

***TECHNICAL EXHIBIT  
APPLICATION FOR LICENSE***

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**FM TRANSLATOR STATION K250BV  
0.170 kW ERP DA / 97.9 MHz  
VENTURA, CALIFORNIA**

**GOLD COAST BROADCASTING LLC**

**NOVEMBER 2018**

## **APPLICATION FOR LICENSE**

The following engineering statement has been prepared for **Gold Coast Broadcasting LLC** ("Gold Coast"), permittee of FM translator station K250BV at Ventura, California, and is in support of their application for license.<sup>1</sup> This application is being filed to cover the initial construction of the translator authorized by its latest construction permit under FCC File No. BMPFT-20161028ACQ.

K250BV is authorized under the referenced construction permit to operate on FM channel 250 with a maximum effective radiated power of 170 Watts at a center of radiation of 75 meters above mean sea level, 60 meters above ground, utilizing a directional antenna. The antenna specified, authorized, and utilized for construction is a Kathrein-Scala model CA5-FM/CP/RM oriented at 180 degrees true. The facility was constructed in accordance with the terms of the construction permit.

The construction permit, as issued by the Commission, lists four special conditions. Gold Coast is substantially in compliance with each of these special conditions, and is working to ensure that the compliance with all conditions is finalized in the near term, as discussed below.

The first special condition or restriction pertains to radiofrequency radiation safety at the site. Under this condition, Gold Coast is required to coordinate with other users of the site to ensure that workers and other personnel are not exposed to levels of radiofrequency radiation in excess of applicable safety standards. Gold Coast certifies that it will perform necessary coordination activities under this condition to adequately protect all persons at the site.

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<sup>1</sup> The Facility ID for K250BV at Ventura, California is 143657.

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Coordination activities will include, but are not necessarily limited to, a reduction in transmitter power or cessation of operation.

The second of these conditions relates to the submission of this application for license. Under this special condition, Gold Coast is advised that this application for license must be on file prior to the commencement of program tests. Gold Coast will operate the translator under the provisions of automatic program test authority upon submission of this license application.

The third condition pertains to the fact that the antenna for the translator is authorized to be mounted on an AM antenna system. This special condition appears to be more germane to a non-directional AM antenna system, rather than the actual location, the KVTA antenna system, which has different directional patterns for daytime and nighttime operation. Gold Coast performed the required pre-construction measurements on this array, which included the recording of a full set of phase monitor indications as well as field strength readings at the authorized monitor points. Following construction, these measurements were repeated.

At the time of the post-construction measurements, some unexpected variances in the measurements were observed. Gold Coast is currently in the process of making adjustments to the KVTA directional antenna system, and upon completion, will submit to the Commission a partial proof of performance demonstrating substantial compliance with the authorized directional patterns. Concurrent with this license application, Gold Coast is filing a request for Special Temporary Authority to KVTA to request authorization to operate with parameters at variance while maintaining monitor point field strength values within authorized limits until these adjustments and

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field strength measurements can be completed. It should be noted that Gold Coast is also the licensee of KVTA, thus there are no objections to the operation of K250BV from the KVTA site.

The fourth special condition pertains to the authorization for K250BV, and that it is part of the Commission's *AM Revitalization* efforts. Gold Coast is cognizant of the requirements stated in this restriction, and will abide by the same.

The specified transmitter power output achieves the authorized effective radiated power. The authorized effective radiated power for the facility is 170 Watts. Data from the manufacturer of the antenna specifies 6.0 dBd, which converts to 3.98, as the power gain for the antenna. The input power to the antenna to achieve the authorized effective radiated power is 42.7 Watts.

Preceding the antenna is a jumper consisting of two feet of Andrew/Commscope LDF4-50 semi-flexible coaxial cable with a nominal diameter of one-half inch. The numerical efficiency of this jumper is 99.08 percent. The input power to this jumper to achieve the authorized effective radiated power is 43.1 Watts.

Ahead of this tower top jumper is the tower run of transmission line, which consists of 198 feet of Commscope AVA5-50 coaxial cable. The insertion loss of this line, including the connectors, is 0.733 dB. This corresponds to an efficiency of 84.47 percent. The input power to this line to achieve the authorized effective radiated power is 51.0 Watts.

Preceding the run of coaxial cable on the tower is a Kintronic Labs isolation coil. This coil has a nominal insertion loss of 0.85 dB at the frequency of operation. This insertion loss

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corresponds to an efficiency of 82.22 percent. The input power to the isolation coil to achieve the authorized effective radiated power is 62.1 Watts.

From the input to the isolation coil to the transmitter building is an additional run of transmission line. This run consists of 498 feet of Commscope AVA5-50. The insertion loss of this line run, including the connectors, is 1.783 dB. This value corresponds to an efficiency of 66.33 percent. The input power to this run of transmission line to achieve the authorized effective radiated power is 93.6 Watts.

Between the horizontal run of line and the transmitter is a jumper, also consisting of two feet of Andrew/Commscope LDF4-50 coaxial cable. The efficiency of this jumper based on data from the manufacturer is 99.08 percent. The input power to the jumper to achieve the authorized effective radiated power is 94.4 Watts. This value rounds to 94 Watts. The input to this jumper is the output of the transmitter, thus the specified transmitter power achieves the authorized effective radiated power.

The facility utilizes a directional antenna. This antenna has been installed in accordance with the instructions of the manufacturer, and has been oriented at the azimuth proposed and authorized.

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The preceding statement has been prepared by me, and is true and accurate to the best of my belief and knowledge.



Above signature is digitized copy of actual signature  
License Expires November 30, 2019

**Jeremy D. Ruck, PE**  
November 2, 2018

**JEREMY RUCK & ASSOCIATES, INC.**

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