

**MULLANEY ENGINEERING, INC.**

9049 SHADY GROVE COURT  
GAITHERSBURG, MD 20877

**ENGINEERING EXHIBIT EE-LIC:**

**RADIO STATION KIJJ (FM)  
GUAM BROADCAST SERVICES, INC.  
TUMON, GUAM**

**Ch. 282C3 12.5 KW 89 M HAAT**

**OCTOBER 4, 2005**

**ENGINEERING STATEMENT IN SUPPORT OF  
A LICENSE APPLICATION FOR A  
NEW "AUCTION" FM STATION**

File No. BMPH-20050422AAM - Facility ID: 164176

**QUESTION 7 - EXHIBIT 8 OF FCC FORM 302-FM**



**ENGINEERING EXHIBIT EE-LIC:**

**RADIO STATION KIJJ (FM)  
GUAM BROADCAST SERVICES, INC.  
TUMON, GUAM**

**Ch. 282C3 12.5 KW 89 M HAAT**

**TABLE OF CONTENTS:**

1. F.C.C. Form 302-FM.
2. Declaration of Engineer
3. Narrative Statement
4. Table A, Summary of Technical Facilities Installed.
5. EE-LIC-RF, RF Exposure Measurements at 12.5 kW.

## Declaration

I, John J. Mullaney, declare and state that I am a graduate electrical engineer with a B.E.E. and my qualifications are known to the Federal Communications Commission, and that I am an principal engineer in the firm of Mullaney Engineering, Inc., and that I have provided engineering services in the area of telecommunications since 1977. My qualifications as an expert in radio engineering are a matter of record with the Federal Communications Commission.

The firm of Mullaney Engineering, Inc., has been requested by Guam Broadcast Services, Inc., to prepare the instant engineering exhibit in support of a license application for FM Station KIJJ (FM) (FCC Facility ID Number: 164176).

All facts contained herein are true of my own knowledge except where stated to be on information or belief, and as to those facts, I believe them to be true. Information concerning the technical equipment installed and compliance with special conditions was obtained directly from the licensee. No on-site inspection of the facility by Mullaney Engineering was made. I declare under penalty of perjury that the foregoing is true and correct.



John J. Mullaney, Consulting Engineer

Executed on the 4th day of October 2005.

**ENGINEERING EXHIBIT EE-LIC:**

**RADIO STATION KIJJ (FM)  
GUAM BROADCAST SERVICES, INC.  
TUMON, GUAM**

**Ch. 282C3 12.5 KW 89 M HAAT**

**NARRATIVE STATEMENT:**

This engineering statement has been prepared on behalf of Guam Broadcast Services, Inc., permittee of Radio Station KIJJ (FM) at Tumon, Guam (Facility ID 164176). The purpose of this statement is to inform the Commission that construction has been completed and that **except as noted** the new facility complies with its outstanding construction permit (BMPH-20050422AAM).

In accordance with the Special Operating Conditions on the construction permit, KIJJ (FM) coordinated the times and locations of construction such that no worker was exposed to excessive R.F. levels and it will continue to do so in the future. In addition, KIJJ filed the results of measurements with the staff and as a result **received** “Automatic Program Test Authority”. The facility “as measured” is in full compliance with “un-controlled” FCC Radiation Guidelines. Compliance with “controlled” standard is through signs.

**Table A** is a summary of the technical facilities installed.

### **“As Built” - Differences**

The newly constructed facility differs from those originally authorized. However, all of these differences are permitted to be adjusted when filing the license application.

KIJJ initially planned on installing a Jampro 4 bay antenna which had a bay to bay spacing of 0.8 wavelengths. However, due to a mixup at the manufacturer it appears that the antenna actually shipped was spaced at 0.5 wavelengths. The manufacturer has agree to replace the antenna and it is expected to arrive within the next few weeks. It should be noted that the specific antenna model was not a condition on the CP since RF Measurements were specified to establish compliance.

The original antenna at a spacing of 0.8 wavelengths was capable of developing an ERP of **18 kW**. However, with the reduced spacing of 0.5 wavelengths and with the transmitter installed the maximum possible ERP is **12.5 kW**. That ERP easily complies as a C3 facility. The antenna is located within the city of Tumon. Assuming an HAAT of 89 meters the 70 dBu contour extends 20.3 km at 18 kW and 18.8 km at 12.5 kW. The city is approximately a square measuring 3 km on a side. City grade 70 dBu service is still provided to 100% of the city of license.

KIJJ fully plans to install the originally proposed 0.8 wavelength spaced antenna in the near future so as to operate at the originally

requested ERP of 18 kW. KIJJ understands that it will be required to **once again take RF exposure measurements** to establish compliance.

As one of the conditions on the CP, KIJJ was required to take RF Exposure measurements. At the time those measurements were taken the problem with the antenna spacing **was not known**. However, the installation of the wrong antenna does not alter the fact that the current operation at the reduced ERP of 12.5 kW is in **full compliance** with the FCC's RF Exposure guidelines.

In an effort to keep the electronic record as complete as possible, those measurements are attached to this 302 license application.

### **SUMMARY**

Guam Broadcast Services, Inc., permittee of Radio Station KIJJ (FM) herein files its license application indicating that construction has been completed and that **except as noted** the facility complies with its outstanding construction permit.



---

John J. Mullaney, Consulting Engineer

October 4, 2005.