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March 17, 1999  
**RECEIVED**

(202) 719-7351

**By Hand**

Magalie R. Salas, Secretary  
Federal Communications Commission  
445 Twelfth Street, S.W.  
12<sup>th</sup> Street Lobby, TW-A325  
Washington, D.C. 20054

MAR 17 1999  
FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

**RECEIVED**  
MAR 17 1999  
FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Re: Minnesota Public Radio  
Application for New Noncommercial Educational FM Station  
Grand Marais, Minnesota (FCC File No. BPED-981204MB)

Dear Ms. Salas:

Minnesota Public Radio ("MPR"), by counsel, hereby submits the enclosed amendment to the above-referenced application on FCC Form 340 for a construction permit for a new, noncommercial educational FM station on Channel 209C3 at Grand Marais, Minnesota.

Please contact the undersigned should you have any questions regarding this matter.

Respectfully submitted,



E. Joseph Knoll III

cc: Norm Miller (by hand)  
Mitzi T Gramling

# FCC 340

## APPLICATION FOR CONSTRUCTION PERMIT FOR NONCOMMERCIAL EDUCATIONAL BROADCAST STATION

(Carefully read instructions before filing form) Return only form to FCC

### Section I - GENERAL INFORMATION

FOR COMMISSION USE ONLY

FILE NO.

1. Name of Applicant  Minnesota Public Radio		
Street Address or P.O. Box 45 East Seventh Street		
City St. Paul	State MN	ZIP Code 55101
Telephone Number (include Area Code) 612 290-1500		

Send notices and communications to the following person at the address below:		
Name Mitzi Gramling		
Street Address or P.O. Box 45 East Seventh Street		
City St. Paul	State MN	ZIP Code 55101
Telephone Number (include Area Code) 612 290-1500		

2. This application is for:

AM

FM

TV

(a) Channel No. or Frequency

209

(b) Principal  
Community

City

State

Grand Marais

MN

(c) Check one of the following boxes:

Application for NEW station

MAJOR change in licensed facilities; call sign: \_\_\_\_\_

MINOR change in licensed facilities; call sign: \_\_\_\_\_

MAJOR modification of construction permit; call sign: \_\_\_\_\_

File No. of construction permit; call sign: \_\_\_\_\_

MINOR modification of construction permit; call sign: \_\_\_\_\_

File No. of construction permit; call sign: \_\_\_\_\_

AMENDMENT to pending application: Application File Number: BPED 981204MB

NOTE: It is not necessary to use this form to amend a previously filed application. Should you do so, however, please submit only Section I and those other portions of the form that contain the amended information.

3. Is this application mutually exclusive with a renewal application?

Yes

No

If Yes, state:

Call letters	Community of License	
	City	State

**SECTION V-B - FM BROADCAST ENGINEERING DATA**

**FOR COMMISSION USE ONLY**

File No. \_\_\_\_\_  
 SSB Referral Date \_\_\_\_\_  
 Referred By \_\_\_\_\_

Name of Applicant Minnesota Public Radio

Call Letters (if issued)

TBA

Is this application being filed in response to an application filing window?  Yes  No  
 If Yes, specify closing date: \_\_\_\_\_

Purpose of Application: (check appropriate boxes)

See Ex #E1

- |   |   |  |
|---|---|--|
| <input checked="" type="checkbox"/> Construct a new (main) facility<br>Amendment to BPED 981204MB | <input checked="" type="checkbox"/> Engineering Statement | <input type="checkbox"/> Construct a new auxiliary backup facility                         |
| <input type="checkbox"/> Modify existing construction permit for main facility                    | <input type="checkbox"/>                                  | <input type="checkbox"/> Modify existing construction permit for auxiliary backup facility |
| <input type="checkbox"/> Modify licensed main facility  | <input type="checkbox"/>                                  | <input type="checkbox"/> Modify licensed auxiliary backup facility                         |

If purpose is to modify, indicate below the nature of change(s) and specify the file number(s) of the authorizations affected.

- |   |  |
|---|--|
| <input type="checkbox"/> Antenna supporting structure height                      | <input type="checkbox"/> Effective radiated power  |
| <input type="checkbox"/> Antenna height above average terrain                     | <input type="checkbox"/> Frequency                 |
| <input type="checkbox"/> Antenna location   | <input checked="" type="checkbox"/> Class          |
| <input type="checkbox"/> Main Studio location per 47 C.F.R. Section 73.1125(b)(2) | <input type="checkbox"/> One-Step processing       |
| <input type="checkbox"/> Directional Antenna                                      | <input type="checkbox"/> Other (summarize briefly) |

File Number(s) \_\_\_\_\_

**1. Allocation:**

Channel No.	Principal community to be served:		
	County	City or Town	State
209	Cook	Grand Marais	MN

- Class (check only one box below)
- A  B1  B  C3  
 C2  C1  C

**2. Exact location of antenna.**

(a) Specify address, city, county and state. If no address, specify distance and bearing relative to the nearest town or landmark.

3.2 km N. of Grand Marais, Cook County, Minnesota

(b) Geographical coordinates (to nearest second). If mounted on element of an AM array, specify coordinates of center of array. Otherwise, specify tower location. Specify South Latitude and East Longitude where applicable; otherwise, North Latitude or West Longitude will be presumed. (The Commission requires coordinates based on NAD 27.)

Latitude	47 °	46 ' 13 "	Longitude	90 °	21 ' 06 "
----------	------	-----------	-----------	------	-----------

Section V-B - FM BROADCAST ENGINEERING DATA (Page 2)

3. Will the antenna be mounted on an antenna structure which has been registered with the Commission?  Yes  No  
 If Yes, provide the seven digit registration number and proceed to item 8. \_\_\_\_\_
4. Has the owner of the antenna structure filed an application for registration with the Commission?  Yes  No  
 If yes, provide the date FCC Form 854 was filed and proceed to item 8. \_\_\_\_\_
5. Applicant certifies that antenna structure meets 6.10 meter (20 feet) exception rule and therefore does not require registration. In other words, the overall height of the entire structure is not more than 6.10 meters (20 feet) above the ground or the antenna does not extend more than 6.10 meters (20 feet) above a man-made structure (structure built for a purpose other than mounting an antenna, i.e., building, water tank, silo, fire tower, etc.)  
 If yes, skip items 6 and 7.
6. Antenna structure will be shielded by existing structures of a permanent and substantial character or by natural terrain or topographic features of equal or greater height, and would be located in the congested area of a city, town or settlement where it is evident beyond all reasonable doubt that the structure is so shielded that it will not adversely affect safety in air navigation.  Yes  No  
 If yes, submit as an Exhibit a detailed explanation and/or diagram to support your claim and skip to item 8. Exhibit No.
7. Antenna structure does not meet FAA notification criteria as defined under 47 C.F.R. Section 17.7 and therefore does not require registration.  Yes  No
8. Is the supporting structure the same as that of another station(s) or proposed in another pending application(s)?  Yes  No  
 If Yes, give call letter(s) or file number(s) or both. \_\_\_\_\_  
 If proposal involves a change in height of an existing structure, specify existing height above ground level including antenna, all other appurtenances, and lighting, if any. \_\_\_\_\_
9. Does the application propose to correct previous site coordinates?  Yes  No  
 If Yes, list old coordinates.

Latitude                    °                    '                    "	Longitude                    °                    '                    "
---	--

10. Has the FAA been notified of the proposed construction?  Yes  No  
 If Yes, give date and office where notice was filed and attach as an Exhibit a copy of FAA determination, if available. Exhibit No.  
 Date \_\_\_\_\_ Office where filed \_\_\_\_\_
11. List all landing areas within 8 km of antenna site. Specify distance and bearing from structure to nearest point of the nearest runway.
- |     | Landing Area | Distance (km) | Bearing (degrees True) |
|-----|--------------|---------------|------------------------|
| (a) | _____        | _____         | _____                  |
| (b) | _____        | _____         | _____                  |

\*On file, no changes. See BPED 981204MB.

Section V-B - FM BROADCAST ENGINEERING DATA (Page 3)

12. (a) Elevation: (to the nearest meter)

(1) Of the site above mean sea level; \_\_\_\_\_ meters

(2) Of the top of supporting structure above ground (including antenna, all other appurtenances, and lighting, if any); and \_\_\_\_\_ meters

(3) Of the top of supporting structure above mean sea level [(a)(1) + (a)(2)]. \_\_\_\_\_ meters

(b) Height of radiation center: (to the nearest meter) H = Horizontal; V = Vertical

(1) Above ground; \_\_\_\_\_ meters (H)

\_\_\_\_\_ meters (V)

(2) Above mean sea level [(a)(1) + (b)(1)]; and \_\_\_\_\_ meters (H)

\_\_\_\_\_ meters (V)

(3) Above average terrain. \_\_\_\_\_ meters (H)

\_\_\_\_\_ meters (V)

13. Attach as an Exhibit sketch(es) of the supporting structure, labeling all elevations required in Question 12 above, except item 12(b)(3). If mounted on an AM directional array element, specify heights and orientations of all array towers, as well as location of FM radiator.

Exhibit No. \_\_\_\_\_

14. Effective Radiated Power:

(a) ERP in the horizontal plane \_\_\_\_\_ kw (H\*) \_\_\_\_\_ kw (V\*)

Is beam tilt proposed?  Yes  No

If Yes, specify maximum ERP in the plane of the tilted beam, and attach as an Exhibit a vertical elevation plot of radiated field.

Exhibit No. \_\_\_\_\_

\_\_\_\_\_ kw (H\*) \_\_\_\_\_ kw (V\*)

\*Polarization

15. Is a directional antenna proposed?

Yes  No

If Yes, attach as an Exhibit a statement with all data specified in 47 C.F.R. Section 73.316, including plot(s), and tabulations of horizontally and vertically polarized radiated components in terms of relative field.

Exhibit No. \_\_\_\_\_

16. Will the main studio be located within the 70 dBu or 3.16 mV/m contour?

Yes  No

If No, attach as justification an Exhibit pursuant to 47 C.F.R. Section 73.1125.

Exhibit No. \_\_\_\_\_

\*On file, no changes. See BPED 981204MB.

17. Are there: (a) within 60 meters of the proposed antenna, any proposed or authorized FM or TV transmitters, or any nonbroadcast (*except citizens band or amateur*) radio stations; or (b) within the blanketing contour, any established commercial or government receiving stations, cable head-end facilities, or populated areas; or (c) within ten (10) kilometers of the proposed antenna, any protected or authorized FM or TV transmitters which may produce receiver-induced intermodulation interference?  Yes  No

If Yes, attach as an Exhibit a description of any expected, undesired effects of operations and remedial steps to be pursued if necessary, and a statement accepting full responsibility for the elimination of any objectionable interference (including that caused by receiver-induced or other types of modulation) to facilities in existence or authorized or to radio receivers in use prior to grant of this application. (See 47 C.F.R. Section 73.315(b), 73.316(d) and 73.318.)

Exhibit No. \_\_\_\_\_

18. Attach as an Exhibit a 7.5 minute series U.S. Geological Survey topographic quadrangle map that shows clearly, legibly, and accurately, the location of the proposed transmitting antenna. This map must comply with the requirements set forth in Instruction D for Section V. Further, the map must clearly and legibly display the original printed contour lines and data as well as latitude and longitude markings, and must bear a scale of distance in kilometers.

Exhibit No. \_\_\_\_\_

19. Attach as an Exhibit (name the source) a map which shows clearly, legibly, and accurately, and with the original printed latitude and longitude markings and a scale of distance in kilometers:

Exhibit No. \_\_\_\_\_

- (a) The proposed transmitter location, and the radials along with profile graphs have been prepared;
- (b) The 1 mV/m predicted contour and, for noncommercial educational applicants applying on a commercial channel, the 3.16 mv/m contour; and
- (c) The legal boundaries of the principal community to which the station is or will be licensed.

20. Specify area in square kilometers (1 sq. mi. = 2.59 sq. km.) and population (latest census) within the predicted 1 mv/m contour.

Area \_\_\_\_\_ sq. km.      Population \_\_\_\_\_

21. Attach as an Exhibit a map (*Sectional Aeronautical charts where obtainable*) showing the present and proposed 1 mv/m (60 dbu) contours.

Enter the following from Exhibit above:

Gain Area \_\_\_\_\_ sq. km.  
 Loss Area \_\_\_\_\_ sq. km.  
 Present Area \_\_\_\_\_ sq. km.

Percent change (gain area plus loss area as divided by present area times 100%) \_\_\_\_\_

If 50% or more, this constitutes a major change. Indicate in question 2(c), Section 1, accordingly. See 47 C.F.R. Section 73.3573(a)(1).

\*On file, no changes. See BPED 981204MB.

Exhibit No. \_\_\_\_\_

22. For an application involving an auxiliary backup facility only, attach as an Exhibit a map (*Sectional Aeronautical Chart or equivalent*) which shows clearly, legibly, and accurately, and with latitude and longitude markings and a scale of distance in kilometers:

- (a) the proposed auxiliary 1 mv/m contour; and
- (b) the 1 mv/m contour of the licensed main facility for which the applied-for facility will be auxiliary. Also specify the file number of the license. See 47 C.F.R. Section 73.1675.

File No. \_\_\_\_\_

23. Terrain and coverage data (*to be calculated in accordance with 47 C.F.R. Section 73.313*)

Source of terrain data: (*check only one box below*)

- Linearly interpolated 30-second database
- 7.5 minute topographic map
- (Source: \_\_\_\_\_)
- Linearly interpolated 3-second database
- Other (summarize)

Are more than eight radials being used to calculate HAAT?  Yes  No

If Yes, specify how many radials are being used. Please note the radials must be evenly spaced and start with the 0 degree radial. \_\_\_\_\_

Radial bearing (degrees True)	Height of radiation center above average elevation of radial from 3 to 16 km (meters)	Predicted Distances to the 1 mV/m contour (kilometers)	If operating on Commercial Channel 3.16 mv/m contour (kilometers)
0			
45			
90			
135			
180			
225			
270			
315			

**Allocation Studies**  
(See Subpart C of 47 C.F.R. Part 73)

24. Is the proposed antenna location within 320 kilometers (199 miles) of the common border between the United States and Mexico?  Yes  No

If Yes, attach as an Exhibit a showing of compliance with all provisions of the Agreement between the United States of America and the United Mexican States concerning Frequency Modulation Broadcasting in the 88 to 108 MHz band.

Exhibit No. \_\_\_\_\_

\*On file, no changes. See BPED 9801204MB.

Section V-B - FM BROADCAST ENGINEERING DATA (Page 6)

25. Is the proposed antenna location within 320 kilometers of the common border between the United States and Canada?  Yes  No

If Yes, attach as an Exhibit a showing of compliance with all provisions of the Working Agreement for Allocation of FM Broadcasting Stations on Channels 201-300 under the Canada-United States FM Agreement of 1947.

Exhibit No.

26. If the proposed operation is for a full service or Class D facility for a channel in the range from Channel 201 through 220 (88.1 through 91.9 MHz), or if this proposed operation is for a Class D station in the range from Channel 221 through 300 (92.1 through 107.9 MHz), attach as an Exhibit a complete allocation study to establish the lack of prohibited overlap of contours with other U.S. stations. The allocation study should include the following:

Exhibit No.

- (a) The normally protected interference-free and the interfering contours for the proposed operation along all azimuths;
- (b) Complete normally protected interference-free contours of all other proposals and existing stations to which objectionable interference would be caused;
- (c) Interfering contours over pertinent arcs of all other proposals and existing stations from which objectionable interference would be received;
- (d) Normally protected and interfering contours over pertinent arcs, of all other proposals and existing stations, which require study to show the absence of objectionable interference;
- (e) Plot of the transmitter location of each station or proposal requiring investigation, with identifying call letters, file numbers and operating or proposed facilities;
- (f) When necessary to show more detail, an additional allocation study will be attached utilizing a map with a larger scale to clearly show interference or absence thereof;
- (g) A scale of kilometers and properly labeled longitude and latitude lines, shown across the entire Exhibit(s). Sufficient lines should be shown so that the location of the sites may be verified; and
- (h) The name of the map(s) used in the Exhibit(s).

27. With regard to any stations separated by 53 or 54 channels (10.6 or 10.8 MHz), attach as an Exhibit information required in 1/ (separation requirements involving intermediate frequency (i.f.) interference).

Exhibit No.

28. (a) Is the proposed operation on Channel 218, 219 or 220?  Yes  No

(b) If the answer to (a) is Yes, does the proposed operation satisfy the requirements of 47 C.F.R. Section 73.207?  Yes  No

(c) If the answer to (b) is Yes, attach as an Exhibit information required in 1/ regarding separation requirements with respect to stations on Channels 221, 222 and 223.

Exhibit No.

(d) If the answer to (b) is No, attach as an Exhibit a statement describing the short spacing(s) and how it or they arose.

Exhibit No.

1/ A showing that the proposed operation meets the minimum distance separation requirements of 47 C.F.R. Section 73.507. Include existing stations, proposed stations, and cities which appear in the Table of Allotments; the location and geographic coordinates of each antenna, proposed antenna or reference point, as appropriate; and distance to each from proposed antenna

\*On file, no changes. See BPED 981204MB.



(e) If authorization pursuant to 47 C.F.R. Section 73.215 is requested, attach as an Exhibit a complete engineering study to establish the lack of prohibited overlap of contours involving affected stations. The engineering study must include the following:

Exhibit No.

- (1) Protected and interfering contours, in all directions (360 degrees), for the proposed operation;
- (2) Protected and interfering contours, over pertinent arcs, of all short-spaced assignments, applications and allotments, including a plot showing each transmitter location, with identifying call letters or file numbers, and indication of whether facility is operating or proposed. For vacant allotments, use the reference coordinates as transmitter location;
- (3) When necessary to show more detail, an additional allocation study utilizing a map with a larger scale to clearly show prohibited overlap will not occur;
- (4) A scale of kilometers and properly labeled longitude and latitude lines, shown across the entire Exhibit(s) (Sufficient lines should be shown so that the location of the sites may be verified.); and
- (5) The official title(s) of the map(s) used in the Exhibit(s).

29. Is the proposed station for a channel in the range from Channel 201 to 220 (88.1 through 91.9 MHz) and the proposed antenna location within the distance to an affected TV Channel 6 station(s) as defined in 47 C.F.R. Section 73.525?

Yes  No

If Yes, attach as an Exhibit either a TV Channel 6 agreement letter dated and signed by both parties or a map and an engineering statement with calculations demonstrating compliance with 47 C.F.R. Section 73.525 for each affected TV Channel 6 station.

Exhibit No.

30. Is the proposed station for a channel in the range from Channel 221 to 300 (92.1 through 107.9 MHz)?

Yes  No

If Yes, attach as an Exhibit information required in 1/. (Except for Class D (secondary) proposals.)

Exhibit No.

31. Environmental Statement. (See 47 C.F.R. Section 1.1301 et seq.)

(a) Would a Commission grant of this application come within 47 C.F.R. Section 1.1307, such that it may have a significant environmental impact?

Yes  No

If you answer Yes, submit as an Exhibit an Environmental Assessment required by 47 C.F.R. Section 1.1311.

Exhibit No.

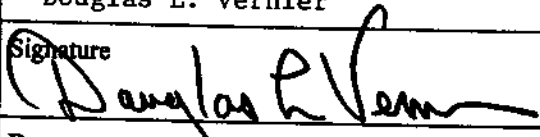
(b) If No, explain briefly why not.

(c) Pursuant to OST/OET Bulletin No. 65, the applicant must explain in an Exhibit what steps will be taken to limit the RF radiation exposure to the public and to persons authorized access to the tower site. In addition, where there are multiple contributors to radiofrequency radiation, you must certify that the established RF radiation exposure procedures will be coordinated with all stations.

\*On file, no changes. See BPED 981204MB.

CERTIFICATION

I certify that I have prepared this Section of this application 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 (Typed or Printed) Douglas L. Vernier	Relationship to Applicant (e.g., Consulting Engineer) Technical Consultant
Signature 	Address (include ZIP Code) 1600 Picturesque Dr. Cedar Falls, IA 50613
Date March 12, 1999	Telephone No. (include Area Code) 319 266-8402

**EXHIBIT #E1**  
**ENGINEERING STATEMENT**

Concerning the Amendment of the Application of  
Minnesota Public Radio  
To Construct a New Non-Commercial Educational Radio Station  
To Serve Grand Marais, Minnesota

March, 1999

**Channel 209 C3**

**6.0 kW H & V**

This engineering statement supports the amended application filed by Minnesota Public Radio to build a new non-commercial educational FM radio station to serve Grand Marais, Minnesota and the surrounding area.

This proposal corrects the class for the facilities filed under BPED 981204MB. The proposed class is to be C3.

Page #2 of this exhibit (Ex. # E1) is a declaration made by the preparer, Doug Vernier, attesting to his qualifications.

**Declaration:**

I, Doug Vernier, declare that I have received training as an engineer from the University of Michigan School of Engineering. That, I have received degrees from the University in the field of Broadcast Telecommunications. That, I have been active in broadcast consulting for over 25 years;

That, I have held a Federal Communications Commission First Class Radiotelephone License continually since 1964. In 1985, this license was reissued by the Commission as a lifetime General Radiotelephone license no. PG-16-16464;

That, I am certified as a Professional Broadcast Engineer (#50258) by the Society of Broadcast Engineers, Indianapolis, Indiana. (Re-certified 11/95.)

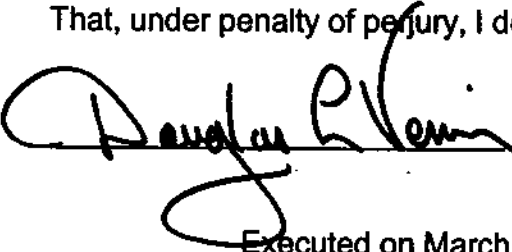
That, my qualifications are a matter of record with the Federal Communications Commission;

That, I have been retained by Minnesota Public Radio, St. Paul, Minnesota, and as such have prepared the engineering showings appended hereto;

That, a portion of the exhibits contained herein were prepared under my supervision by Kate Michler, Associate;

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

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

  
Douglas L. Vernier

Executed on March 12, 1999

Subscribed and sworn before me this 12th day of March, 1999.

  
Katherine A. Michler  
Notary Public in and for the State of Iowa

My Commission Expires August 10, 2001

**SECTION VI - EQUAL EMPLOYMENT OPPORTUNITY PROGRAM**

Does the applicant propose to employ five or more full-time employees?  Yes  No

If Yes, the applicant must include an EEO program called for in the separate Broadcast Equal Employment Opportunity Program Report (FCC Form 396-A). (See also 47 C.F.R. Section 73.2080.)

**SECTION VII - CERTIFICATIONS**

1. Has or will the applicant comply with the public notice requirements of 47 C.F.R. Section 73.3580?  Yes  No

Not applicable (minor change)

2. By checking Yes, the applicant certifies, that, in the case of an individual applicant, he or she is not subject to a denial of federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862, or, in the case of a non-individual applicant (e.g., corporation, partnership or other unincorporated association), no party to the application is subject to a denial of federal benefits that includes FCC benefits pursuant to that section. For the definition of a "party" for these purposes, see 47 C.F.R. Section 1.2002(b).

Yes  No

The APPLICANT hereby waives 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 requests an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)

The APPLICANT acknowledges that all the statements made in this application and attached Exhibits are considered material representations, and that all Exhibits are a material part hereof and incorporated herein.

The APPLICANT represents that this application is not filed for the purpose of impeding, obstructing, or delaying determination on any other application with which it may be in conflict.

In accordance with 47 C.F.R. Section 1.65, the APPLICANT has a continuing obligation to advise the Commission, through amendments, of any substantial and significant changes in information furnished.

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.

Name Minnesota Public Radio	Signature <i>William Haddeland</i>
Title Vice President	
Typed or Printed Name of Person Signing William Haddeland	Date 3-15-99

**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).**