

ENGINEERING STATEMENT  
OF  
EDWARD P. DE LA HUNT  
SUPPORT OF  
AMENDMENT TO APPLICATION FOR  
CONSTRUCTION PERMIT  
FILE NO: BPH-20040526ADP  
KXGT(FM) – JAMESTOWN, NORTH DAKOTA  
CHANNEL 238C1 - 100.0 kW ERP - 197 M HAAT  
FACILITY ID NO. 68627

GENERAL

I am a Consulting Engineer, my education and experience are a matter of record with the Federal Communications Commission. This engineering statement, amendment to FCC Form 301, File No. BPH-20040526ADP, and associated exhibits have been prepared on behalf of Two Rivers Broadcasting, Inc., licensee of FM station KXGT(FM), Jamestown, North Dakota. KXGT(FM) is currently licensed to operate on Channel 238C1 (95.5 MHz) with an ERP of 100 kW and an HAAT of 121 meters (FCC File No. BLH-19840905DY). It is proposed to relocate the antenna to a new support structure and increase the HAAT to 197 meters.

PROPOSED SITE LOCATION

It is proposed to relocate the KXGT(FM) antenna/transmitter facility to a site 28.76 kilometers west of the present site located south of Jamestown, North Dakota. This site is uniquely described by the NAD-27 coordinates of North Latitude 46 degrees 56 minutes 21 seconds, West Longitude 98 degrees 18 minutes 30 seconds. The proposed antenna system will be shared with KQDJ(FM), Valley City, North Dakota.

### PREDICTED COVERAGE CONTOURS

The predicted coverage contours were calculated in accordance with the method described in Section 73.313 of the Rules, utilizing the appropriate F(50,50) propagation curves from the Rules (Section 73.333, Figure 1), effective radiated power, and antenna height above average terrain as determined for each profile radial. The average terrain on the eight cardinal radials from 3 kilometers to 16 kilometers from the proposed site was determined using the National Geophysical Data Center Thirty Second Point Topography Database, as prescribed in Section 73.312(d) of the Rules. The antenna site elevation was determined by a qualified surveyor.

The distances to contours were calculated and verified utilizing the FCC's "Curves" computer program. The 3.16 mV/m (70 dBu) contour completely encompasses the principal community to be served (Jamestown, North Dakota). **(See Exhibit 1).**

### ALLOCATION STUDY

A FM channel allocation study was performed to ensure that the proposed site meets all of the minimum separation requirements to other authorized co-channel and adjacent channel stations and vacant allotments. The study revealed the proposed transmitter site will meet all of the required separations as specified in Section 73.207 of the FCC Rules and Regulations. **(See Exhibit 2).**

### CANADIAN CONCURRENCE

KXGT(FM) is located within 320 kilometers of the Canadian border. The licensed KXGT(FM) Class C1 allotment has received Canadian concurrence as a Class C1 facility as specified under the Canadian - U.S.A. FM Broadcasting Agreement of 1947. The proposed facility conforms to the Table of Minimum Distance Separations as set forth in the Agreement, therefore further negotiations with the Canadian Administration should not be required. It is

respectfully requested that the Commission, on behalf of KXGT(FM), notify the Canadian Administration of the proposed facility change if deemed necessary.

### TECHNICAL FACILITIES

The applicant proposes at this time to utilize an ERI, Model SHPX-10AC8, ten-bay, omni-directional, circularly-polarized antenna. The antenna system will be a shared antenna system with station KQDJ(FM) Valley City, North Dakota. The shared FM antenna will be side-mounted on a new steel-guyed tower such that the radiation centerline is 195.0 meters above ground level (640 meters above mean sea level). The overall height of the tower will be 210.0 meters above ground (655 meters above mean sea level).

A type-approved transmitter of adequate power for the required transmitter power output (TPO) will be installed at the time of construction. The appropriate TPO will be determined at license application filing to achieve an effective radiated power of 100 kilowatts taking into consideration the losses in transmission line, the combiner losses, and the power gain of the antenna system.

### FAA NOTIFICATION

The proposed FM antenna will be side mounted on a new tower support structure, with a height of 210 meters AGL and 655 meters AMSL. A Notice of Proposed Construction, FAA Form 7460-1, was filed with the Great Lakes Regional Office. The FAA issued a "Determination of No Hazard", Aeronautical Study No. 2004-AGL-3957-OE on November 10, 2004. The "Determination of No Hazard" becomes final on December 20, 2004. Once the determination is final, Antenna Structure Registration will be obtained by electronic filing and

the staff will be notified of the tower registration number. **(See Exhibit 3, Vertical Plan Antenna Sketch).**

#### BLANKETING AND INTERMODULATION INTERFERENCE

There are no known commercial or government receiving stations or cable head-end facilities located within the blanketing contour. The KXGT(FM) proposed antenna will be shared by station KQDJ(FM), Valley City, North Dakota and the tower will also support a NEW(FM), Wimbledon, North Dakota. Both are located within 60 meters. In the event that blanketing or intermodulation interference, including RITOE, occurs with any facilities or to radio receivers in use prior to grant of their application, the applicant will accept the responsibility to alleviate any interference resulting from the proposal.

In accordance with the Commission's January 2, 1991, decision (FCC 91-3, released January 14, 1991) regarding the application of WKLY, Inc., the applicant will exclude both mobile and battery-powered receivers from Receiver Induced Third Order Intermodulation and Blanketing Interference Resolution Requirements. In the event any type of intermodulation occurs with any other facility which has not been identified, the applicant will install and maintain any traps or filters necessary to reduce or eliminate any interference. The applicant will respond to any complaints for a period of one year, in compliance with Section 73.318(b) of the Commission Rules.

#### ENVIRONMENTAL IMPACT

The proposal described herein meets the criteria specified in Section 1.1306 of the Commission Rules as an action, which is categorically excluded from environmental processing. The proposal does not involve a site location specified under Section 1.1307(a)(1-7) of the Rules, nor high intensity lighting as specified under Section 1.1307(a)(8).

### RADIOFREQUENCY RADIATION IMPACT

The proposed facility will not result in human exposure to radiofrequency (RF) radiation in excess of safety standards specified in Section 1.1307(b). Effective October 15, 1997, the FCC adopted revised guidelines and procedures for evaluating the environmental effects of RF emissions. These revised guidelines incorporate two tiers of exposure limits based on whether exposure occurs in a "controlled" (occupational) situation or an "uncontrolled" (general population) situation. Based on the methods published in OET Bulletin No. 65 (entitled "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields"), the predicted power density value produced by the proposed facility will be well below the established ANSI guideline limits.

Verification of compliance with FCC-specified guidelines for human exposure to RF radiation was determined utilizing the equations and graphs set forth in OET Bulletin No. 65. The KXGT(FM) proposed facility will be co-located with the proposed facilities of FM station KQDJ(FM), Valley City, North Dakota and a proposal for a NEW(FM), Wimbledon, North Dakota. Since this will be a multiple-use site, the contribution from each of the facilities has to be calculated. The bulletin prescribes that the fraction of the recommended limit incurred within each frequency interval should be determined and that the sum of all fractional contributions should not exceed 100%.

The proposed KXGT(FM) facility will operate with a radiation centerline at 195.0 meters above ground level (AGL) and an ERP of 100.0 kW on Channel 238 operating with dual polarization. KXGT(FM) proposes to utilize an ERI, Model SHPX-10AC8, 10 bay antenna. Utilizing FMModel and the methods prescribed by the EPA in the Gailey and Tell report, this antenna is classified as a "rototiller" or "Type 3" antenna. The highest value of power density occurs at 46.8 meters from the base of the tower which is 0.0092 mW/cm<sup>2</sup> or 4.61% of the 0.2 mW/cm<sup>2</sup> MPE limit for uncontrolled/general exposures. It is 0.92 % of the MPE for occupational/controlled areas.

The proposed KQDJ(FM) facility will operate with a radiation centerline at 195.0 meters above ground level (AGL) and an ERP of 100.0 kW on Channel 266 operating with dual polarization. KQDJ(FM) proposes to utilize an ERI, Model SHPX-10AC8, 10 bay antenna. Utilizing FMMODEL and the methods prescribed by the EPA in the Gailey and Tell report, this antenna is classified as a “rototiller” or “Type 3” antenna. The highest value of power density occurs at 46.8 meters from the base of the tower which is 0.0092 mW/cm<sup>2</sup> or 4.61% of the 0.2 mW/cm<sup>2</sup> MPE limit for uncontrolled/general exposures. It is 0.92 % of the MPE for occupational/controlled areas.

The proposed NEW(FM), Wimbledon, North Dakota facility will operate with a radiation centerline at 142.0 meters above ground level (AGL) and an ERP of 99.0 kW on Channel 276 operating with dual polarization. The NEW(FM), Wimbledon, North Dakota proposes to utilize an ERI, Model SHPX-10AC8, 10 bay antenna. Utilizing FMMODEL and the methods prescribed by the EPA in the Gailey and Tell report, this antenna is classified as a “rototiller” or “Type 3” antenna. The highest value of power density occurs at 34 meters from the base of the tower which is 0.0174 mW/cm<sup>2</sup> or 8.7% of the 0.2 mW/cm<sup>2</sup> MPE limit for uncontrolled/general exposures. It is 1.75% of the MPE for occupational/controlled areas.

The cumulative worst-case contribution of KXGT(FM), KQDJ(FM), and the proposed NEW(FM) will be 17.92% for MPE uncontrolled/general exposure limits. It is 3.59% of the MPE for occupational/controlled areas. Since the proposed combined power density is less than 100 percent of the ANSI guideline, the proposed facility complies with FCC requirements regarding radiofrequency radiation. In addition, the base of the tower will be fenced and warning signs will be posted at appropriate intervals to preclude casual access.

It is submitted that the proposed KXGT(FM) proposal will not constitute a potential hazard to the quality of the human environment. Accordingly, the KXGT(FM) proposal, as described herein, should be categorically excluded from RF environmental processing under Section 1.1307(b) of the Rules.

#### OCCUPATIONAL SAFETY

The applicant will ensure protection to station personnel working in the vicinity of their antenna. Access to the antenna supporting tower base will be restricted to authorized personnel only. KXGT(FM) will reduce power or cease operation, when appropriate and deemed necessary, during times of service or maintenance of the transmitting system or when work is being performed on the tower to avoid potentially harmful exposure to station personnel or workers. KXGT(FM) will initiate joint procedures with common users to be followed during times of service or maintenance of the transmission systems when necessary to avoid potentially harmful exposure to personnel.

#### SUMMARY

It is submitted that the KXGT(FM) proposal described herein complies with the Rules and Regulations of the Federal Communications Commission.

This statement and attached exhibits were prepared by me or under my direct supervision and are believed to be true and correct.

DATED: December 2004

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Edward P. De La Hunt