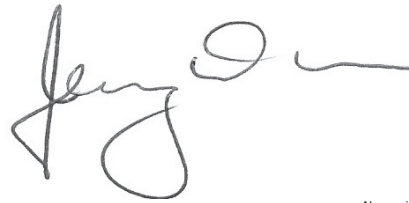
² The building and tower support additional facilities including; WCCO(TV), KSTC(TV), KSTP(TV), WUCW(TV), KARE(TV), WLTE(FM), & KSTP(FM).

from the base of the tower, no locations were identified where the measured power density exceeded the uncontrolled environment condition of the applicable safety standard. The radius of 100 meters was chosen based on data from the Commissions *FM Model* software package, which indicated the peak in power density was expected to occur between 80 and 100 meters from the tower base.

Access to the areas referenced within this report are restricted to personnel having training in RF safety procedures as well as education in the hazards of exposure to RF radiation in the excess of applicable standards. As a result, the controlled environment condition of the IEEE C95.1-1991 standard is applicable in this instance. Access to the area is controlled to the perimeter by fencing and electronically controlled gates with ID proximity card controls. The building is further secured by steel doors and locks. There is no general public access to these areas.

All areas within the study are in controlled areas. However, the measured power density at all locations **does not exceed 100% of the uncontrolled environment condition** of the IEEE C95.1-1991 standard at any of the locations described. Outside of the building power densities were between 1.5 and 19% of the uncontrolled environment condition of the standard. Inside the controlled access transmitter facility power densities were measured between 48.5 and 97% of the uncontrolled environment condition of the standard.

The preceding statement and attached exhibits have been prepared by me, or under my direction, and are true and accurate to the best of my belief and knowledge.



Above signature is digitized copy of actual signature
License Expires November 30, 2011

Jeremy D. Ruck, PE
June 17, 2010