

Comprehensive Technical Exhibit
Application for License
K269FB - Daly City, California
IHR Educational Broadcasting
July, 2010

Application for License

The following engineering statement and attached exhibits have been prepared for **IHR Educational Broadcasting** ("IHR"), and are in support of their application for license to cover changes authorized to FM translator station K269FB at Daly City, California.¹ The referenced changes were authorized under FCC File no. BPFT-20080129AGJ.

Pursuant to that construction permit, IHR was granted authority by the Commission to relocate K269FB to the KSFB transmitter site. As part of the relocation, K269FB would operate with a maximum effective radiated power of 13 Watts utilizing a directional antenna. The use of the directional antenna is necessary to provide adequate contour protection to adjacent facilities in the vicinity.

Under the construction permit, the effective radiated power was authorized as 13 Watts horizontally polarized and 13 Watts vertically polarized, i.e. circular polarization. The antenna that is utilized by the facility is a horizontally polarized antenna. As a result, K269FB will utilize the standard FM polarization of horizontal instead of the circular polarization listed on the construction permit. In all other respects, the facility was constructed in accordance with the terms of the construction permit.

The construction permit as issued by the Commission listed three special operating conditions or restrictions. Each of these special conditions or restrictions will be specifically

¹ The Facility ID for K269FB at Daly City, California is 147348.

addressed in this engineering statement. As will be demonstrated, IHR is in compliance with each of the conditions.

Under the first special condition, IHR is advised that it must have FCC File Form 350 on file prior to the commencement of program tests. Upon the submission of this application, IHR will commence program tests. The provisions of automatic program test authority are applicable in this case.

The second special condition or restriction pertains to RF safety at the site. Under that condition, IHR is advised that it must coordinate with other users of the site to reduce power and/or cease operation as necessary to protect workers at the site from being exposed to levels of non-ionizing radiation in excess of the applicable safety standards. IHR certifies that it will coordinate with all present and future users of the site. Such coordination will include, but is not necessarily limited to, a reduction in transmitter power and/or cessation of operation as necessary.

The third special condition pertains to the location of the antenna in proximity to the radiator for AM station KSFB at San Francisco, California.² The antenna utilized for K269FB is mounted to a tower that is not utilized as part of the KSFB antenna system. This existing tower is not base-insulated, nor is it de-tuned at the KSFB frequency of operation of 1260 kHz. Indeed the structure is less than one-tenth wavelength at the frequency of KSFB. As a result, neither the existing tower nor the addition of the antenna for K269FB will have a substantive impact on the KSFB directional radiation pattern.

² The Facility ID for KSFB at San Francisco, California is 6369.

The specified transmitter power output achieves the authorized effective radiated power. The transmitter power output is 4.4 Watts. The translator is connected to 45 feet of LDF4-50A semi-flexible coaxial cable. At the frequency of operation, the manufacturer of this transmission line specifies this length of line as having a decimal efficiency of 0.9264. At the antenna, which is connected to the other end of the transmission line, the input power is therefore 4.1 Watts. The antenna utilized by the facility is a Kathrein-Scala CA-4(70). This antenna has a power gain of 5.0 dBd.³ The resulting effective radiated power is 13 Watts, thus the specified transmitter power output achieves the authorized effective radiated power.

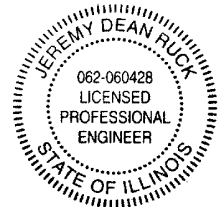
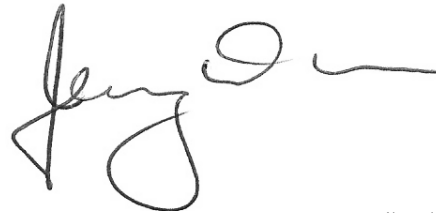
As previously discussed, the facility does utilize a directional antenna. This antenna is mounted to the structure in accordance with the specific instructions provided by the manufacturer. The antenna is properly oriented at an azimuth of 330 degrees true as specified in the construction permit application and as authorized on the construction permit.

As part of this application for license, IHR wishes to modify the primary station. Under the construction permit, as authorized, the primary station is specified as being KPOO(FM) at San Francisco, California. KSFB at San Francisco, California is the desired primary station. KSFB is an AM facility operating on 1260 kHz, and the translator facility complies with the applicable portions of the Commission's Rules to utilize KSFB as a primary station.⁴ Exhibit E-1 illustrates the 60 dBu service contour of K269FB along with both the 2 mV/m daytime contour of KSFB and a 25 miles radius centered on its transmitter site. As indicated on this map, the translator 60 dBu service contour is wholly contained within both the 2 mV/m daytime contour and 25 mile radius.

³ Power gain is 3.16.

⁴ Exhibit E-1 i

The preceding statement and attached exhibits have been prepared by me, or under my direction, and are true and accurate to the best of my belief and knowledge.



Above signature is digitized copy of actual signature
License Expires November 30, 2011

Jeremy D. Ruck, PE
July 6, 2010

K269FB.C

BPFT20081208ACA

Latitude: 37-42-59 N

Longitude: 122-23-37 W

ERP: 0.013 kW

Channel: 269

Frequency: 101.7 MHz




AMSL Height: 116.0 m

Horiz. Pattern: Directional

Vert. Pattern: No

Prop Model: None

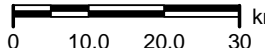
D.L. Markley & Associates, Inc.

-  K269FB 60 dBu Service Contour
-  KSFB 2 mV/m Daytime Service Contour
-  25 mile / 40.2 km Radius Centered on KSFB

K269FB 60 dBu
Service ContourKSFB 2 mV/m
Daytime Contour

Exhibit E-1
Service Contour Comparison
K269FB - Daly City, California
IHR Educational Broadcasting
July, 2010

Scale 1:1,000,000


0 10.0 20.0 30 km