

ENGINEERING REPORT

**Requesting a Minor Change
for FM Station**

**KJTA (FM) – Flagstaff, AZ
File No. BLED-20001219AAQ
Channel 210 – 89.9 MHz**

December 2007

COPYRIGHT 2007

MUNN-REESE, INC.
Broadcast Engineering Consultants
Coldwater, MI 49036

TABLE OF CONTENTS

Discussion of Report

Main Studio Location

Exhibit 13.1 – Copy of Topographic Map Showing Proposed Site
Exhibit 13.2 – Vertical Plan of Antenna System and Support Tower
Exhibit 13.3 – Tabulation of Operating Conditions
Exhibit 13.4 – Present and Proposed Contour Study

Interference Requirements

Contour Overlap Requirements

Exhibit 16.1 – Tabulation of Non-Commercial Allocation

Spacing Requirements (none)

Grandfathered Short-Spaced Requirements (none)

Contour Protection Requirements (none)

TV Channel 6 Protection Requirements

Exhibit 19.1 – Protection of Channel 6 Television Facilities

Exhibit 19.2 – Analysis of Vertical Plane Antenna Patterns

RF Radiation Study Requirement

Exhibit 22.1 – RF Compliance Study

(Exhibit Numbering is in response to FCC Online Form 340, Section VII)

DISCUSSION OF REPORT

This firm was retained to prepare the required engineering report in support of a minor change application for Non-Commercial FM station KJTA (FM) at Flagstaff, AZ, File No. BLED-20001219AAQ. KJTA (FM) is licensed to operate on Channel 210C1, 89.9 MHz with 9.0 kW at 440 meters HAAT. This minor change application requests 1.0 kW at 606 meters HAAT from a site just above Flagstaff, AZ. The proposed facility will utilize a non-directional antenna. The proposed location is managed by the US Forest Service and the maximum ERP allowed from stations located at the electronics site is 1.0 kW. Thus, the class of operation will be reduced from C1 to C2. The station will remain licensed to Flagstaff.

The proposed site for the Class C2 operation meets all the contour protection requirements towards other stations in the allocation. A tabulation of the proposed protections to each of the other relevant stations is found in **Exhibit 16.1**. It is believed there is sufficient clearance to preclude the need for further study with respect to the other protected stations shown in the allocation study.

The transmitter site is not located within 320 km of the common border between the United States and Canada or Mexico, therefore international concurrence need not be sought. The transmitter site proposed in this application is within the affected radius of one Channel 6 television station, KTVW-CA, Flagstaff/Doney Park, AZ. The additional studies dictated by §73.525 under such conditions are included as **Exhibits 19.1** and **19.2** of this report. Full protection is provided to the Channel 6 facility under the co-location provisions of the rules.

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 13.4** of this report. This exhibit shows 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 13.4** are based on the use of a full 360 terrain radials and the NGDC 30 Second Terrain Database.

The antenna will be mounted on a new tower that is scheduled for construction at the existing electronics site. The tower does not require Antenna Structure Registration and passes the FCC TOWAIR program. A copy of USGS topographic mapping showing the tower site has been included in **Exhibit 13.1**. A vertical antenna plan depicting the placement of the antenna on the tower has been included in **Exhibit 13.2**. The applicant has been informed that the US Forest Service has a pending application for exemption from the Nationwide Programmatic Agreement and Section 106 compliance.

DISCUSSION OF REPORT (continued)

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 Form 340.

The FM Broadcast facility proposed in this application will not produce human exposure to radiofrequency radiation in excess of the applicable safety standards specified in §1.1310 of the Commission's rules. **Exhibit 22.1** provides the details of the study that was made to demonstrate compliance. The facility will be properly marked with signs, and entry will be restricted by means of locked doors and/or gates. Any other means which 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.

DISTANCES TO CONTOURS: The table below shows the distances to the 1.0 mV/m contour from the proposed facility using an ERP of 1.0 kW at an HAAT of 606 meters. These distances have been calculated based on the FCC F(50-50) curves.

N. Lat. = 351425.0 W. Lng. = 1113549.0						
HAAT and Distance to Contour - FCC Method - NGDC 30 SEC						
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	2411.4	427.6	1.0000	0.00	1.000	37.14
045	2117.2	721.8	1.0000	0.00	1.000	48.85
090	2028.0	811.0	1.0000	0.00	1.000	51.51
135	2052.0	787.0	1.0000	0.00	1.000	50.84
180	2105.9	733.1	1.0000	0.00	1.000	49.21
225	2147.8	691.2	1.0000	0.00	1.000	47.83
270	2280.4	558.6	1.0000	0.00	1.000	42.99
315	2722.9	116.1	1.0000	0.00	1.000	20.09
Ave El= 2233.21 M HAAT= 605.79 M AMSL= 2839						