

# ***KLEIN BROADCAST ENGINEERING, L.L.C.***

**dedicated to improving the science and technology of radio & television communications**

**FCC Form 301 Application  
for  
FM Broadcast Station Construction Permit & One-Step Upgrade to Class C  
(a minor change application)**

**HBG RADIO ONTARIO, L.L.C.  
K S R V – F M  
FM CHANNEL 241 C / 96.1 mHz.  
ONTARIO , OREGON**

**JULY 2004**

## **INTRODUCTION and ENGINEERING STATEMENT**

The firm of Klein Broadcast Engineering, L.L.C., has been retained by the applicant, HBG Radio Ontario, L.L.C., the licensee of FM Broadcast Station KSRV-FM at Ontario, Oregon to prepare the engineering necessary for the instant application. The instant application and One Step Upgrade to Class C requests a One Step Upgrade of the present KSRV-FM FM Channel 241 Class C1 to Class C.

The Section 73.207 reference site coordinates are:

NL:44-03-44 / WL:116-54-22 (NAD1927)

There is unobstructed line of sight to the principal community, Ontario, Oregon, from this 47 CFR Section 73.207 reference site for the One-Step Class C upgrade.

The instant application also specifies Class C operation with the following parameters:

E.R.P. 47.0kW H & V

Beam Tilted Maximum E.R.P. 49.0kW H & V

Radiation Center AGL 66 meters

Radiation Center AMSL 2,203 meters

Ground Level Elevation at site 2137 meters AMSL

HAAT 815 meters

## **INTRODUCTION and ENGINEERING STATEMENT cont'd page two: KSRV-FM**

The applicant requests processing of this application for the facility specified herein under 47 CFR Section 73.215 with respect to FM Station KID(FM), Idaho Falls, Idaho.

The Proposed Antenna Location site coordinates for Section 73.215 operation are:

NL:43-45-18 / WL: 116-05-51 (NAD1927)

Engineering Exhibit E-1 is a complete FCC FM Channel Spacing Study that shows compliance with Section 73.215 of the Commission's Rules for the requested Class C One Step Upgrade at the proposed antenna location. Engineering Exhibit E-1A is a complete FCC FM Channel Spacing Study that shows the proposed Class C Reference Site is in compliance with Section 73.207 of the Commission's Rules.

Engineering Exhibit E-2 is a detailed plot of Station KSRV-FM proposed 60dBu f(50,50) and 40dBu f(50,10) contours and the KID(FM) 60dBu f(50,50) and 40dBu f(50,10) contours. This exhibit clearly shows compliance with Section 73.215 contour protection for Station KID(FM) provided by the proposed Section 73.215 facility of KSRV-FM as upgraded to Class C operating with a directional antenna and the facility proposed herein.

Engineering Exhibit E-3 is an Azimuth Plot of the proposed directional antenna envelope pattern.

Engineering Exhibit E-3A is a Tabulation of the proposed Directional Antenna pattern and is tabulated every 1 degree.

## **INTRODUCTION and ENGINEERING STATEMENT cont'd page three: KSRV-FM**

Engineering Exhibit E-4 is a detailed study of the terrain between the proposed 47 CFR Section 73.215 transmitter site for KSRV-FM and the stations' Community of License, Ontario, Oregon. This exhibit evaluates several terrain plotted radials from the proposed transmitter site through the principal community and determines delta h to be between 602.2 and 666.2 meters which qualifies the applicant to use an alternate contour prediction method to prove compliance with 47 CFR Section 73.315 of the Commission's Rules. Additionally this exhibit demonstrates there to be more than a 10% difference between the location of the 70dBu contour when predicted under the provisions of the FCC Standard Prediction Method F(50,50) and the alternate contour prediction used and demonstrated within Exhibit E-4. This exhibit also contains supporting exhibits E4A, E4B, and E4C. These exhibits are terrain profile plots on pertinent radials from the proposed transmitter site and the principal community. Exhibit E-4D is a sample tabulation of how delta h was determined for this exhibit. Exhibit E-4E is a contour map showing the predicted 70dBu contour from the proposed facility when the FCC Standard Prediction Method is used f,(50,50) and the 79.91 dBu contour location calculated under Longley-Rice. This map also has the principal community boundaries of Ontario, Oregon, accurately plotted thereon. The map conclusively shows coverage of the principal community in compliance with 47 CFR Section 73.315.

Engineering Exhibit E-10RHS is a complete and comprehensive RF Radiation Hazard Study/Evaluation of the facility proposed in the instant application. Based on the calculations and findings contained therein, the proposed new main transmission facility complies with all of the requirements of the FCC O.S.T. Bulletin, Guidelines for Human Exposure to Non-Ionizing Radio Frequency Radiation, as amended to date. Figure #1. of this exhibit is a Vertical Pattern Plot of the antenna to be employed. The antenna specified herein is an Electronics Research, Inc., model, MP-6AC-DA-HW, 0.5 wavelength spaced directional antenna. Figure #2, of this exhibit is the plot of the RFR calculation from the Commission's RFR calculator from a distance of 0 to 1000 meters from the base of the antenna support structure, 2 meters above the ground level.

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The topographic data employed in the instant applications is from the DMA 3 Arc Second Digitized Terrain Datafile.

An analysis of the engineering data presented herein demonstrates compliance of the proposed facility with all of the applicable Rules and Regulations of the Federal Communications Commission as amended to date. Therefore, the applicant and licensee of FM Broadcast Station KSRV-FM at Ontario, Oregon, requests the Commission consider and GRANT the facility and One-Step Upgrade requested herein.

Respectfully submitted,

Elliott Kurt Klein, Consulting Broadcast Engineer

For the firm:

KLEIN BROADCAST ENGINEERING, L.L.C.

07 July 2004