

KCLD-FM AUXILIARY

BXPH-20190307AAJ

TECHNICAL STATEMENT

It is noted that the ERP has been decreased from the authorized 2.8 kW to 2.0 kW as a result of the TPO capability of the constructed antenna and transmitter. It is believed that this is in compliance with 47 CFR §73.1690(c)(8) and will conserve Communion resources that would be consumed with a form 301 modification and permit the auxiliary facility to be immediately available for use. Clearly the 60 dBu will be contained within the licensed 60 dBu since the ERP is decreased, there is no city of license coverage requirement and the class of the authorized facility does not change.

- (1) A spurious emissions report is attached demonstrating compliance with the Commission's rules.
- (2) The resistance of the KNSI(AM) (FCC facility #37002) on which the KCLD auxiliary antenna is mounted did not discernibly change and certainly less than 2%. Therefore, indirect power determination and the filing of a 302 are not required.
- (3) The license will coordinate the with all users of the tower to abide by Commission RF exposure limits and regulations.



Charles M. Anderson 1-29-2022

FM PROOF OF PERFORMANCE

SPURIOUS EMISSIONS MEASUREMENTS § 73.317

KZPK 98.9 MHz Construction Permit No. BXPB-20190307AAG
KCLD 104.7 MHz Construction Permit No. BXPB-20190307AAJ

Date of measurements: January 20, 2022

As required by Special Operating Condition No 1 of the Constructions Permits of KZPK and KCLD for the use of an Auxiliary Antenna System constructed on ASRN 1025393, measurements were performed to prove any spurious emissions meet the requirements of § 73.317 which were calculated to be required to be suppressed greater than 78 dBc.

Measurements were made using an Anritsu MS2721B Spectrum Analyzer, 58 dB pad and a Microwave Filter Company 40 dB FM Band Stop Filter.

The Auxiliary Antenna System consists of a non-directional, two-bay, full wave spaced Shively antenna model 6832-2 located at 100 meters center of radiation above ground level. The KZPK and KCLD Auxiliary transmitters are Nautel VS2.5 models and are combined by a Shively combiner model 2604-2B-04 with port to port isolation of -50 dB and spur rejection of >80 dB according to the manufacturers specifications. A sample of the combined signal was taken from the port at the output of the combiner utilizing the 58 dB pad to attenuate the sample to prevent overloading the front end of the spectrum analyzer. The measurements were performed with the transmitters operating simultaneously at their TPO of 2.8 kW. Prior to measurements being made the spectrum analyzer was calibrated to represent the carrier peak of each signal at 0 dB on it's display with a resolution bandwidth of 1 kHz. Measurement of each carrier was made with a span of 2 MHz to prove compliance with § 73.317 (b) and (c). Careful attention was paid to a potential for mix products that might occur at 93.1 MHz and 110.5 MHz. Measurement of these frequencies show no mix product exceeding 78 dBc are occurring proving compliance with § 73.317(d). Measurement of each frequency was also made with a span of 0 to 10 times the fundamental were made with the FM Band Stop filter providing 40 dB of attenuation to prove compliance with § 73.317 (d).

The results of these measurements show there are no harmonics or spurious emissions above the 78 dBc limit.

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The measurements were performed by James R Offerdahl, Chief Engineer for Offerdahl Broadcast Service, Inc of Fosston, MN. Mr. Offerdahl has been a Broadcast Engineer since 2002 and his work is a matter of record with the FCC.

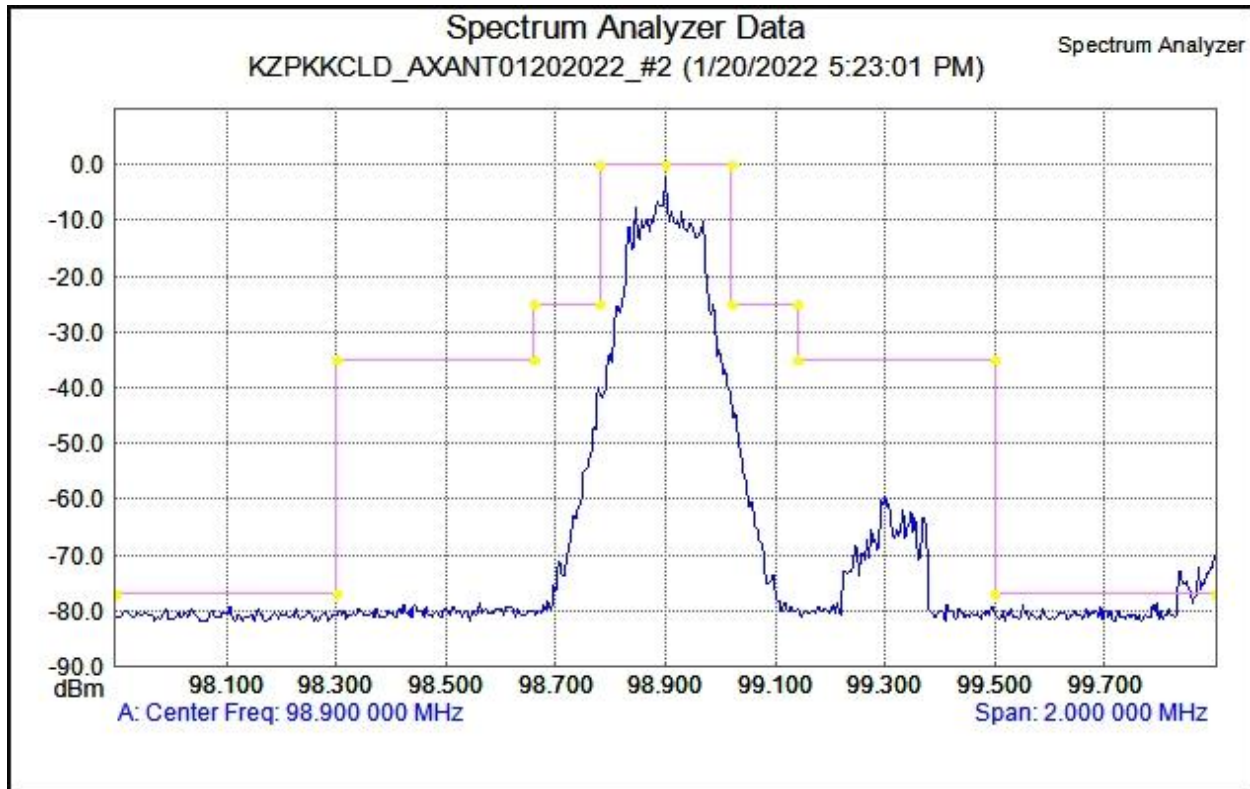
The attached exhibits provide proof that the KZPK/KCLD Auxiliary Antenna System performs in compliance with sections 73.317 (b), (c) and (d) as required in Special Operating Condition No 1 of the Construction Permits.

This report is true and correct to the best of my belief.


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**98.9 MHz Occupied Bandwidth
2 MHz Span**

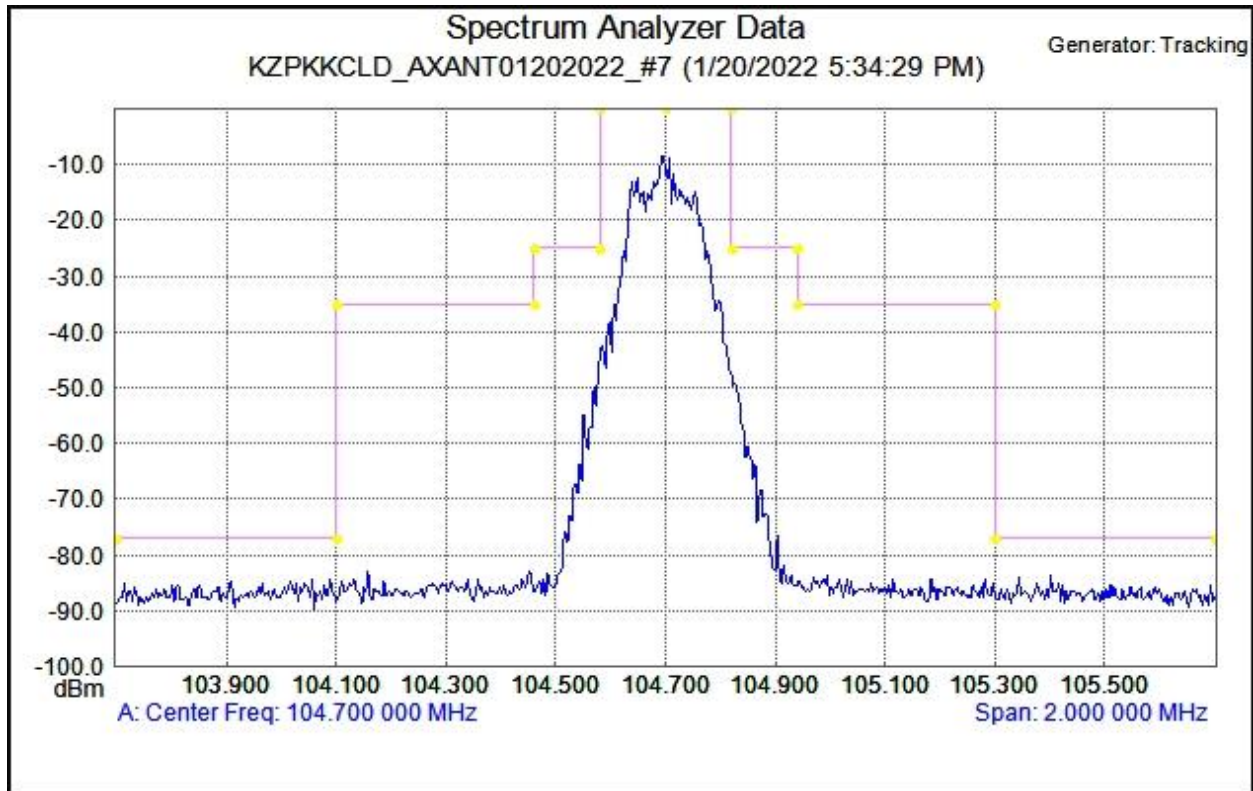
Notes:

93.3 MHz = KNSI FX

99.9 MHz = KCML

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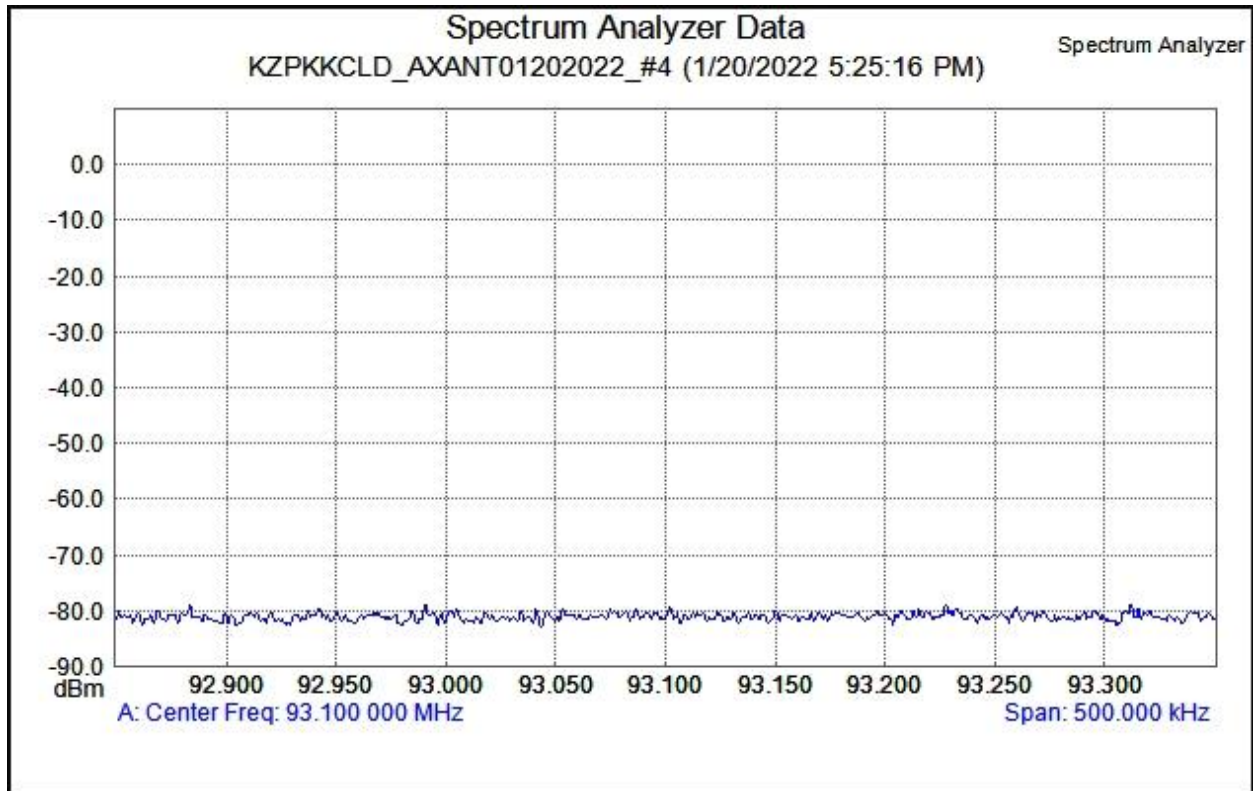
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**104.7 MHz Occupied Bandwidth
2 MHz Span**

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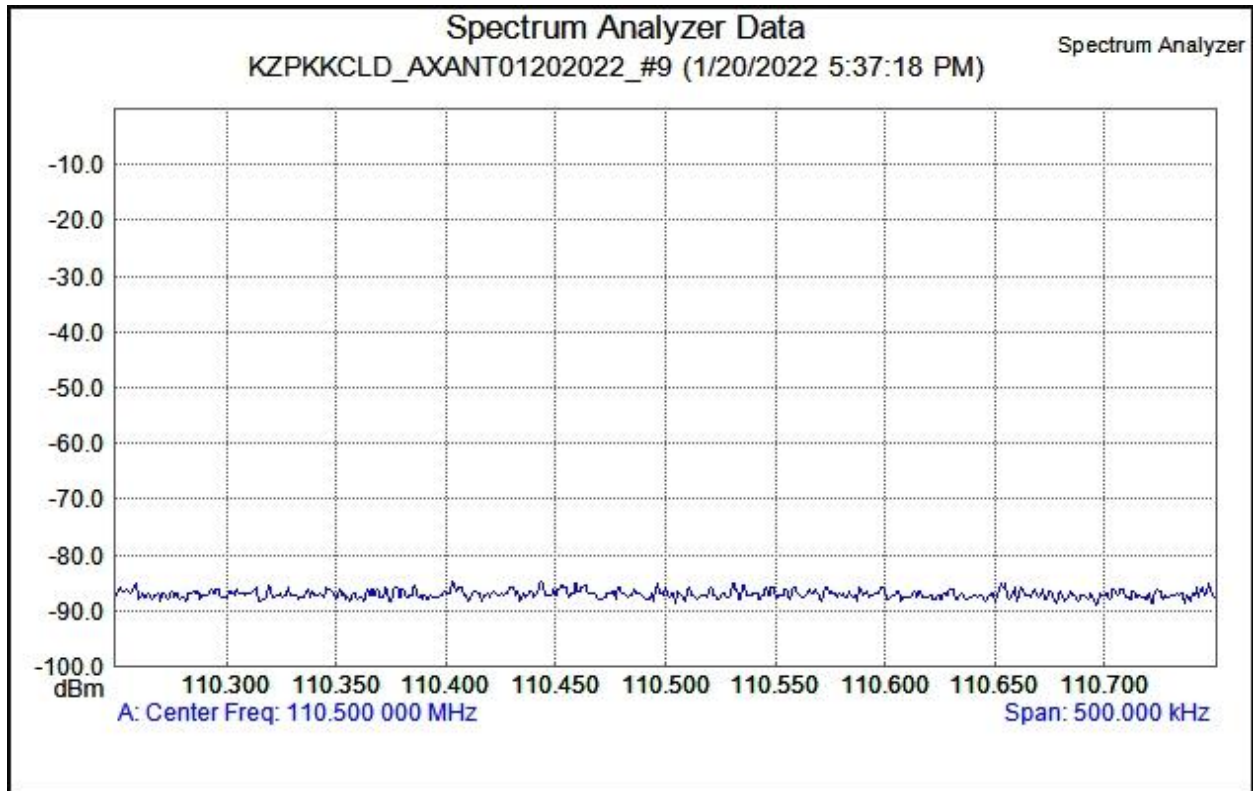
Potential Mix Product

$$104.7 - 98.9 = 5.8 \text{ MHz}$$

$$98.9 - 5.8 = \mathbf{93.1 \text{ MHz}}$$

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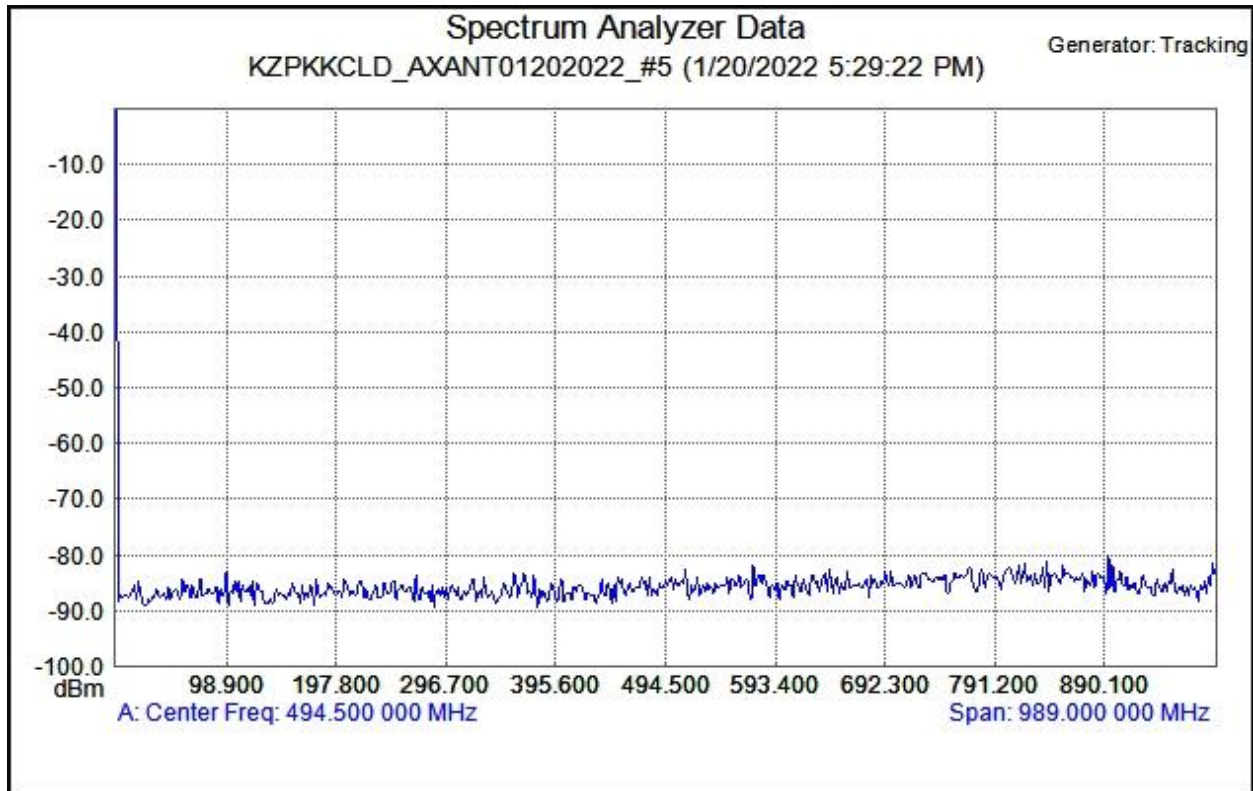
Potential Mix Product

$$104.7 - 98.9 = 5.8 \text{ MHz}$$

$$104.7 + 5.8 \text{ MHz} = \mathbf{110.5 \text{ MHz}}$$

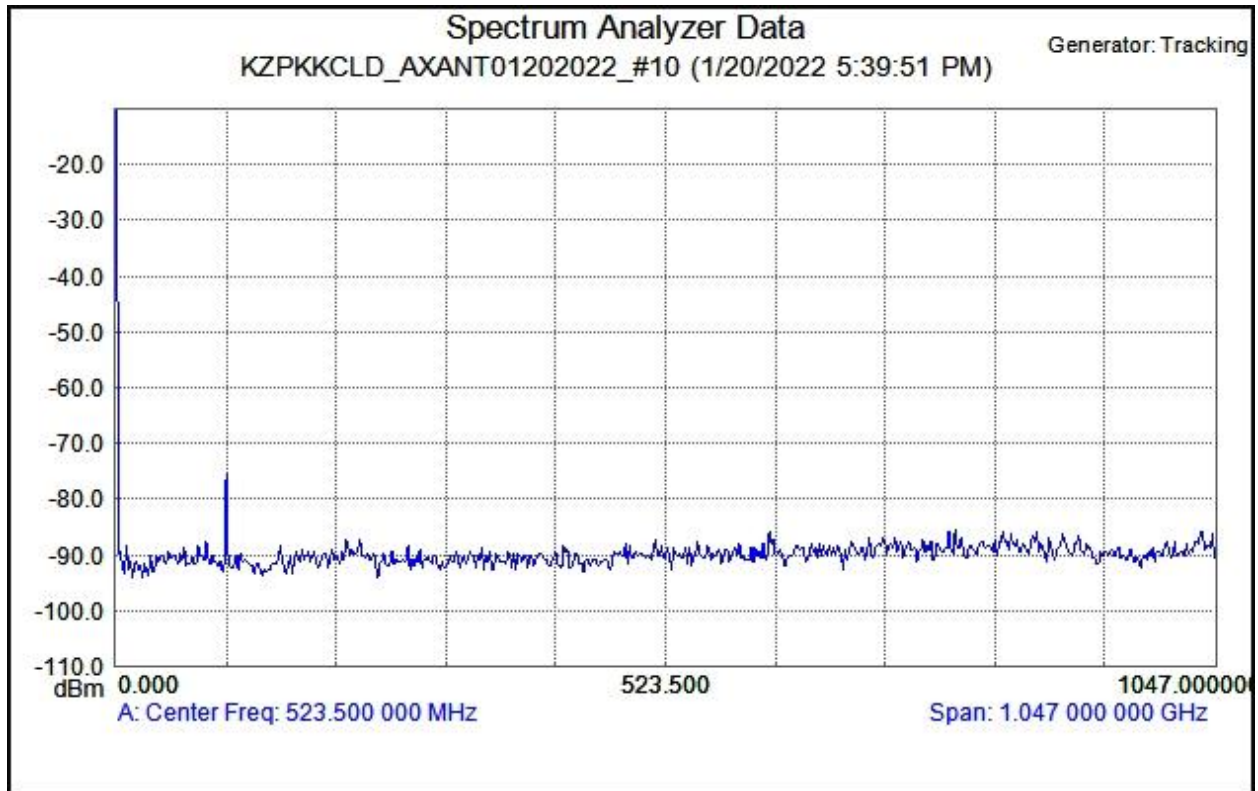
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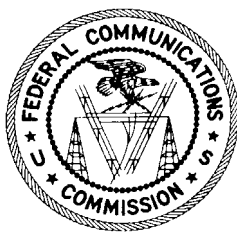


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United States of America
FEDERAL COMMUNICATIONS COMMISSION
FM BROADCAST STATION CONSTRUCTION PERMIT
AUXILIARY ANTENNA

Authorizing Official:

Official Mailing Address:

LEIGHTON ENTERPRISES, INC.
P. O. BOX 1458
ST. CLOUD MN 56302

James D. Bradshaw
Deputy Chief
Audio Division
Media Bureau

Facility ID: 37003

Call Sign: KCLD-FM

Permit File Number: BXPB-20190307AAJ

Grant Date: April 17, 2019

This permit expires 3:00 a.m.
local time, 36 months after the
grant date specified above.

Subject to the provisions of the Communications Act of 1934, as amended, subsequent acts and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions set forth in this permit, the permittee is hereby authorized to construct the radio transmitting apparatus herein described. Installation and adjustment of equipment not specifically set forth herein shall be in accordance with representations contained in the permittee's application for construction permit except for such modifications as are presently permitted, without application, by the Commission's Rules.

Commission rules which became effective on February 16, 1999, have a bearing on this construction permit. See Report & Order, Streamlining of Mass Media Applications, MM Docket No. 98-43, 13 FCC RCD 23056, Para. 77-90 (November 25, 1998); 63 Fed. Reg. 70039 (December 18, 1998). Pursuant to these rules, this construction permit will be subject to automatic forfeiture unless construction is complete and an application for license to cover is filed prior to expiration. See Section 73.3598.

Equipment and program tests shall be conducted only pursuant to Sections 73.1610 and 73.1620 of the Commission's Rules.

Name of Permittee: LEIGHTON ENTERPRISES, INC.

Station Location: MN-ST. CLOUD

Frequency (MHz): 104.7

Channel: 284

Class: C

Hours of Operation: Unlimited -- For auxiliary purposes only

Transmitter: Type Accepted. See Sections 73.1660, 73.1665 and 73.1670 of the Commission's Rules.

Transmitter output power: As required to achieve authorized ERP.

Antenna type: Non-Directional

Antenna Coordinates: North Latitude: 45 deg 32 min 21 sec
West Longitude: 94 deg 10 min 05 sec

	Horizontally Polarized Antenna	Vertically Polarized Antenna
Effective radiated power in the Horizontal Plane (kW):	2.80	2.80
Height of radiation center above ground (Meters):	100	100
Height of radiation center above mean sea level (Meters):	418	418
Height of radiation center above average terrain (Meters):	99	99

Antenna structure registration number: 1025393

Overall height of antenna structure above ground (including obstruction lighting if any) see the registration for this antenna structure.

Special operating conditions or restrictions:

- 1 BEFORE PROGRAM TESTS COMMENCE, sufficient measurements shall be made to establish that the operation authorized in this construction permit is in compliance with the spurious emissions requirements of 47 C.F.R. Sections 73.317(b) through 73.317(d). All measurements must be made with all stations simultaneously utilizing the shared antenna. These measurements shall be submitted to the Commission along with the FCC Form 302-FM application for license.
- 2 This construction permit authorizes the mounting of an antenna on the nondirectional tower of the AM station identified below. During the installation of the antenna, the AM station shall determine operating power by the indirect method (see Section 73.51 of the Commission's Rules). Upon completion of the antenna installation, antenna impedance measurements on the AM antenna shall be made. If the resistance of the AM antenna has changed by more than 2 percent from the licensed value (see Section 73.45(c)(1) of the Commission's Rules), an application for the AM station to return to direct power measurement, including a tower sketch of the installation, shall be filed with the Commission by the AM station licensee using form FCC 302-AM. (See Section 1.30003 of the Commission's Rules.) The permittee must submit confirmation of completion of the requirements of this condition in the application for license to cover this construction permit.

KNSI(AM), St. Cloud, MN, Fac. ID No. 37002

Special operating conditions or restrictions:

- 3 The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.

*** END OF AUTHORIZATION ***