

**MULLANEY ENGINEERING, INC.**

9049 SHADY GROVE COURT  
GAITHERSBURG, MD 20877

**ENGINEERING EXHIBIT EE-LIC:**

**RADIO STATION KCHZ(FM)  
SYNCOM RADIO CORPORATION  
OTTAWA, KANSAS**

**Ch. 239C1 98 KW 299 M HAAT**

**NOVEMBER 3, 2003**

**ENGINEERING STATEMENT IN SUPPORT OF  
A LICENSE APPLICATION FOR A  
ANTENNA REPLACEMENT**

File No. BLH-20010621AAJ - Facility ID: 33332

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

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## 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 Syncom Radio Corporation, to prepare the instant engineering exhibit in support of a license application for FM Station KCHZ(FM) (FCC Facility ID Number: 33332).

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. I declare under penalty of perjury that the foregoing is true and correct.

/s/ John J. Mullaney

John J. Mullaney, Consulting Engineer

Executed on the 3rd day of November 2003.

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**NARRATIVE STATEMENT:**

This engineering statement has been prepared on behalf of Syncom Radio Corporation, Licensee of Radio Station KCHZ(FM) at Ottawa, Kansas (Facility ID 33332). The purpose of this statement is to inform the Commission that KCHZ has replaced its existing 8 bay ERI antenna with an 8 bay Jampro antenna system while keeping the antenna center of radiation unchanged.

In accordance with the original special Operating Conditions on the last construction permit, KCHZ(FM) coordinated the times and locations of construction such that no worker was exposed to excessive R.F. levels. The proposed facility is in full compliance with both the “controlled” & “un-controlled” FCC Radiation Guidelines. Since the facility contributes less than 1% of the “controlled” standard at ground level it is **categorically excluded** from further consideration.

Table A is a summary of the technical facilities installed.

### **“As Built” - Differences**

The only significant difference in the Jampro antenna is the incorporation of 0.5 degrees of electrical beam tilt. Figure 1 is a plot & tabulation of the elevation pattern. However, all of these differences are permitted to be adjusted when filing the license application.

### **SUMMARY**

Syncom Radio Corporation, licensee of Radio Station KCHZ(FM) herein files its license application indicating that a replacement antenna has been installed and that the facility complies with its last authorization.

/s/ John J. Mullaney

John J. Mullaney, Consulting Engineer

November 3, 2003.

## Table A

### Summary of Technical Facilities Installed

<b>Call:</b>	KCHZ(FM)		
<b>City/State:</b>	Ottawa, Kansas		
<b>Facility ID:</b>	33332		
<b>Channel:</b>	239C1	95.7 MHz	
<b>C.P. Number:</b>	None Required		
<b>Coordinates:</b>	39-00-45 / 95-01-46 NAD-27		
<b>Tower ASR:</b>	1044528		
<b>Tip Height:</b>	319.7 M AGL		
<b>Antenna C.R.:</b>	308 M AGL	566 M AMSL	299 M HAAT
<b>ERP (max):</b>	98 kW H	98 kW V	
<b>ERP (hor):</b>	96 kW H	96 kW V	
<b>Antenna Make:</b>	JAMPRO	JHPC-8D 1.0 lambda spacing	
<b>OMNI:</b>	Yes	<b>E-Tilt:</b> 0.5 deg	<b>Gain:</b> 4.3
<b>Coax Efficiency:</b>	72.2 %	Andrew HJ8-50J	3" 313.9 meters
<b>Total Efficiency:</b>	69.5 % (Including coaxial switch)		
<b>TPO:</b>	32.78 kW		