

FCC 302-FM

**APPLICATION FOR FM BROADCAST STATION
LICENSE**

FOR COMMISSION USE ONLY
FILE NO.

BLED - 20030429AAO

Read INSTRUCTIONS Before Filling Out Form

Section I - General Information

1. Legal Name of the Applicant MINNESOTA PUBLIC RADIO		
Mailing Address 45 EAST 7TH ST.		
City ST. PAUL	State or Country (if foreign address) MN	ZIP Code 55101 -
Telephone Number (include area code) 6512901259	E-Mail Address (if available) MGRAMLING@MPR.ORG	
	Call Sign KCRB-FM	Facility Identifier 42970
2. Contact Representative (if other than licensee/permittee) TODD STANSBURY		Firm or Company Name WILEY REIN & FIELDING
Telephone Number (include area code) 2027194948		E-Mail Address (if available) TSTANSBU@WRF.COM
3. If this application has been submitted without a fee, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114): <input type="radio"/> Governmental Entity <input checked="" type="radio"/> Noncommercial Educational Licensee/Permittee <input type="radio"/> Other		
4. Facility Information: a. <input type="radio"/> Commercial <input checked="" type="radio"/> Noncommercial b. <input type="radio"/> Directional <input checked="" type="radio"/> Nondirectional c. Community of License: City: BEMIDJI State: MN		
5. Program Test Authority: <input type="radio"/> Requesting program test authority. <input checked="" type="radio"/> Station operating pursuant to automatic program test authority (47 C.F.R. Section 73.1620(a)(1)).		
6. Purpose of Application <input checked="" type="radio"/> Cover construction permit (list most recent construction permit file number -- starts with the prefix BPH, BMPH, BPED, or BMPED): BMPED-20011114ABQ <input type="radio"/> Modify an authorized license (list license file number -- starts with the prefix BLH, BMLH, BLED, or BMLED): - <input type="radio"/> Amend a pending application If an amendment, submit as an Exhibit a listing by Section and Question Number the portions of the pending application that are being revised. [Exhibit 1]		

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

Section II - Legal and Financial

1.	Certification. Applicant certifies that it has answered each question in this application based on its review of the application instructions and worksheets. Applicant further certifies that where it has made an affirmative certification below, this certification constitutes its representation that the application satisfies each of the pertinent standards and criteria set forth in the application instructions and worksheets.	<input checked="" type="radio"/> Yes <input type="radio"/> No
2.	Licensee/Permittee certifies that all terms, conditions, and obligations set forth in the underlying construction permit have been fully met.	<input checked="" type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 2]
3.	Licensee/Permittee certifies that, apart from changes already reported, no cause or circumstance has arisen since the grant of the underlying construction permit which would result in any statement or representation contained in the construction permit application to be now incorrect.	<input checked="" type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 3]
4.	Character Issues. Applicant certifies that neither licensee/permittee 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 checked="" type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 4]
5.	Adverse Findings. Applicant certifies that, with respect to the applicant and any party to the application, no adverse finding has been made, nor has an adverse final action been taken related to the following: any felony; mass media-related antitrust or unfair competition; fraudulent statements to another governmental unit; or discrimination.	<input checked="" type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 5]
6.	Anti-Drug Abuse Act Certification. Applicant certifies that neither licensee/permittee 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

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

Typed or Printed Name of Person Signing THOMAS J KIGIN	Typed or Printed Title of Person Signing EXECUTIVE VICE PRESIDENT
Signature	Date 4/29/2003

SECTION III - PREPARER'S CERTIFICATION

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

Name RALPH HORNBERGER	Relationship to Applicant (e.g., Consulting Engineer) SENIOR DESIGN ENGINEER	
Signature	Date 4/29/2003	
Mailing Address 45 EAST 7TH STREET		
City ST. PAUL	State or Country (if foreign address) MN	Zip Code 55101 -
Telephone Number (include area code) 6512901548	E-Mail Address (if available) RHORNBERGER@MPR.ORG	

Section III - 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: 203

2. a. Effective Radiated Power: 83 kW(H) 83 kW(V)
 b. Maximum Effective Radiated Power: 0 kW(H) 0 kW(V)
 (Beam-Tilt Antenna ONLY) Not Applicable

3. Transmitter Power Output: 15.67 kW

4. Antenna Data

Manufacturer	Model	Number of Sections	Spacing Between Sections (wavelength)
ERI	FMH-12AC	12	1

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

CERTIFICATION

All applicants must complete this section.

5. **Main Studio Location.** The main studio location complies with 47 C.F.R. Section 73.1125. Yes No
 See Explanation in [Exhibit 6]

6. **Transmitter Power Output.** The operating transmitter power output produces the authorized effective radiated power. Yes No
 See Explanation in [Exhibit 7]

APPLICATIONS FILED TO COVER A CONSTRUCTION PERMIT.

Only applicants filing this application to cover a construction permit must complete the following section.

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.

7. **Constructed Facility.** The facility was constructed as authorized in the underlying construction permit or complies with 47 C.F.R. Section 73.1690. Yes No
 See Explanation in [Exhibit 8]

8. **Special Operating Conditions.** The facility was constructed in compliance with all special operating conditions, terms, and obligations described in the construction permit. Yes No
 See Explanation in [Exhibit 9]

An exhibit may be required. Review the underlying construction permit. [Exhibit 10]

APPLICATIONS FILED PURSUANT TO 47 C.F.R. SECTIONS 73.1675(c) or 73.1690(c).

Only applicants filing this application pursuant to 47 C.F.R. Sections 73.1675(c) or 73.1690(c) must complete the following section.

9. **Changing transmitter power output.** Is this application being filed to authorize a change in transmitter power output caused by the replacement of omnidirectional antenna with another Yes No

	omnidirectional antenna or an alteration of the transmission line system? See 47 C.F.R. Sections 73.1690(c)(1) and (c)(10).
10.	<p>Increasing effective radiated power. Is this application being filed to authorize an increase in ERP for a station operating in the nonreserved band (Channels 221-300)? See 47 C.F.R. Sections 73.1690(c)(4), (c)(5) and (c)(7).</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No</p>
	If "Yes" to the above, the applicant certifies the following:
a.	<p>Spacing Requirements. The increase in ERP was authorized pursuant to MM Docket 88-375 (Class A stations) OR the facility complies with the spacing requirements of 47 C.F.R. Section 73.207.</p> <p><input type="radio"/> Yes <input type="radio"/> No</p> <p>See Explanation in [Exhibit 11]</p>
b.	<p>International Coordination. The transmitter site is greater than 320 km from the Canadian or Mexican borders OR coordination for the station's international class is complete.</p> <p><input type="radio"/> Yes <input type="radio"/> No</p> <p>See Explanation in [Exhibit 12]</p>
c.	<p>Interference. The requirements of 47 C.F.R. Section 73.1030 regarding notification to radio astronomy installations, radio receiving installations and FCC monitoring stations have either been satisfied OR are not applicable.</p> <p><input type="radio"/> Yes <input type="radio"/> No</p> <p>See Explanation in [Exhibit 13]</p>
	<p>Exhibit required. If the proposed facility must be notified to the entities set forth in 47 C.F.R. Section 73.1030, the applicant must provide a copy of the written approval for the ERP increase from the affected entity.</p> <p>[Exhibit 14]</p>
d.	<p>Multiple Ownership Showing. The increase in ERP will not require the consideration of a multiple ownership showing pursuant to 47 C.F.R. Section 73.3555.</p> <p><input type="radio"/> Yes <input type="radio"/> No</p> <p>See Explanation in [Exhibit 15]</p>
e.	<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 Appendix A, an Exhibit is required.</p> <p><input type="radio"/> Yes <input type="radio"/> No</p> <p>See Explanation in [Exhibit 16]</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>
11.	<p>Increasing vertically polarized effective radiated power. Is this application being filed pursuant to 47 C.F.R. Section 73.1690(c)(4) to authorize an increase in the vertically polarized ERP for a station operating in the reserved band (Channels 200-220)?</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No</p>
	If "Yes" to the above, the applicant certifies the following:
a.	<p>TV Channel 6 Protection Requirements. The facility complies with the spacing requirements of 47 C.F.R. Section 73.525(a)(1).</p> <p><input type="radio"/> Yes <input type="radio"/> No</p> <p>See Explanation in [Exhibit 17]</p>
b.	<p>Environmental Protection Act. The proposed facility is excluded from environmental processing under 47 C.F.R. Section 1.1 306 (i.e., the facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments). Unless the applicant can determine compliance through the use of the RF worksheets in Appendix A, an Exhibit is required.</p> <p><input type="radio"/> Yes <input type="radio"/> No</p> <p>See Explanation in [Exhibit 18]</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>
12.	<p>Decreasing effective radiated power (non-reserved channel). Is this application being filed pursuant to 47 C.F.R. Section 73.1690(c)(8) to authorize a decrease in the ERP for a station operating in the nonreserved band (Channels 221-300)?</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No</p>

If "Yes" to the above, the applicant certifies the following:		
a. Community Coverage . The proposed facility complies with the community coverage requirements of 47 C.F.R. Section 73.315 where the distance to the 3.16 mV/m contour is predicted using the standard prediction method in 47 C.F.R. Section 73.313.	<input type="radio"/> Yes <input type="radio"/> No	See Explanation in [Exhibit 19]
b. Auxiliary Facilities . The authorized or pending auxiliary facilities for this station comply with 47 C.F.R. Section 73.1675(a).	<input type="radio"/> Yes <input type="radio"/> No	See Explanation in [Exhibit 20]
c. Multiple Ownership Showing . The decrease in ERP is not requested or required to establish compliance with 47 C.F.R. Section 73.3555.	<input type="radio"/> Yes <input type="radio"/> No	See Explanation in [Exhibit 21]
13. Decreasing effective radiated power (reserved channel) . Is this application being filed pursuant to 47 C.F.R. Section 73.1690(c)(8) to authorize a decrease in the ERP for a station operating in the reserved band (Channels 200-220)?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
If "Yes" to the above, the applicant certifies the following:		
a. Community Coverage . The proposed facility complies with the community coverage requirements of 47 C.F.R. Section 73.1690(c)(8)(i) where the distance to the 1 mV/m contour is predicted using the standard prediction method in 47 C.F.R. Section 73.313.	<input type="radio"/> Yes <input type="radio"/> No	See Explanation in [Exhibit 22]
b. Auxiliary Facilities . The authorized or pending auxiliary facilities for this station comply with 47 C.F.R. Section 73.1675(a).	<input type="radio"/> Yes <input type="radio"/> No	See Explanation in [Exhibit 23]
14. Replacing a directional antenna . Is this application being filed pursuant to 47 C.F.R. Section 73.1690(c)(2) to replace a directional antenna with another directional antenna?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
If "Yes" to the above, the applicant certifies the following:		
a. Measurement of Directional Antenna . The composite measured pattern and measurement procedures comply with 47 C.F.R. Section 73.1690(c)(2). Exhibit required.	<input type="radio"/> Yes <input type="radio"/> No	See Explanation in [Exhibit 24] [Exhibit 25]
b. Installation of Directional Antenna . The installation of the directional antenna complies with 47 C.F.R. Section 73.1690(c)(2). Exhibit required.	<input type="radio"/> Yes <input type="radio"/> No	See Explanation in [Exhibit 26] [Exhibit 27]
15. Deleting contour protection status . Is this application being filed pursuant to 47 C.F.R. Section 73.1690(c)(6) to delete contour protection status (47 C.F.R. Section 73.215) for a station operating in the nonreserved band (Channels 221-300)?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
If "Yes" to the above, the applicant certifies that the facility complies with the spacing requirements of 47 C.F.R. Section 73.207.		<input type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 28]
16. Use a formerly licensed main facility as an auxiliary facility . Is this application being filed pursuant to 47 C.F.R. Section 73.1675(c)(1) to request authorization to use a formerly licensed main facility as an auxiliary facility and/or change the ERP of the proposed auxiliary facility?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
If "Yes" to the above, the applicant certifies the following:		
a. Auxiliary antenna service area . The proposed auxiliary facility complies with 47 C.F.R. Section 73.1675(a).	<input type="radio"/> Yes <input type="radio"/> No	

	See Explanation in [Exhibit 29]
b. Environmental Protection Act. The proposed facility is excluded from environmental processing under 47 C.F.R. Section 1.1 306 (i.e., the facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments). Unless the applicant can determine compliance through the use of the RF worksheets in Appendix A, an Exhibit is required.	<input type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 30]
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.	
17. Change the license status. Is this application being filed pursuant to 47 C.F.R. Section 73.1690(c)(9) to change the license status from commercial to noncommercial or from noncommercial to commercial?	<input type="radio"/> Yes <input checked="" type="radio"/> No
If "Yes" to the above, submit an exhibit providing full particulars. For applications changing license status from commercial to noncommercial, include Section II of FCC Form 340 as an exhibit to this application.	[Exhibit 31]
PREPARERS CERIFICATION ON PAGE 3 MUST BE COMPLETED AND SIGNED.	

Exhibits

Exhibit 10

Description: INTERMODULATION AND SECOND HARMONIC LEVELS

Attachment 10

Description
Intermodulation and Second Harmonic Levels / Bemidji

FCC Form 302-FM
Minnesota Public Radio (FRN 0002-6425-10)
Exhibit 10
KNBJ (FM) - Facility No 42966
KCRB (FM) - Facility No 42970

Intermodulation and Second Harmonic Levels
Measured at KCRB/KNBJ, Bemidji, Minnesota, at 10:30 PM, 22 April 2003

Procedure:

The measurements were performed using a Hewlett Packard 8591E spectrum analyzer, a DB Products 8591E band pass cavity, a 3dB power pad, and a Microwave Filters 6367 notch filter. The RF sample was taken from an ERI directional coupler located in the output of the combiner. The 3 dB pad was used to isolate the test set up from the coupler, and to present a good 50ohm source to the measurement devices. This pad was left in for all measurements.

The Intermodulation products were measured using the HP spectrum analyzer, and the DB Products cavity. Both carriers were operated at their full, authorized power for this test. The cavity loss was calibrated out of the system, and the analyzer was zero referenced to the carrier producing the intermodulation product. The cavity was then tuned to the intermodulation product in question, and the product level was measured in dB below the carrier.

The Second Harmonic levels were measured using the HP spectrum analyzer, and the Microwave Filters notch filter. Each carrier was measured with the other carrier turned off. The analyzer was first zero referenced to the carrier under test. The notch filter was then inserted to lower the carrier level by a minimum of 20 dB, allowing the analyzer's dynamic range to be increased by 20 dB. This allowed measurements to be made to as low as 95 dB below the reference carrier. The analyzer noise floor made lower level measurements questionable.

Results:

Intermodulation products:

<u>Call Sign</u>	<u>Frequency</u>	<u>IM Frequency</u>	<u>IM Level</u>
KCRB	88.5 MHz	85.7 MHz	-87 dBc
KNBJ	91.3 MHz	94.1 MHz	-85 dBc

Second Harmonic Levels:

<u>Call Sign</u>	<u>Frequency</u>	<u>Second Harmonic</u>	<u>Level</u>
KCRB	88.5 MHz	177 MHz	-89 dBc
KNBJ	91.3 MHz	182.6 MHz	-87 dBc

All other harmonics, from both transmitters, were measured to be greater than - 95 dBc

Measurements performed by:
Ralph E. Hornberger
Senior Design Engineer
Minnesota Public Radio