



**EXHIBIT #1
ENGINEERING STATEMENT**

Concerning the Application of
Yavapai Broadcasting Corporation
To Make a Minor Change
To Commercial FM Station KZGL
File No. BLH19940505KD

October 2003

CH 240C0

21 kW H & V

This engineering statement supports the application of the Yavapai Broadcasting Corporation to make a minor change to commercial FM station KZGL, Cottonwood, Arizona to upgrade to Class C0, increase power to 21 kW, move the transmitter location and increase antenna height above average terrain. There are no further changes at this time.

Exhibit #21 provides information about compliance with Section 73.203(b), regarding the upgrade of KZGL to a Class C0.

Exhibit #22 of this exhibit is a computer generated map of KZGL'S proposed 60 dBu and 70 dBu F(50-50) contours, using the U.S.G.S. world map database. The city of license, Cottonwood, Arizona, is completely encompassed by the city grade, 70 dBu contour. The main studio is located in Cottonwood, in compliance with Section 73.1125(a)(1). 360 evenly spaced radials were used to plot each signal contour. The area within the proposed 60 dBu protected contour amounts to 20,627 square kilometers. This figure was determined using numerical calculus. The distance to the one mV/m signal contour along each of the radial azimuths was squared and then the average of the sum of these distances was calculated. The resulting average radius squared was then multiplied by π to determine the area within the contour. The population within the 60 dBu service contour was determined to be 252,781 people through the use of a computer program which extracts a population count based on population centroids defined by U.S. Census 2000 (PL-94-171) digital census block data.

A total of 36 evenly spaced radials were used to determine the antenna height above average terrain. The N.G.D.C. 30 arc second database was employed to determine the elevations along the radials that were averaged using the required four-point interpolation method. The resulting averaged radial antenna heights were employed

using the Commission's own TVFMINT algorithm to project the distances to signal contours. A tabular listing of the distance to the 60 and 70 dBu contours can be found on page #2.

Exhibit #24 is an Allocation Report. The first page is a computer channel study of all stations having a frequency and distance relationship. Under the proposed facility, all minimum spacing requirements are met, with the exception of the co-channel relationship with KZHK, St. George, Utah. The applicant proposes to provide contour protection under Section 73.215 to this station.

Exhibit #28 is a contour protection channel study. The exhibit gives current operating powers, HAAT's bearings and distances. (All distances were computed according to the method described under Section 73.208 of the Commission's Rules.) The second page is a narrative of the methods and conventions used in the report. Pages 3-6 are maps and FMOver tables, depicting the relationship between the proposed facility and co-channel KZHK.

The proposed transmitter location is within 320 kilometers of the Mexican border (312.7 km), however there are no pertinent relationships with Mexican stations. The station is OK with respect to Canada, Table Mountain, AM towers, FCC monitoring stations and the West Virginia Quiet Zone. There are no pertinent IF relationships.

Exhibit #29 is an R.F. emissions compliance statement.

Page #3 of **Exhibit #1** is a statement of the qualifications of the preparer.

Kate Michler

Declaration:

I, Katherine A. Michler, have received a Bachelor of Science degree from the University of Northern Iowa, and;

That, I declare that I have received training as a technical consultant as a member of the staff of Doug Vernier Telecommunications Consultants, and;

That, I have apprenticed under Douglas Vernier for over five years, and;

That, he has been active in broadcast consulting for over 25 years, and;

That, his qualifications are a matter of record with the Federal Communications Commission, and;

That, I am an Associate Member (#20792) of the Society of Broadcast Engineers, Indianapolis, Indiana, and;

That, the consulting firm of Doug Vernier Telecommunications Consultants has been retained by Yavapai Broadcasting Corporation, Cottonwood, Arizona;

That, I have personally prepared these engineering showings, the technical information contained in same and the facts stated within are true to my knowledge, and;

That, under penalty of perjury, I declare that the foregoing is correct.

Katherine A. Michler Katherine A. Michler

Executed on October 29, 2003