

ENGINEERING REPORT

MINOR CONSTRUCTION PERMIT APPLICATION

For

**KRGN.C - Channel 275C1 - Amarillo, TX
File No. BPED-20050107ABS**

March, 2006

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MUNN-REESE, INC.
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TABLE OF CONTENTS

Discussion of Report

Allotment Requirement

Exhibit 22.1 - Copy of Antenna Tower Registration

Exhibit 22.2 - Vertical Plan of Antenna System

Exhibit 22.3 - Tabulation of Operating Conditions

Exhibit 22.4 - Proposed Service Contour Study

Community Coverage Requirement (See Discussion)

Main Studio Location Requirement (See Discussion)

Interference Requirements

Separation Requirements

Exhibit 25.1 - Tabulation of Commercial Spacings

Contour Protection Requirements

Exhibit 29.1 - KJNZ.L (max facilities) & KJNZ.C Contour Study

RF Radiation Study Requirement

Exhibit 30.1 - RF Radiation Study

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DISCUSSION OF REPORT

This firm was retained to prepare the required engineering report in support of a minor construction permit modification to BPED-20050107ABS for KRGN(FM), Amarillo, TX. KRGN(FM) is currently licensed under File No. BMLED-19950509KB for operation in CH276A with 3.0 kW at 91 meters HAAT. The KRGN(FM) authorized construction permit BPED-20050107ABS specifies operation on CH275C1 with 100 kW at 88 meters HAAT. This construction permit was filed in response to MM Docket #87-402. Due to a request from the tower owner concerning available space, the facility will operate with 100 kW ERP at 120 meters HAAT from ASR 1044767 and continue to serve Amarillo, TX.

The proposed site for the Class C1 operation meets all the spacing requirements of 47 C.F.R. §73.207 toward other stations in the allocation with the exception of one station. A tabulation of the existing and required spacing toward each of the other relevant stations is found in **Exhibit 25.1**. Contour protections toward KJNZ(FM), Hereford, TX as required by §73.215 have been included in **Exhibit 29.1**. KJNZ(FM) holds both a valid fully spaced license and an authorized construction permit granted under §73.215. More than adequate protection is afforded both the KJNZ(FM) license at maximum Class C2 facilities and the presently authorized KJNZ(FM) CP facilities.

The proposed service contours have been calculated in accordance with the Rules, and the data obtained has been tabulated and plotted in this report. The plotted contours are found as **Exhibit 22.4** of this report. This exhibit shows the 3.16 mV/m contour that serves the community of license, and the overall service that is provided by the 1.0 mV/m contour of the facility. The tabulation of the distances to the respective contours shown in this discussion is based on the use of the standard eight cardinal bearings, which were also used for the computation of the HAAT. However, the plotted contours shown in **Exhibit 22.4** and the contour used as the basis of the area and population computations are based on the use of a full 360 terrain radials.

The antenna will be mounted on an existing tower bearing FCC Antenna Structure Registration No. 1044767. As the overall height of the tower will not be increased, the FAA need not be notified. A copy of the existing ASR for Tower 1044767 has been included in **Exhibit 22.1**. A vertical antenna plan depicting the placement of the antenna on the tower has been included in **Exhibit 22.2**.

The remainder of the information in this report and exhibit numbering is responsive to the Rules of the Commission, and provides the data for FCC Online Form 301, Section III-B.

The FM Broadcast facility proposed in this application will not result in human exposure to radiofrequency radiation in excess of the applicable safety standards specified in §1.1307(b) of the Commission's rules. **Exhibit 30.1** provides the details of the study that was made to demonstrate compliance. The facility will be properly marked with signs, and entry will continue to be restricted by means of fencing with locked doors and/or gates. Any other means as may be required to protect employees and the general public will be employed.

In the event work would be required in proximity to the antenna such that the person or persons working in the area would be potentially exposed to fields in excess of the guidelines set forth in OET Bulletin No. 65 (Edition 97-01), the transmitter power will be reduced or the station will cease operation during the critical period.

DISCUSSION OF REPORT

DISTANCES TO CONTOURS: The table below shows the distances to the 3.16 mV/m and 1.0 mV/m contours from the proposed facility using an ERP of 100 kW at an HAAT of 120 meters. These distances have been calculated based on the FCC F(50-50) curves.

N. Lat. = 35 15 41 W. Lng. = 101 52 52							
HAAT and Distance to Contour - FCC Method - NGDC30 Arc Sec.							
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5	70-F5
000	1025.9	168.1	100.0000	20.00	1.000	60.67	40.31
045	1046.8	147.2	100.0000	20.00	1.000	58.09	37.92
090	1086.8	107.2	100.0000	20.00	1.000	52.17	32.97
135	1101.4	92.6	100.0000	20.00	1.000	49.42	30.65
180	1108.8	85.2	100.0000	20.00	1.000	47.87	29.43
225	1110.7	83.3	100.0000	20.00	1.000	47.46	29.11
270	1078.0	116.0	100.0000	20.00	1.000	53.63	34.19
315	1030.2	163.8	100.0000	20.00	1.000	60.18	39.84
Ave El= 1073.60 M HAAT= 120.40 M AMSL= 1194 M							