

ENGINEERING STATEMENT
IN SUPPORT OF AN APPLICATION FOR LICENSE
TO COVER CONSTRUCTION PERMIT (0000137879)
WKHI(FM), NEWARK, MARYLAND
CHANNEL 233A (94.5 MHz) 4.7 KW 113 METERS

JULY 2022

This engineering statement has been prepared on behalf of The Voice Radio, LLC licensee of FM broadcast station WKHI, Newark, Maryland in support of an application for station's license to cover construction permit (CP) File Number: 0000137879.

At present WKHI operates on Channel 235A (94.9 MHz) with 4.7 kW effective radiated power (ERP) and 113 meters antenna height above average terrain (HAAT) using a directional FM antenna manufactured by PSI . WKHI was granted a CP (File Number: 0000137879) to operate on Channel 233A (94.5 MHz) to mitigate interference. No changes in the currently licensed operation, including the directional FM antenna were proposed and granted in the CP.

The following data provides pertinent information for the proposed WKHI licensed operation on Channel 233A.

Name of the Licensee:	The Voice Radio, LLC		
Station Location:	MD, Newark		
Channel:	233A (94.5 MHz)		
Hours of Operation:	Unlimited		
Transmitter:	Type Accepted		
Antenna Type:	Directional, PSI, model PSIFMR-2E-DA		
Antenna Coordinates:	North Latitude:	38 deg 21 min 41.5 sec	
	West Longitude:	75 deg 15 min 9.1 sec	
Transmitter output power:	As required to achieve authorized ERP		
Effective Radiated Power (ERP):	4.7 kW 6.72 dBk		

Height of Radiation Center Above Ground (H&V):	110.0 meters
Height of Radiation Center Above Mean Sea Level (H&V):	120.0 meters
Height of Radiation Center Above Average Terrain (H&V):	113.0 meters
Antenna Structure Registration Number:	1262840

In support of compliance of the CP's Special Operating Conditions or Restrictions, the following information is provided:

FM Antenna Proof-of-performance: The attached letter from PSI indicates there would be no change in the directional radiation pattern of the FM antenna on Channel 233A (94.5 MHz) from the licensed FM antenna currently operating on Channel 235A (94.9 MHz).

FM Antenna Orientation: The licensed antenna orientation was certified by a licensed surveyor. WKHI states that there has been no change in the orientation of FM antenna since installed for operation Channel 235A (94.9 MHz).

FM Antenna Installation: See attached statement from Terry Dalton, the technical director of radio station WKHI concerning installation and orientation of the directional antenna and the survey conducted by a registered surveyor dated on July 4th, 2016.

Community Coverage: Since, beside operating frequency, there is no change in the station's licensed operation including ERP, HAAT and directional radiation pattern, WKHI will continue to comply with Section 73.315 of the Commission rules.

RMS and Minimum Radiated Power: The directional radiation pattern of the WKHI antenna also complies with the CP conditions with respect to the RMS value of the pattern and the principal minima and their associated field strength limits of 0.343 kW between 340 to 350 degrees True (clockwise) as noted in the PSI letter.



Propagation Systems, Inc.

Quality Broadcast Antenna Systems

July 7, 2022

Kevin Andrade
President
The Voice Radio Network, LLC
20254 Dupont Blvd.
Georgetown, DE 19947

Ref: WKHI Directional Antenna Frequency Change

Dear Mr. Andrade,

In regard to PSI Job 1592, antenna model PSIFMR-2E-DA manufactured and supplied June of 2016, we have evaluated the effects of changing the frequency of operation from the current 94.9 MHz to the new frequency of 94.5 MHz and have determined there will be no measurable change to the radiation pattern and gain of the antenna.

In accordance with FCC requirements the measured pattern at the new frequency does not exceed the approved envelope pattern and is 92.4% of the envelope RMS. In order to reach the approved ERP of 4.7 kW an input power of 2.94 kW to the antenna is required.

Sincerely,

Douglas A. Ross
President

Statement of Terry Dalton

I have been the technical director of FM radio station WKHI, Newark, Maryland, since the station was acquired by The Voice Radio LLC in April of 2020. WKHI was operating on Channel 235A (94.9 MHz) with 4.7 kW ERP and 113 meters HAAT using a PSI directional antenna. WKHI has now been granted a construction permit (File number: 0000137879), modifying license (BLH-20170216ABQ), to operate on Channel 233A ((94.5 MHz) with 4.7 kW ERP and 113 meters using the currently licensed directional FM antenna. To the best of my knowledge, no changes have been to the installation of the licensed FM antenna including its orientation since its acquisition.

Terry Dalton

Terry Dalton
Technical Director
The Voice Radio LLC
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5th July 2016

Vern Egli
Madison Media Partners
1002 Greensway Drive
Douglas, GA 31533

RE: Azimuth of the WAMS 94.9 Mhz antenna

Dear Mr. Egli:

On July 4th, 2016 I surveyed the orientation of a PSIFMR-2E-DA antenna located on 9112 Logtown Road in Berlin Maryland. The antenna was determined to have a Geodetic North Azimuth of 159°. Consider this letter official verification of the orientation of that antenna.

Thank you.

Russell Hammond
MD #21329
DE #S6-0000781



