

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

<p>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.</p>	<p><input checked="" type="radio"/> Yes <input type="radio"/> No</p>
<p>2. Licensee/Permittee certifies that all terms, conditions, and obligations set forth in the underlying construction permit have been fully met.</p>	<p><input checked="" type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 2]</p>
<p>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.</p>	<p><input checked="" type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 3]</p>
<p>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.</p>	<p><input checked="" type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 4]</p>
<p>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.</p>	<p><input checked="" type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 5]</p>
<p>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.</p>	<p><input checked="" type="radio"/> Yes <input type="radio"/> No</p>

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 4/11/2002</p>

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.

<p>Name RALPH HORNBERGER</p>	<p>Relationship to Applicant (e.g., Consulting Engineer) SENIOR ENGINEER PROJECT MANAGER</p>
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Signature		Date
Mailing Address		4/11/2002
45 EAST SEVENTH STREET		
City	State or Country (if foreign address)	Zip Code
SAINT PAUL	MN	55101 -
Telephone Number (include area code)	E-Mail Address (if available)	
6512901548	RHORNBERGER@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 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: 204		
2.	a. Effective Radiated Power:	6 kW(H) 6 kW(V)	
	b. Maximum Effective Radiated Power:	kW(H) kW(V)	
	(Beam-Tilt Antenna ONLY) <input checked="" type="checkbox"/> Not Applicable		
3.	Transmitter Power Output: 3.303 kW		
4.	Antenna Data		
	Manufacturer	Model	Number of Sections
	SHI	6810	4
			Spacing Between Sections (wavelength)
			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.	<input type="radio"/> Yes <input checked="" type="radio"/> No See Explanation in [Exhibit 6]	
6.	Transmitter Power Output. The operating transmitter power output produces the authorized effective radiated power.	<input type="radio"/> Yes <input type="radio"/> 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.	<input checked="" type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 8]	

<p>An exhibit may be required. Review the underlying construction permit.</p>	<p>[Exhibit 10]</p>
<p>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.</p>	
<p>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 omnidirectional antenna or an alteration of the transmission line system? See 47 C.F.R. Sections 73.1690(c)(1) and (c)(10).</p>	<p><input type="radio"/> Yes <input type="radio"/> No</p>
<p>10. 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). If "Yes" to the above, the applicant certifies the following:</p>	<p><input type="radio"/> Yes <input type="radio"/> No</p>
<p>a. 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 See Explanation in [Exhibit 11]</p>
<p>b. 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 See Explanation in [Exhibit 12]</p>
<p>c. 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 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>
<p>d. 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 See Explanation in [Exhibit 15]</p>
<p>e. 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 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>	
<p>11. 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)? If "Yes" to the above, the applicant certifies the following:</p>	<p><input type="radio"/> Yes <input type="radio"/> No</p>
<p>a. 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 See Explanation in [Exhibit 17]</p>
<p>b. Environmental Protection Act. The proposed facility is excluded from environmental</p>	<p><input type="radio"/> Yes <input type="radio"/> No</p>

	<p>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>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 type="radio"/> No</p>
	<p>If "Yes" to the above, the applicant certifies the following:</p>	
	<p>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.</p>	<p><input type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 19]</p>
	<p>b. Auxiliary Facilities. The authorized or pending auxiliary facilities for this station comply with 47 C.F.R. Section 73.1675(a).</p>	<p><input type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 20]</p>
	<p>c. Multiple Ownership Showing. The decrease in ERP is not requested or required to establish compliance with 47 C.F.R. Section 73.3555.</p>	<p><input type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 21]</p>
13.	<p>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)?</p>	<p><input type="radio"/> Yes <input type="radio"/> No</p>
	<p>If "Yes" to the above, the applicant certifies the following:</p>	
	<p>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.</p>	<p><input type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 22]</p>
	<p>b. Auxiliary Facilities. The authorized or pending auxiliary facilities for this station comply with 47 C.F.R. Section 73.1675(a).</p>	<p><input type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 23]</p>
14.	<p>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?</p>	<p><input type="radio"/> Yes <input type="radio"/> No</p>
	<p>If "Yes" to the above, the applicant certifies the following:</p>	
	<p>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.</p>	<p><input type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 24] [Exhibit 25]</p>
	<p>b. Installation of Directional Antenna. The installation of the directional antenna complies with 47 C.F.R. Section 73.1690(c)(2). Exhibit required.</p>	<p><input type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 26]</p>

		[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 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 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 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 2

Description: EXPLANATION OF COMPLIANCE WITH CONSTRUCTION PERMIT

SEE ATTACHED

Attachment 2

Description	Type	Conversion	
		Status	File
	Adobe		

<u>Explanation of Compliance with Construction Permit</u>	Acrobat File	not needed	PDF
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Exhibit 6**Description:** MAIN STUDIO LOCATION

THE STATION IS OPERATING PURSUANT TO A WAIVER OF THE COMMISSION'S MAIN STUDIO RULE, 47 C.F.R. S 73.1125, AS AUTHORIZED IN ITS CONSTRUCTION PERMIT.

Attachment 6

Exhibit 8**Description:** EXPLANATION OF COMPLIANCE WITH CONSTRUCTION PERMIT

SEE EXHIBIT 2

Attachment 8

Exhibit 9**Description:** EXPLANATION OF COMPLIANCE WITH CONSTRUCTION PERMIT

SEE EXHIBIT 2

Attachment 9

This exhibit provides further information regarding the responses of Minnesota Public Radio ("MPR") to Section II, Question 2; Section III, Question 7; and Section III, Question 8. Each of these questions pertains to compliance with the terms of the underlying construction permit. As indicated in the application, all terms, conditions, and obligations set forth in the underlying construction permit have been fully met, and the facility was constructed as authorized in the underlying construction permit, in compliance with all special operating conditions, terms, and obligations. As detailed below, after commencing program tests, MPR learned that the operation of WMLS and WLSN at full power may have contributed to existing reception problems to a channel 6 translator's input channel co-located with the stations' antenna which receives the signal of its primary station over-the-air using an amplified high-gain antenna.¹ The primary station is located in Duluth, MN, approximately 110 miles from Grand Marias. Thus, the translator is substantially outside of the main station's Grade B contour and is well over the radio horizon. As explained below, MPR has voluntarily taken steps to remedy the reception problems, is committed to reaching a final solution, and expects to achieve full resolution of the issue in the very near future. Currently, MPR is voluntarily operating WMLS and WLSN at reduced power.

In August of 2001, MPR completed construction of the stations, including installation of the four-bay antenna for the operation of WMLS and WLSN. By separate letters for each station dated September 13, 2001, MPR advised the FCC that it intended to commence program tests, in

¹ The translator's receive antenna is also used to deliver the main station's over-the-air signal to a local cable system.

compliance with Section 73.1610 of the Commission's rules and the terms of the construction permits. On September 20, 2001, the stations began program tests. Initial measurements confirmed that WMLS and WLSN were operating at full power in compliance with the terms of their construction permits.

Subsequently, however, MPR discovered problems with the antenna, and therefore began to operate WMLS and WLSN at substantially reduced power to avoid potential damage to the antenna or the transmitter. MPR notified the Commission of this action by letters dated September 26, 2001 and October 25, 2001. Further investigation revealed that the antenna had been improperly assembled at the factory, and, as of November 22, 2001, MPR obtained and installed the correct parts for the antenna and tuned the antenna, allowing the stations to resume full power operation. Measurements taken at that time indicated that WMLS and WLSN were operating within the FCC's limits. Specifically, the harmonics, spurious, and intermodulation products were found to be almost unmeasurable at better than 100 dB below carrier.

Several hours after returning WMLS and WLSN to full power operation, reception problems with the input signal of the co-located channel 6 translator were identified. Even before WMLS and WLSN commenced operations, however, the translator suffered severe reception difficulties. Indeed, the channel 6 translator was operating with intermittent service under the best conditions, with deep fades that caused complete loss of reception lasting up to an hour and shorter, frequently occurring, fades that resulted in poor picture quality. MPR was advised that reception by the translator was "paper thin," and MPR's measurements confirm that the signal is approximately *30 dB below the manufacturer's recommended minimum input level*.

Within one day of discovering the channel 6 translator reception issue, MPR installed a filter on the channel 6 receive antenna, which resulted in some improvement. MPR also replaced

multiple coax cables in the channel 6 building and attempted various grounding schemes. These steps produced some, but not desired, improvements. Additional analysis conducted between November 24 and December 1, 2001 revealed that the channel 6 reception problems were being caused by an intermodulation product that was generated not by WMLS and WLSN, but by the tower itself. Specifically, MPR discovered that the tower had been painted prior to its initial construction in August of 2001, resulting in a thin coating of paint on the mating faces of the tower leg flanges. This provided insulation between the various 20-foot sections of the antenna, resulting in poor grounding. Additionally, paint had not been removed from the mounting hardware used to secure the antenna mounts, contributing further to the reception difficulties of the channel 6 translator. At this time, MPR again notified the Commission that it was attempting to resolve the reception issues, by letters dated November 26, 2001.

On December 10, 2001, an MPR engineer began working with a tower crew to ground the MPR antenna to the tower and to place copper jumpers around the tower leg flanges and in the vicinity of the WMLS/WLSN antenna. This improved reception significantly, and the stations were brought up to 70% power without exacerbating the reception problems of the channel 6 translator. Reception noticeably declined, however, when the tower crew passed by the channel 6 receive antenna, and declined further when the antenna was shaken slightly. In early January, the tower owner agreed to tighten the channel 6 translator receive antenna, which improved the reception to some degree. MPR determined that the unbonded tower sections, and, possibly one or more dirty guy wire joints, were contributing to the channel 6 reception problems.

In the course of investigating potential sources of interference to the channel 6 translator, MPR also learned that an independently owned FM station in Grand Marais, MN, was radiating

a second harmonic within the frequency band of channel 8, which caused some interference to the reception of the channel 6 signal from Duluth. The engineer for that station has acknowledged that some of the white flashes in the channel 6 translator reception are likely the result of his station. MPR is working with this station to remediate the second harmonic problem.

Because of the reception issue, MPR has voluntarily agreed to send, at its own expense, a tower crew to bond all of the tower leg joints and to bond the guy wires to the tower, and to clean and tighten any suspicious metal-to-metal joints. MPR believes that these actions will permit the stations to resume operation at full power without contributing to the reception problems of the channel 6 translator.

MPR respectfully submits that full-power operation of WMLS and WLSN, even if found to contribute to the reception difficulties experienced by the translator (and cable system), is in compliance with the terms of the stations' authorizations and the FCC's rules. The reception problems being experienced at the site do not constitute FM blanketing interference that MPR is obligated to remedy. Section 73.318 of the Commission's rules, which obligates stations to correct FM blanketing interference, specifically excludes "interference complaints resulting from . . . improperly installed antenna systems[] or the use of high-gain antennas or antenna booster amplifiers." 47 C.F.R. § 73.318(b). Because the channel 6 translator utilizes a high-gain antenna *and* an amplifier, and the reception problems of the channel 6 translator appear to be the result, at least in part, of the antenna system's installation, any alleged contribution by WMLS/WLSN to the reception problems of the receive antenna is not cognizable interference under Section 73.318. Nevertheless, MPR has voluntarily taken substantial steps, and, indeed,

has in significant part funded efforts, to assist the translator operator in resolving its reception difficulties.

Moreover, full-power non-commercial FM stations are not obligated to protect secondary services, including television translators. This is particularly true when, as here, the translator allegedly experiencing reception problems is located more than 100 miles from the main station whose signal it is attempting to receive, and that signal is being transmitted at a level substantially lower than the manufacturer's recommended power. Indeed, alternative, and far more appropriate, means exist to deliver the channel 6 signal to the translator (and cable system) over such a distance, including fiber and microwave links. Since MPR is providing two new, full-power, over-the-air non-commercial services to the citizens of Grand Marais without causing any interference cognizable under the Commission's rules, a grant of the instant license application will serve the public interest.