

APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B

Measurements to demonstrate compliance with §73.317 of the Commission's rules for suppression of spurious emissions for FM transmission were conducted on October 22, 2015 utilizing the calibrated directional coupler, which is built into the output section of the Shively 3 Way Star Junction and 32734 branch combiner, Agilent E4411B Spectrum Analyzer and three Microwave Filter Company 2-section notch filters. The measurement technique, graphic, and tabular presentation of the results of these measurements are included in this exhibit, as well as the details of the Shively 32734 Combiner. Three frequency Intermodulation products

Measurement Procedure

- The Agilent E4411B spectrum analyzer was fed via a 10 dB pad from the forward power port of the precision directional coupler, which is built into the combiner output.
- Triple cascaded notch filters tuned to 93.7 MHz, 104.1 MHz, and 105.9 MHz were placed between the 10 dB pad and the RF input to the spectrum analyzer.
- The reference level for the fundamental FM carriers were established without the notch filters in the circuit.

- With the notch filters in circuit, the fundamentals are reduced by approximately 50 db which allows the instrument gain and available dynamic range to be increased without overloading the 1st mixer within the spectrum analyzer. Due to the reduced noise floor, accurate assessment of the intermodulation product levels can be established.
- The graphic presentation of each measurement was saved, printed, and included with this report.

Measurement Results

A tabulation of the measurement results is found in Exhibit B1. Individual graphic presentation of the fundamental frequency levels and each potential intermodulation frequency measurement found in Exhibits B2 through B31.

By analysis of these measurements of spurious frequencies it is believed that WRJY is in compliance with the guidelines of §73.317 of the Commission's rules.

APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B1

§73.317 db Attenuation =
 <65 db minimum <80 db maximum
 or
 $43+10\text{LOG}(\text{power in watts})$

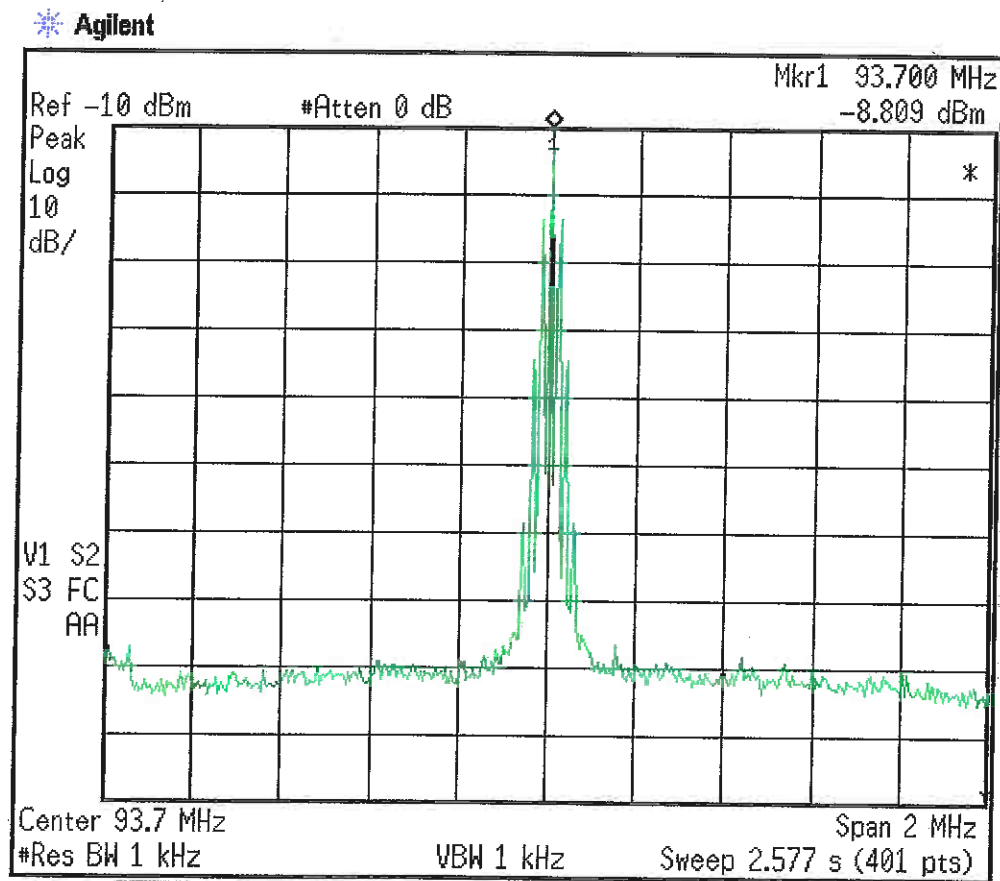
| INTERMOD FREQUENCY (MHz) | SIGNAL LEVEL (dBm) | REFERENCE 93.7 MHz SIGNAL LEVEL | REFERENCE 104.1 MHz SIGNAL LEVEL | REFERENCE 105.9 MHz SIGNAL LEVEL |
|--------------------------------|--------------------------|--|---|---|
| | | -8.8 | -12.3 | -6.7 |
| | | 6.15 | 3.36 | 11.88 |
| | | -80.0 | -78.3 | -80.0 |
| 91.9 | -100.1 | -91.3 | -87.8 | -93.4 |
| 102.9 | -102.9 | -94.1 | -90.6 | -96.2 |
| 102.3 | -98.4 | -89.6 | -86.2 | -91.7 |
| 83.3 | -99.4 | -90.6 | -87.1 | -92.7 |
| 114.5 | -99.1 | -90.3 | -86.9 | -92.4 |
| 95.5 | -107.5 | -98.7 | -95.2 | -100.8 |
| 116.3 | -99.4 | -90.6 | -87.1 | -92.7 |
| 107.7 | -99.1 | -90.3 | -86.8 | -92.4 |
| 118.1 | -98.4 | -89.6 | -86.1 | -91.7 |
| 69.3 | -99.0 | -90.2 | -86.8 | -92.3 |
| 79.7 | -98.3 | -89.5 | -86.0 | -91.6 |
| 90.1 | -99.0 | -90.2 | -86.8 | -92.3 |
| 71.1 | -98.1 | -89.3 | -85.8 | -91.4 |
| 72.9 | -98.9 | -90.0 | -86.6 | -92.1 |
| 112.7 | -103.1 | -94.3 | -90.8 | -96.4 |
| 85.1 | -102.8 | -94.0 | -90.5 | -96.1 |
| 124.9 | -102.2 | -93.4 | -89.9 | -95.5 |
| 97.3 | -100.0 | -91.2 | -87.7 | -93.3 |
| 126.7 | -104.9 | -96.1 | -92.6 | -98.2 |
| 128.5 | -104.9 | -96.1 | -92.6 | -98.2 |
| 109.5 | -102.7 | -93.9 | -90.4 | -96.0 |
| 119.9 | -102.0 | -93.2 | -89.7 | -95.3 |
| 130.3 | -102.9 | -94.1 | -90.6 | -96.2 |
| 81.5 | -97.0 | -88.2 | -84.7 | -90.3 |

Transmitter Power (kW)
 Required Spur Supression

APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B2

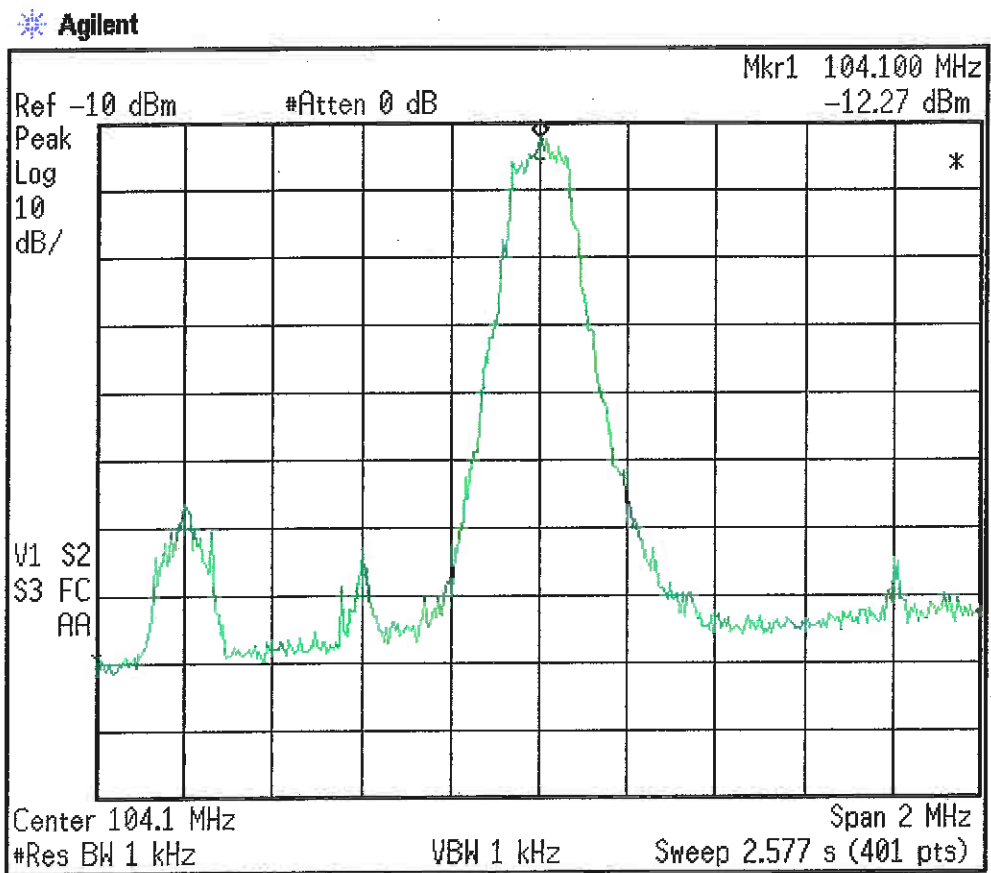
WBQO Reference



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B3

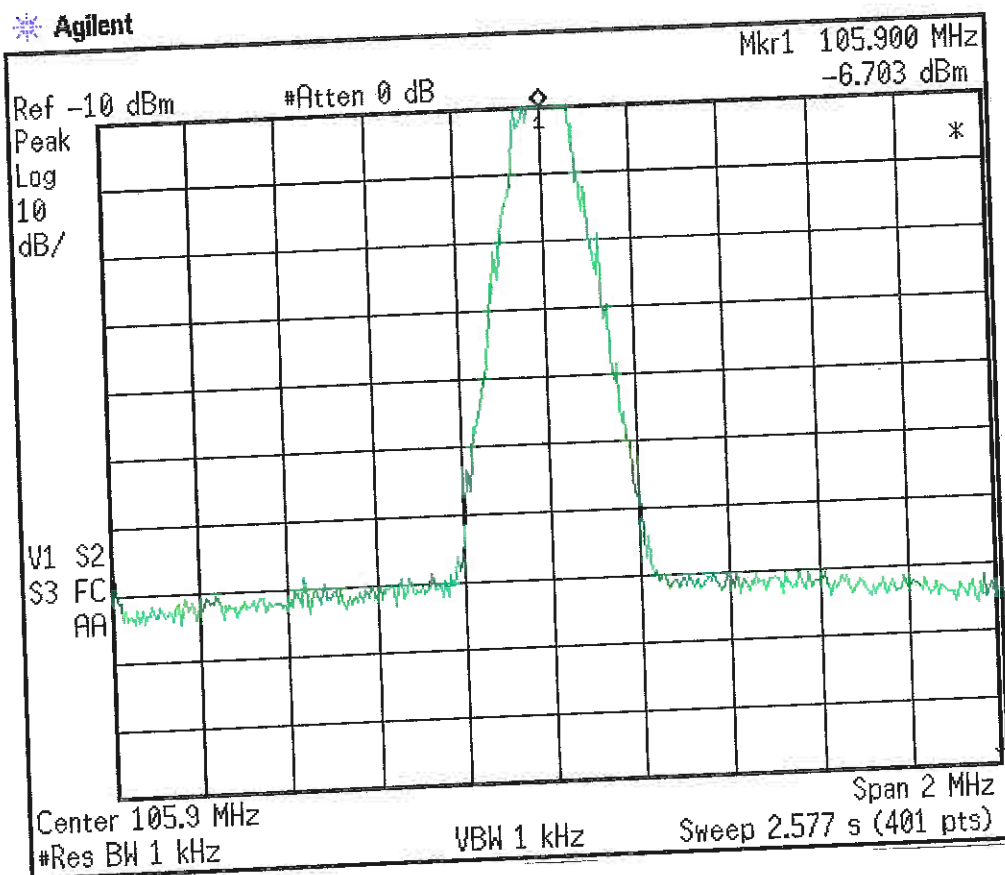
WRJY Reference



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B4

WXMK Reference



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B5

Calculations Intermod Frequencies

Brunswick GA

INTERMOD STUDY

Brunswick, GA

0 : 0 : 00.000 0 : 0 : 00.000
3 station branched
// -----

TRANSMIT FREQUENCIES

93.7MHz : 104.1MHz : 105.9MHz :
// -----

HIT WINDOW LIMITS

LOWER LIMIT: 75MHz : UPPER LIMIT: 136MHz :

// -----

IN THE THIRD ORDER:

10 products checked, 7 hits found
93.7 MHz is involved in 5 hits 71.4%
104.1 MHz is involved in 5 hits 71.4%
105.9 MHz is involved in 5 hits 71.4%

IN THE FIFTH ORDER:

21 products checked, 9 hits found
104.1 MHz is involved in 8 hits 88.9%
105.9 MHz is involved in 8 hits 88.9%
93.7 MHz is involved in 7 hits 77.8%

// -----

THIRD ORDER HITS:

105.900000 - 93.700000 - 93.700000 = ± 81.500000
104.100000 - 93.700000 - 93.700000 = ± 83.300000
105.900000 - 104.100000 - 104.100000 = ±102.300000
105.900000 + 105.900000 - 104.100000 = ±107.700000
104.100000 + 104.100000 - 93.700000 = ±114.500000
105.900000 + 104.100000 - 93.700000 = ±116.300000
105.900000 + 105.900000 - 93.700000 = ±118.100000

// -----

FIFTH ORDER HITS:

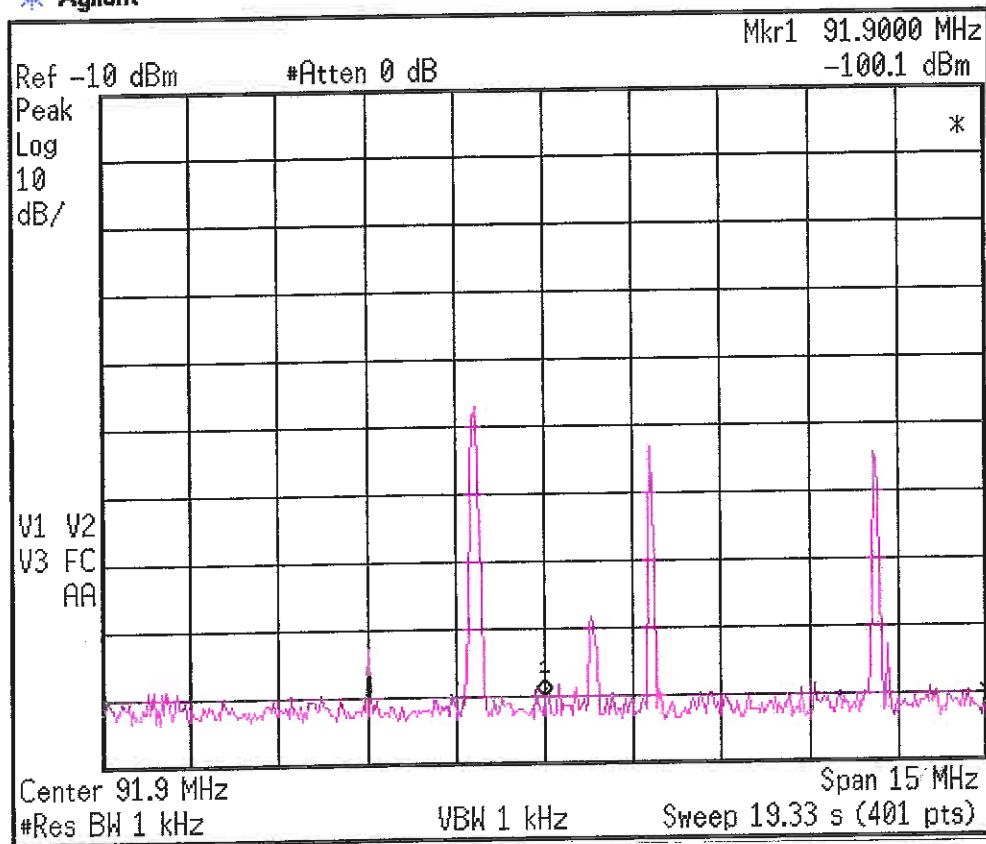
105.900000 + 105.900000 - 104.100000 - 104.100000 + 93.700000 = ± 97.300000
105.900000 + 105.900000 - 104.100000 - 104.100000 - 104.100000 = ±100.500000
105.900000 + 105.900000 + 105.900000 - 104.100000 - 104.100000 = ±109.500000
105.900000 - 104.100000 - 104.100000 - 104.100000 + 93.700000 = ±112.700000
105.900000 + 105.900000 + 105.900000 - 104.100000 - 93.700000 = ±119.900000
104.100000 + 104.100000 + 104.100000 - 93.700000 - 93.700000 = ±124.900000
105.900000 + 104.100000 + 104.100000 - 93.700000 - 93.700000 = ±126.700000
105.900000 + 105.900000 + 104.100000 - 93.700000 - 93.700000 = ±128.500000
105.900000 + 105.900000 + 105.900000 - 93.700000 - 93.700000 = ±130.300000

// -----

APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B6

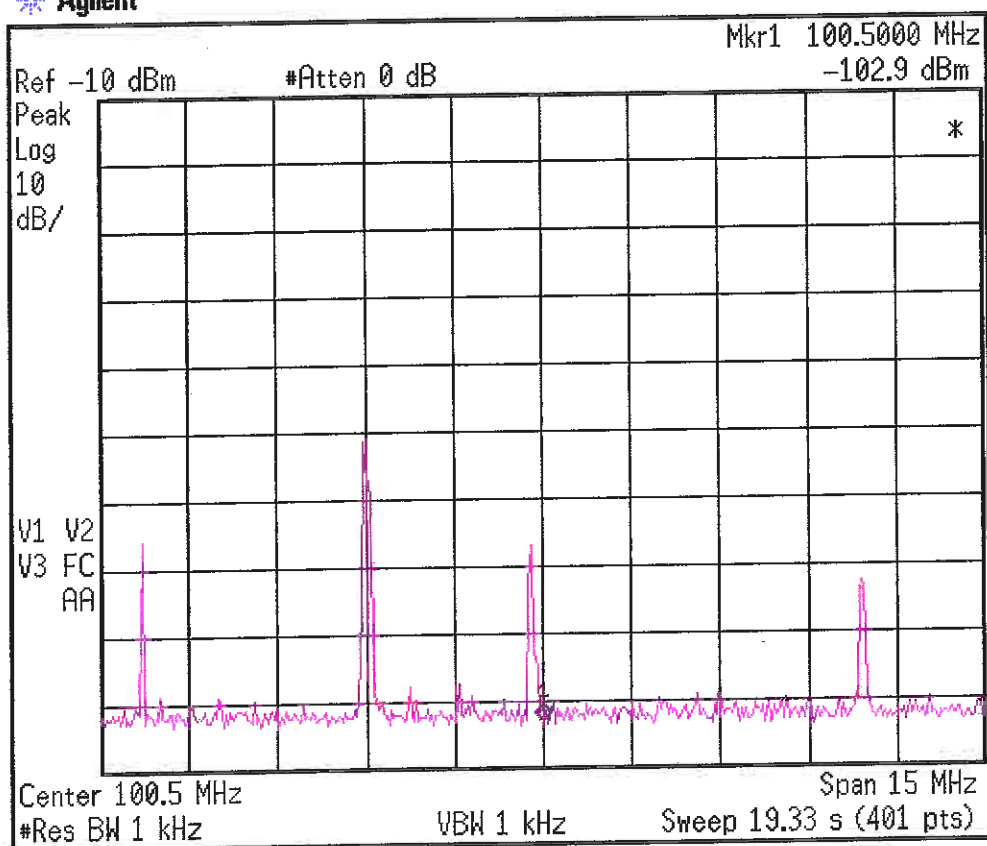
* Agilent



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B7

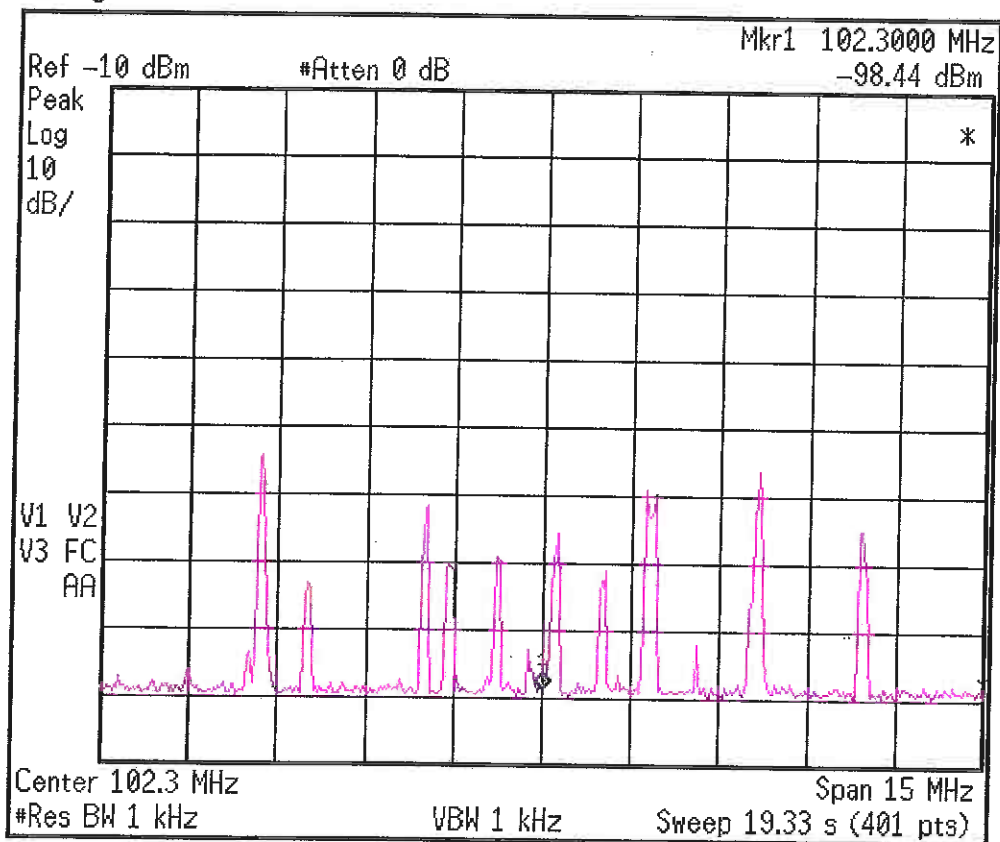
* Agilent



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHz - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

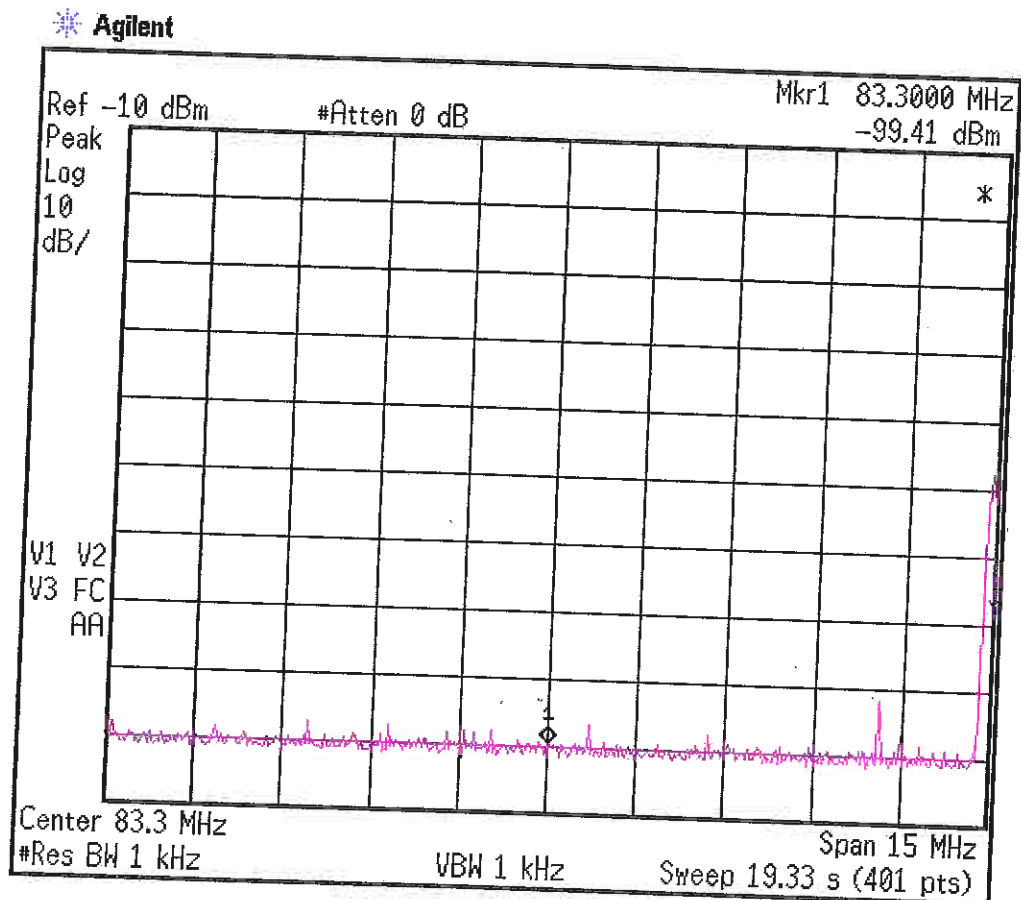
EXHIBIT B8

* Agilent



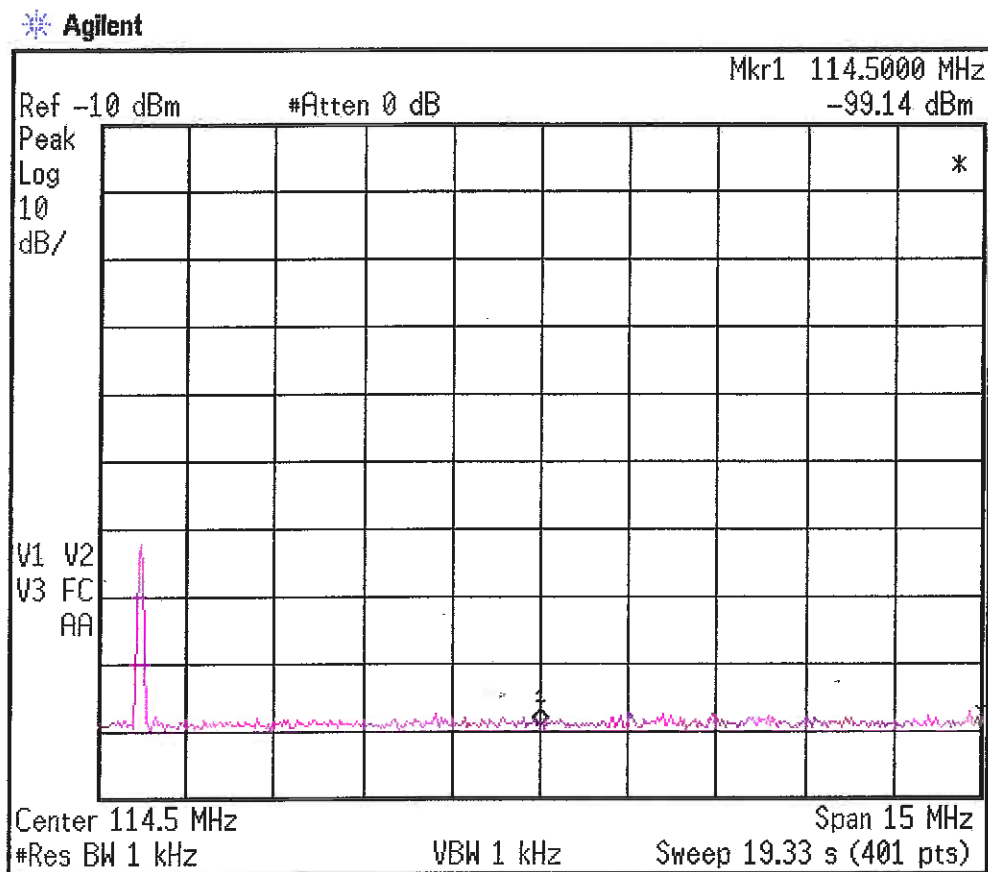
APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B9



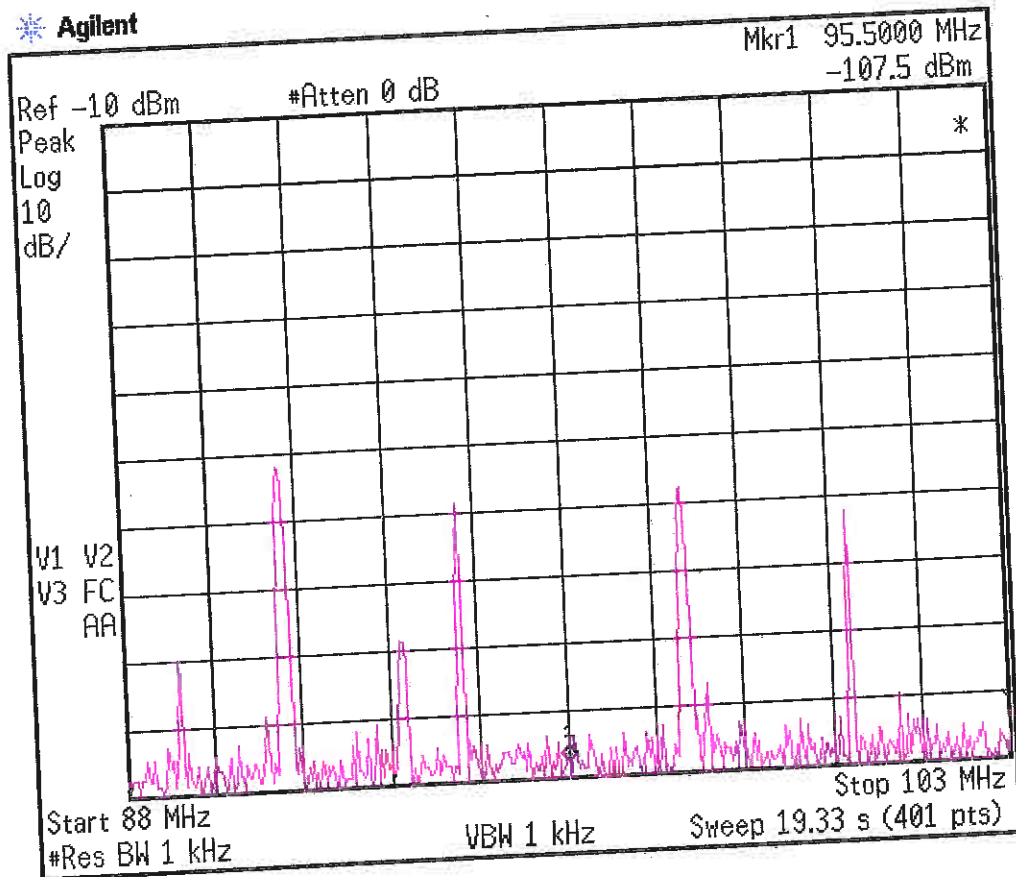
APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B10



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

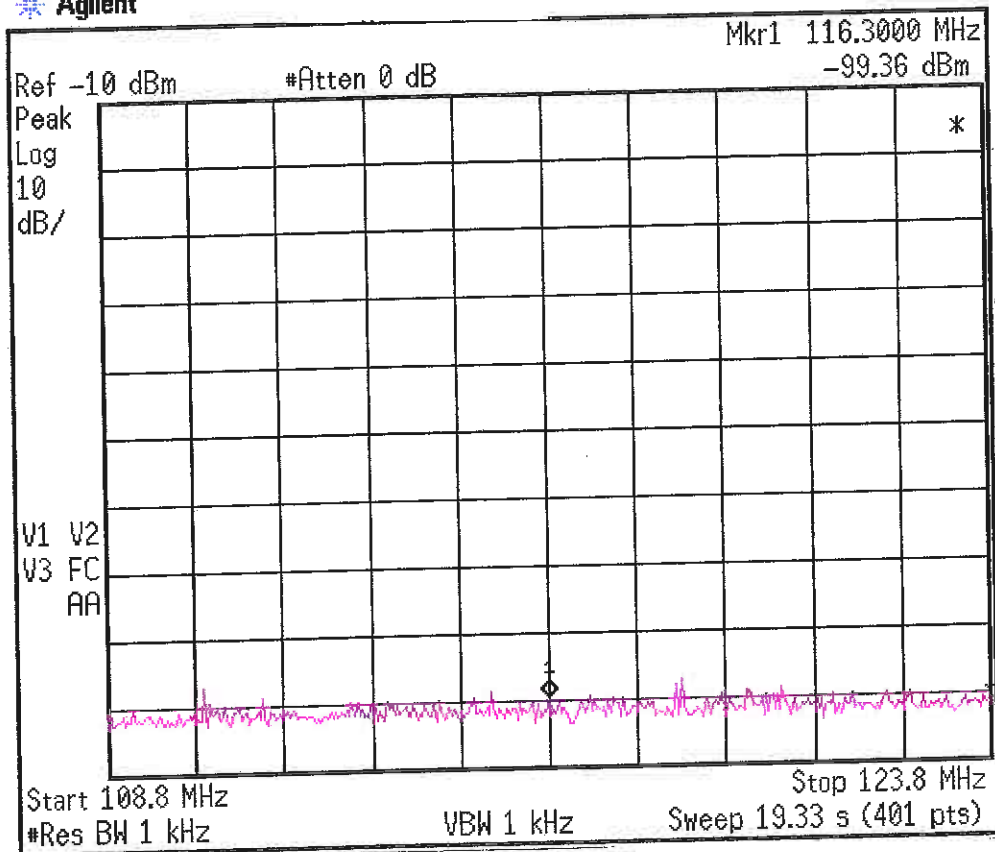
EXHIBIT B11



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B12

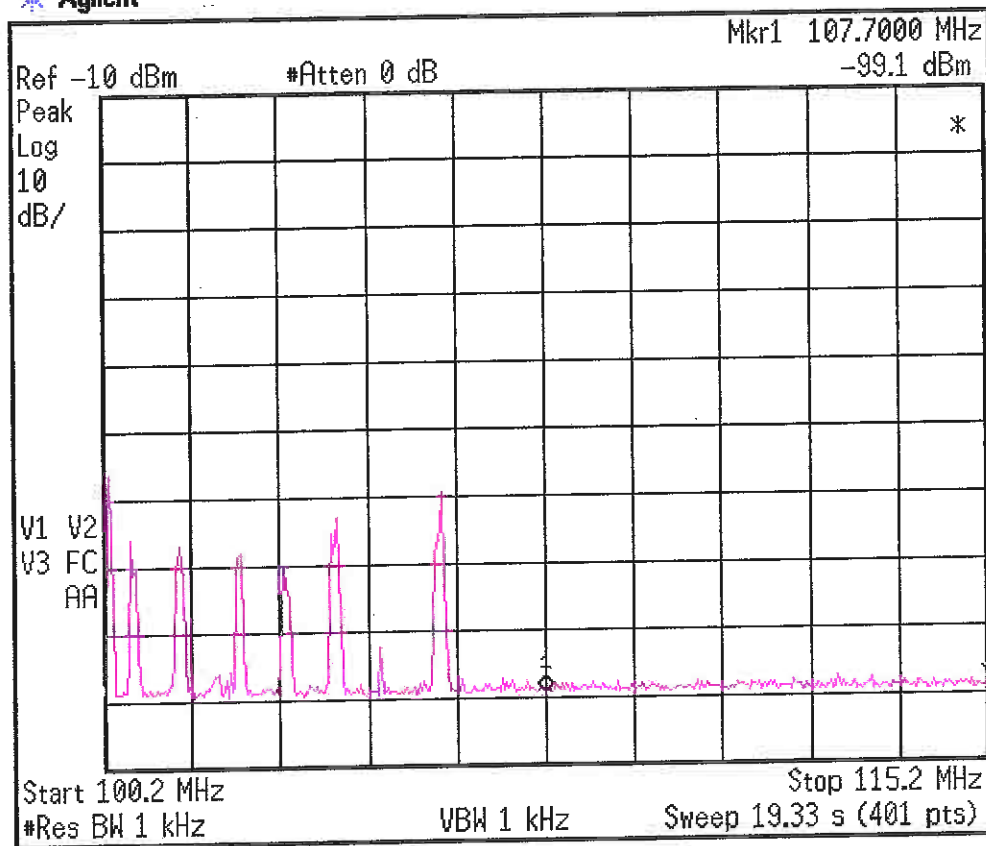
Agilent



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B13

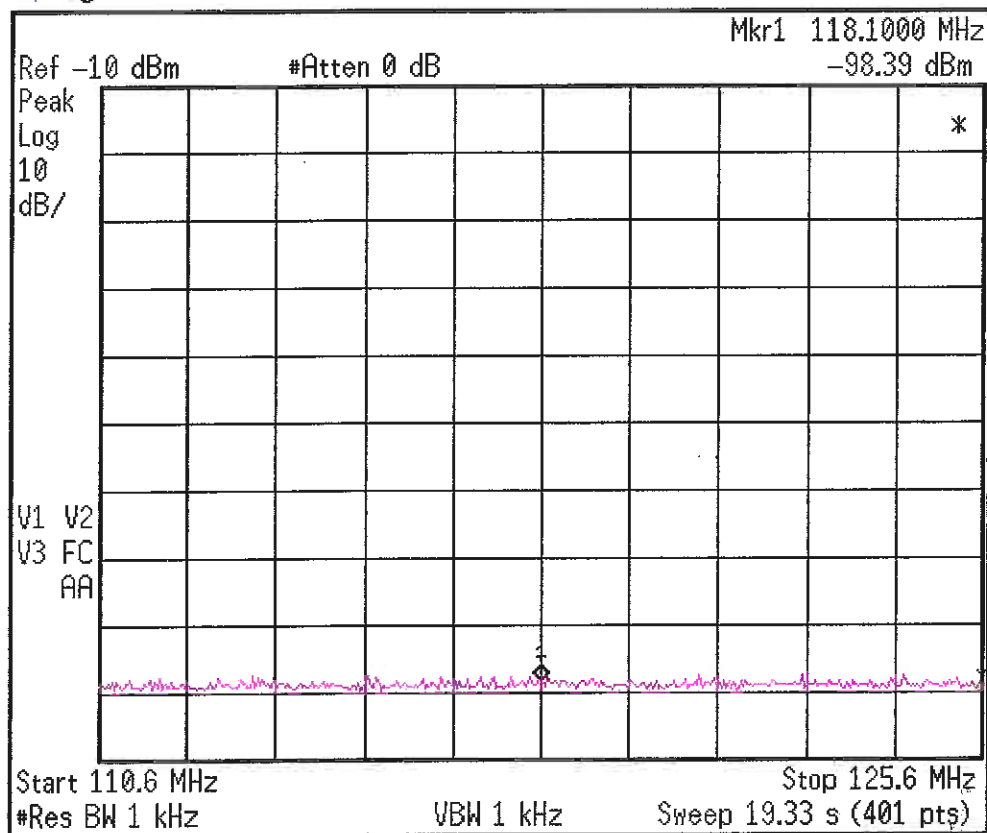
* Agilent



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B14

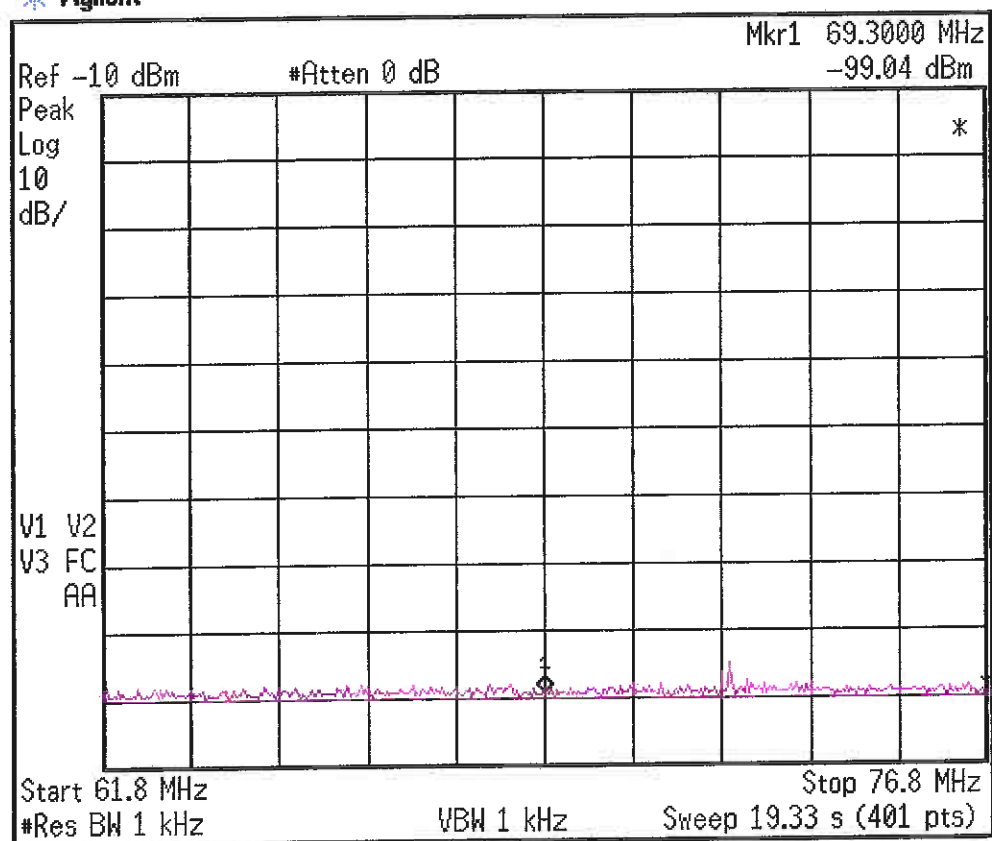
* Agilent



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

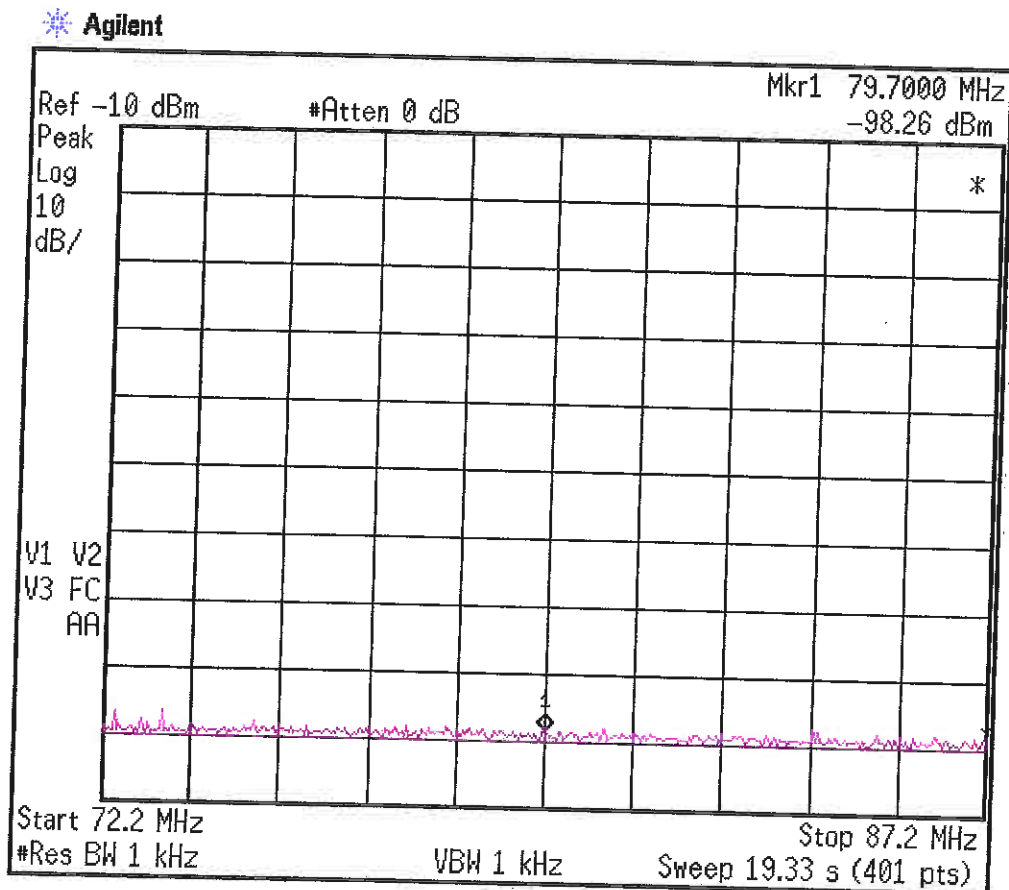
EXHIBIT B15

* Agilent



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

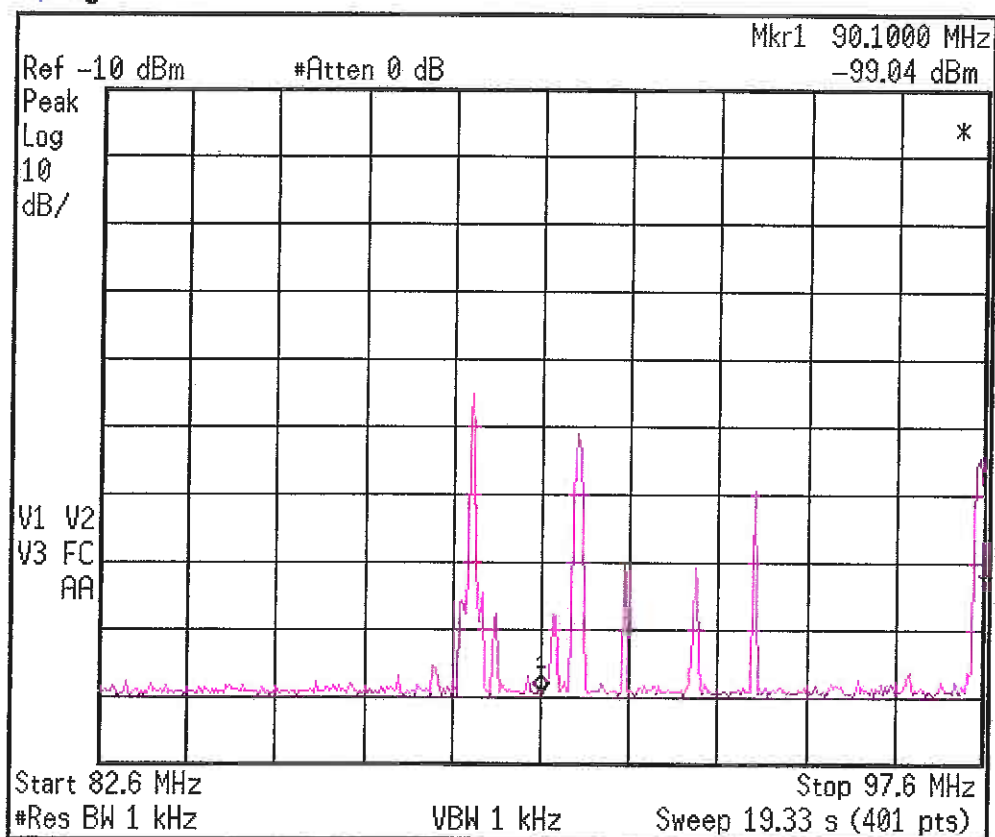
EXHIBIT B16



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B17

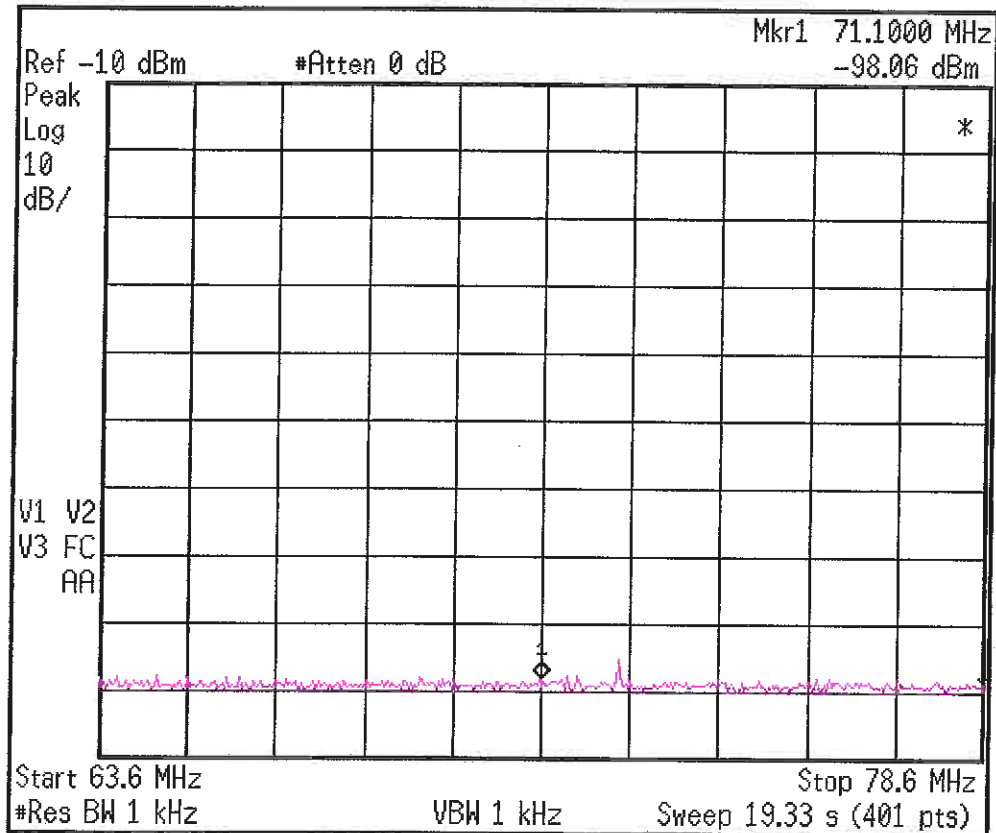
* Agilent



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B18

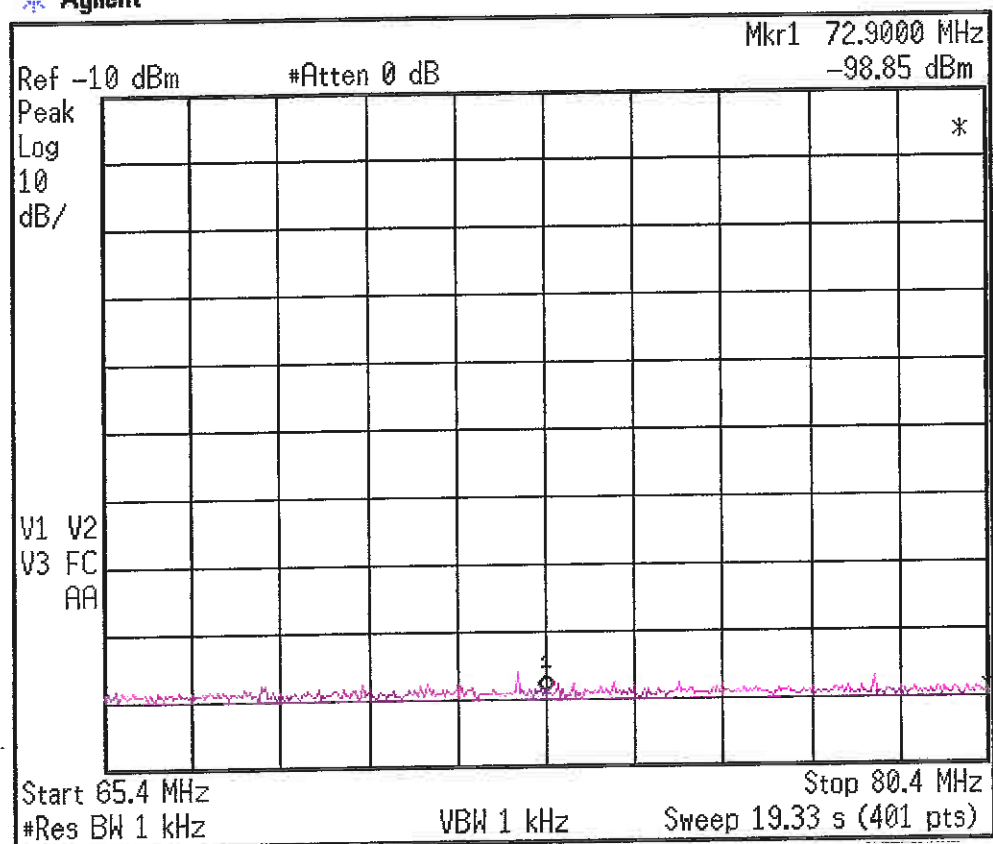
* Agilent



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B19

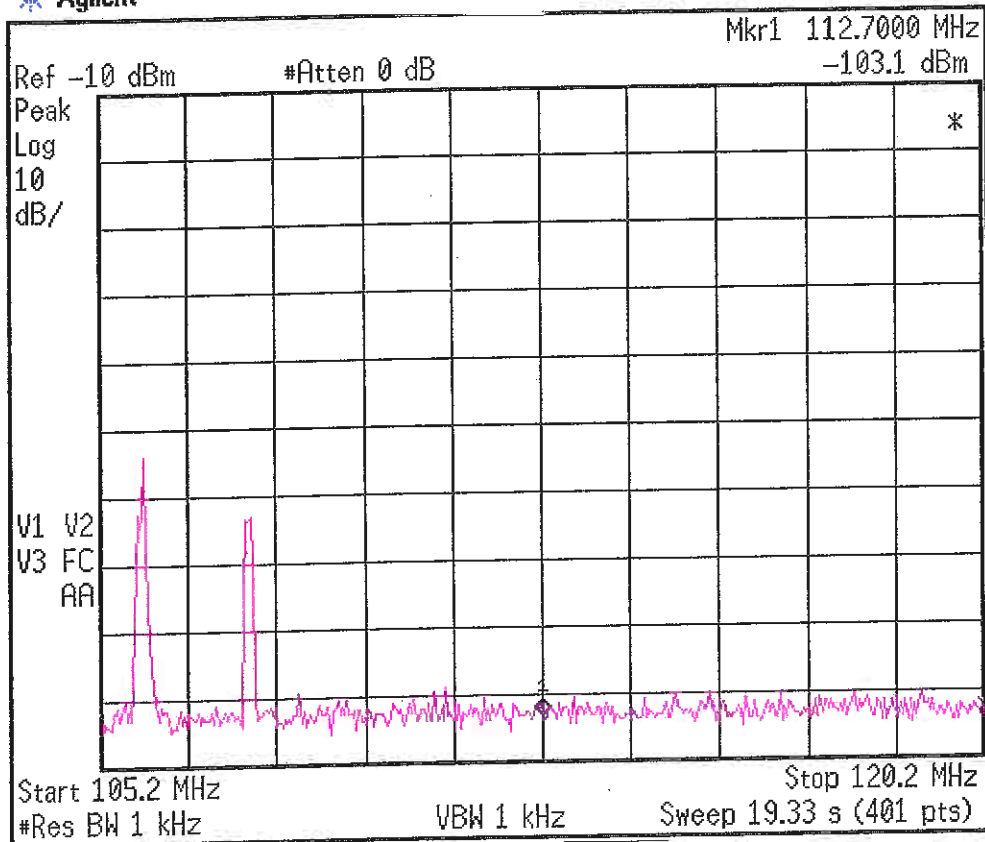
* Agilent



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B20

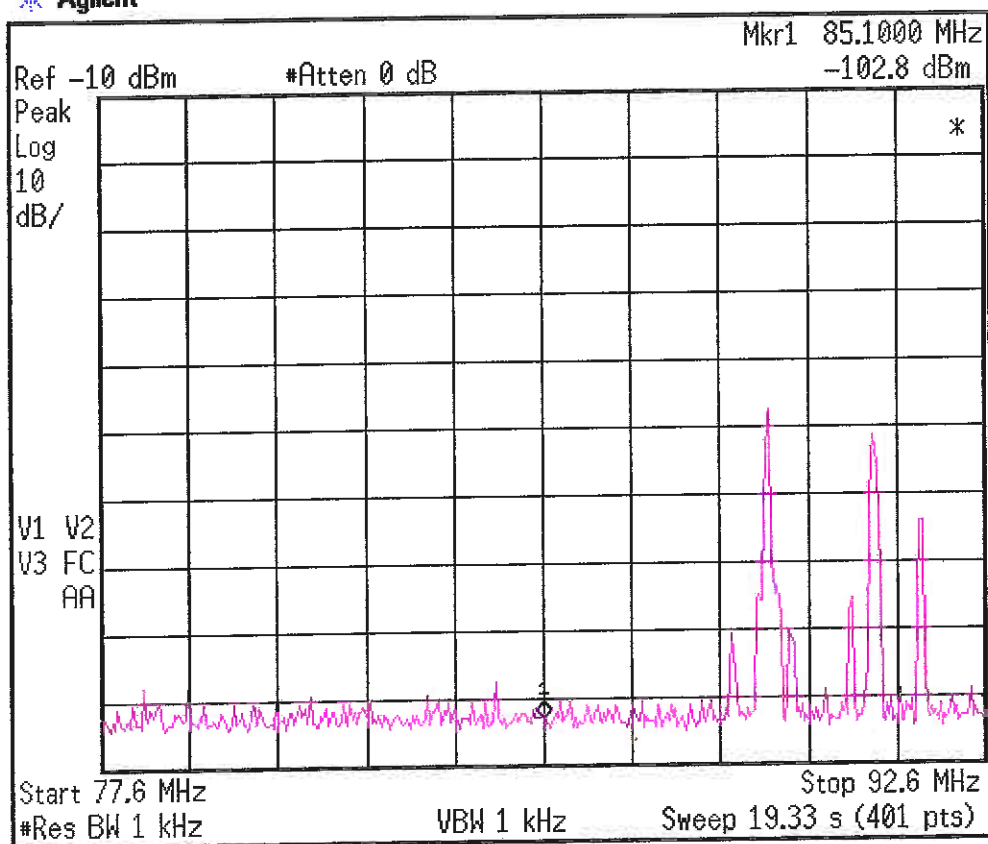
* Agilent



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B21

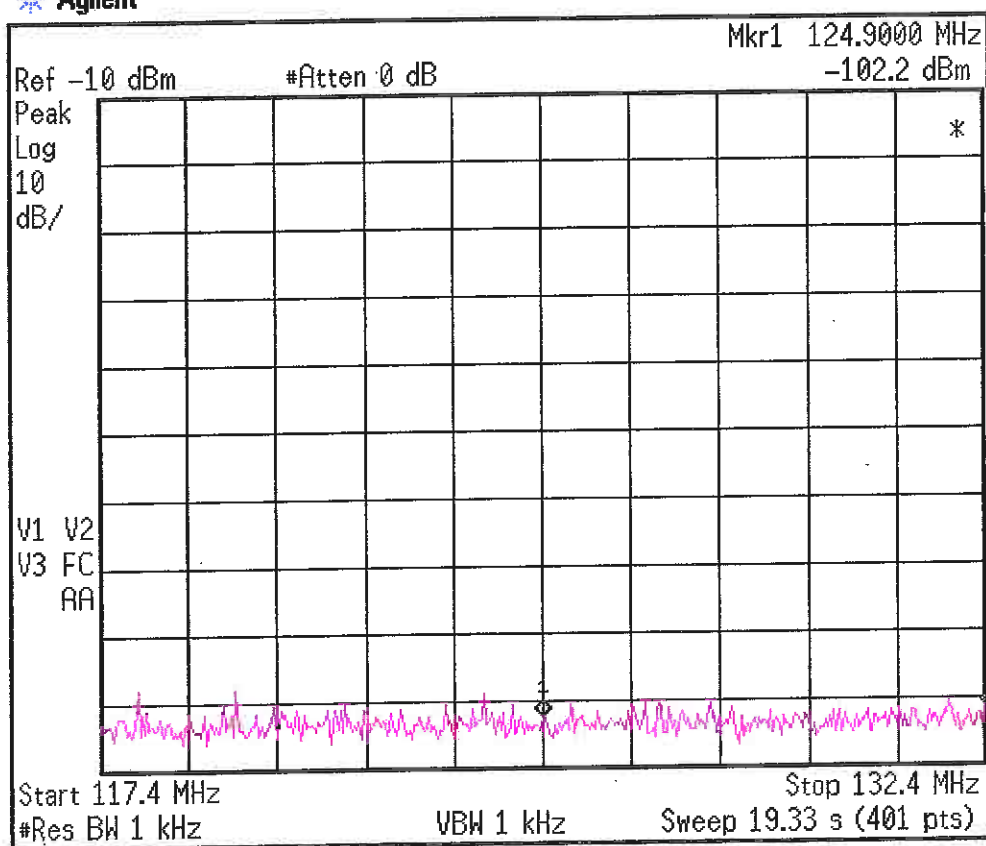
Agilent



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

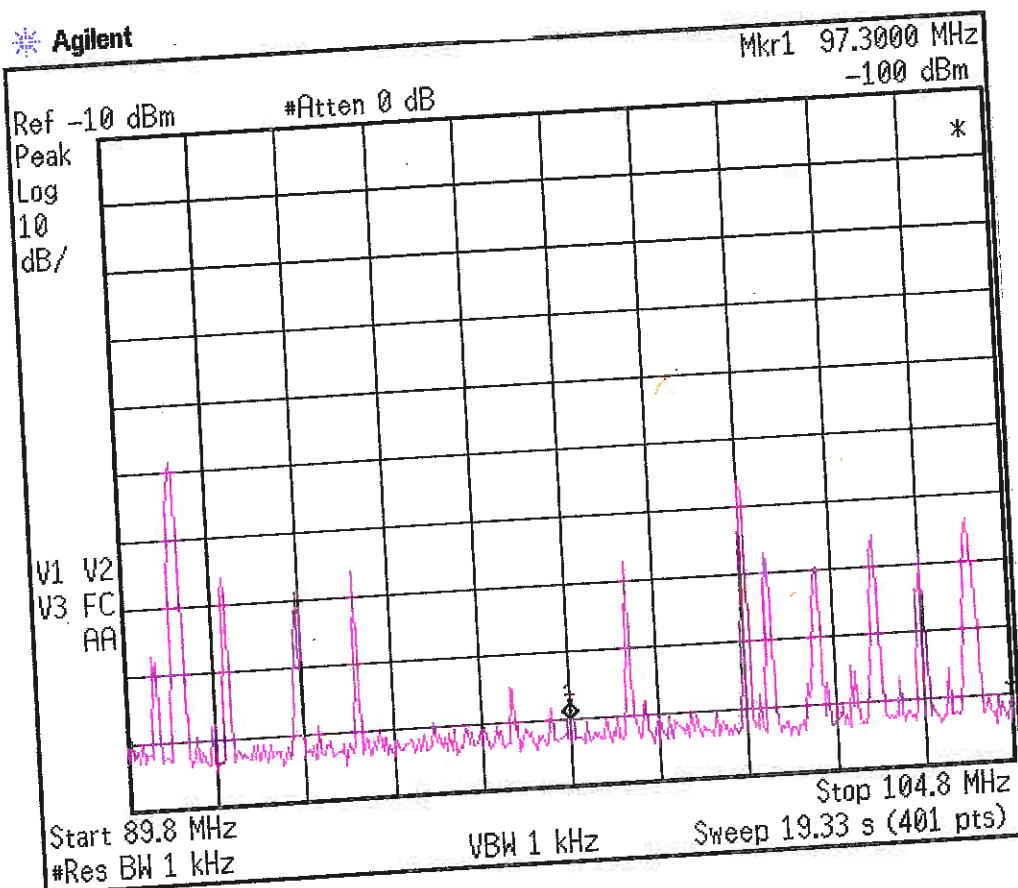
EXHIBIT B22

* Agilent



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

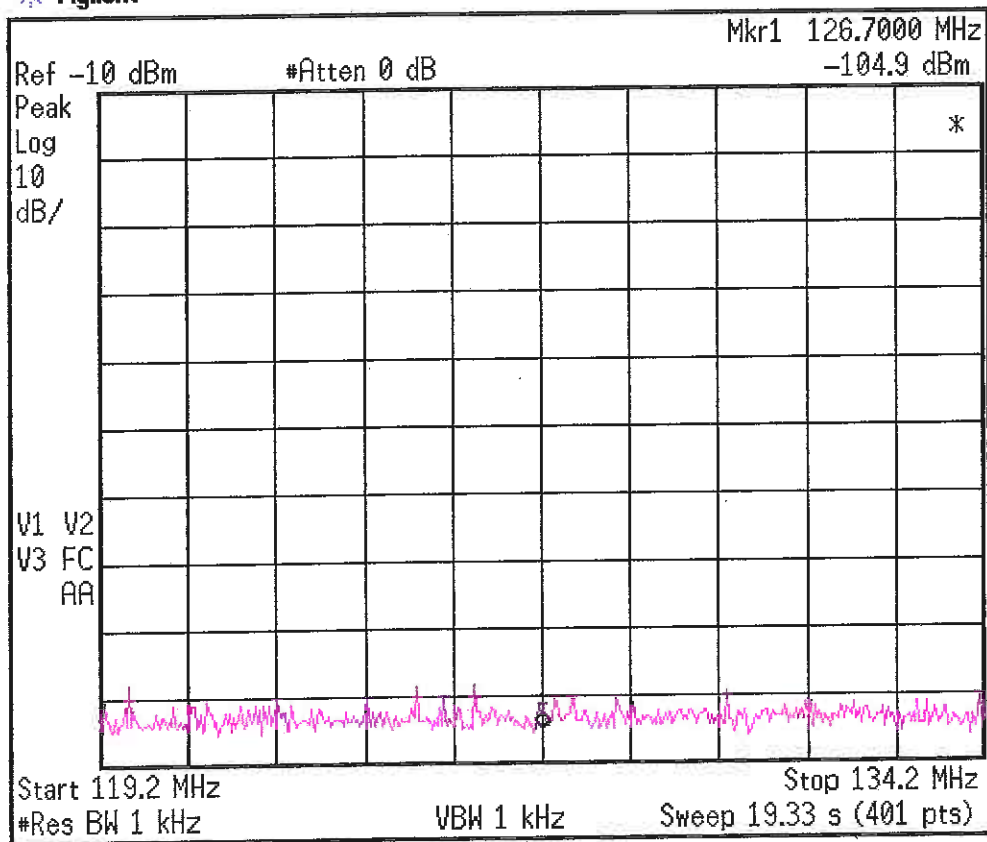
EXHIBIT B23



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHz - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B24

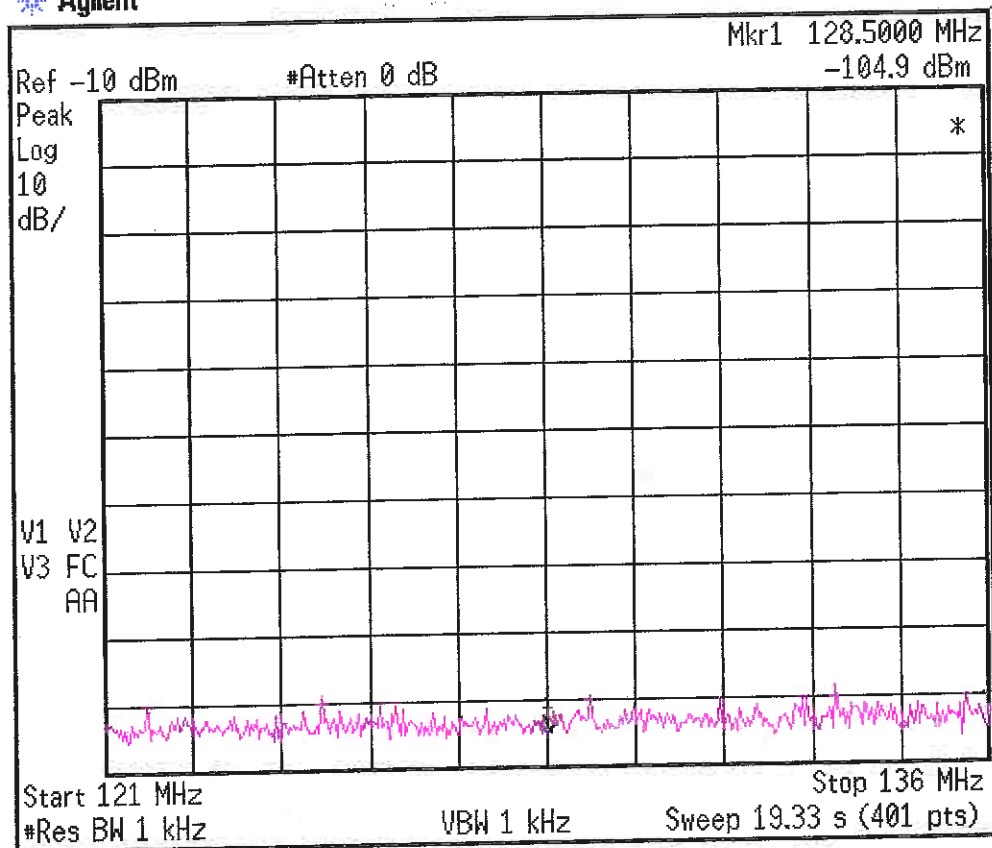
* Agilent



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B25

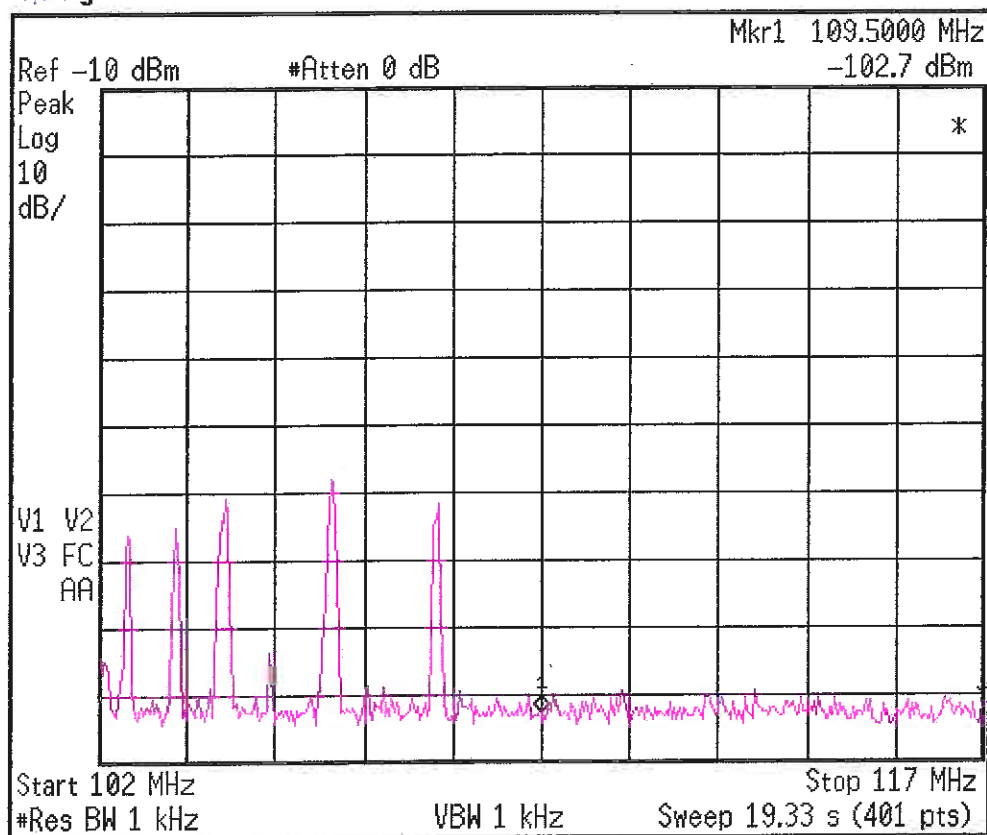
* Agilent



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B26

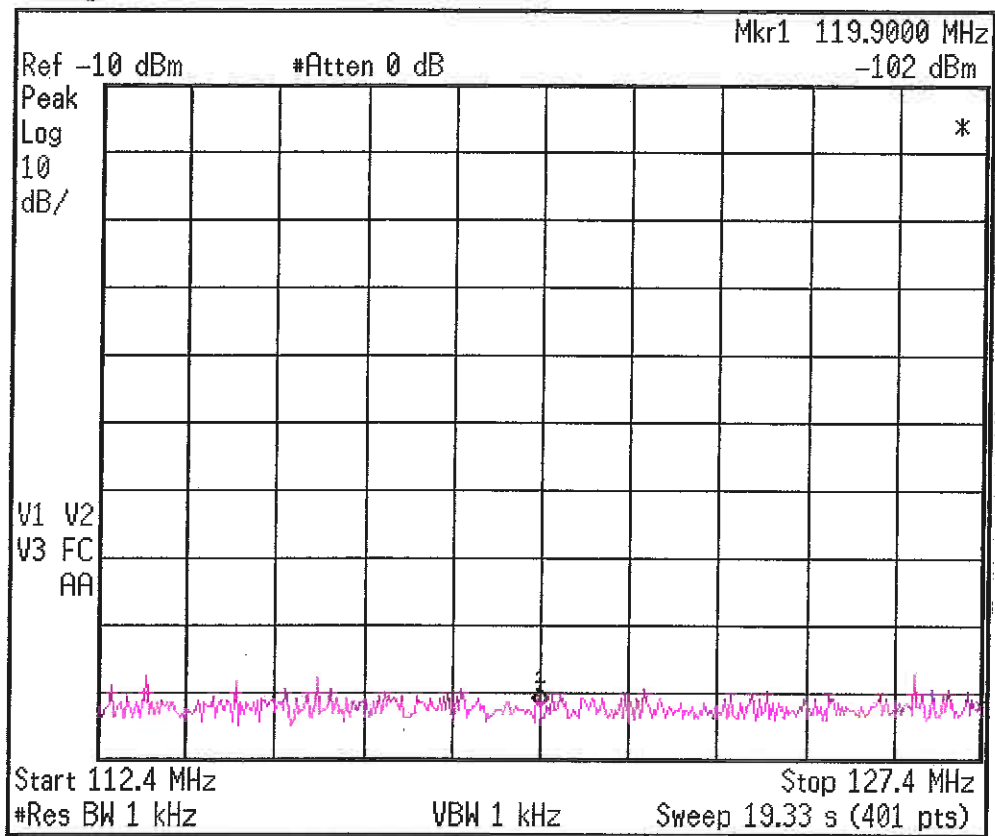
* Agilent



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

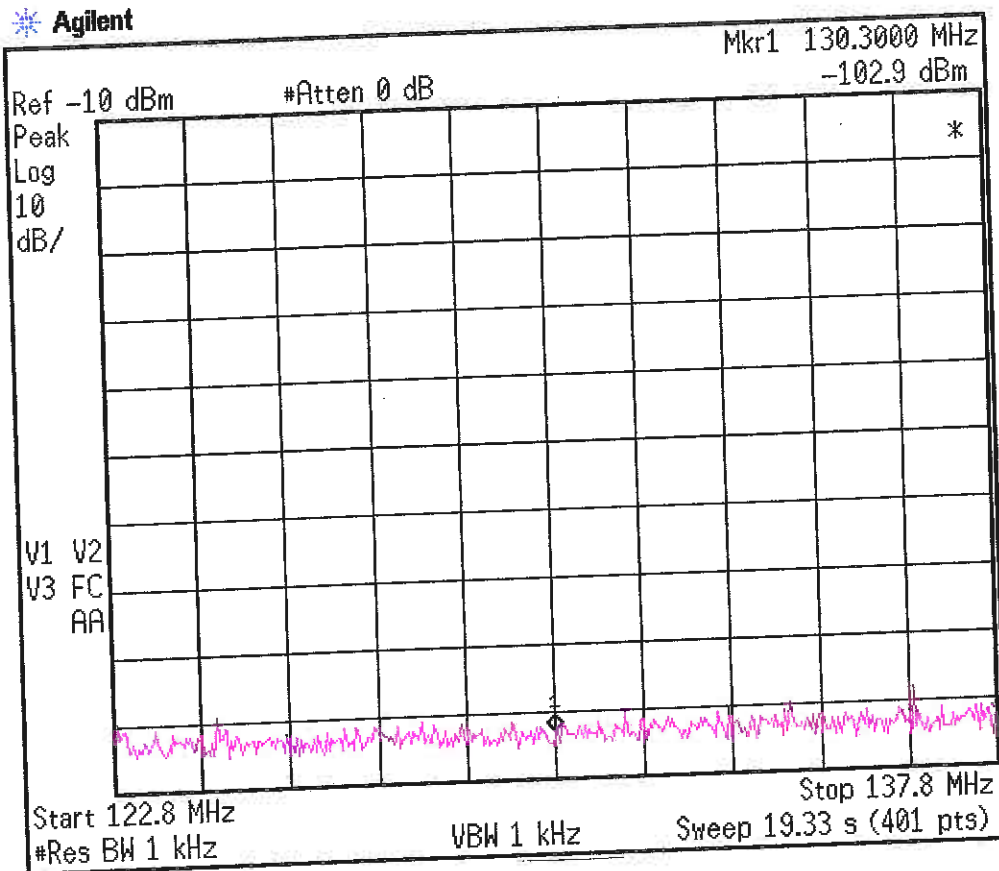
EXHIBIT B27

* Agilent



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

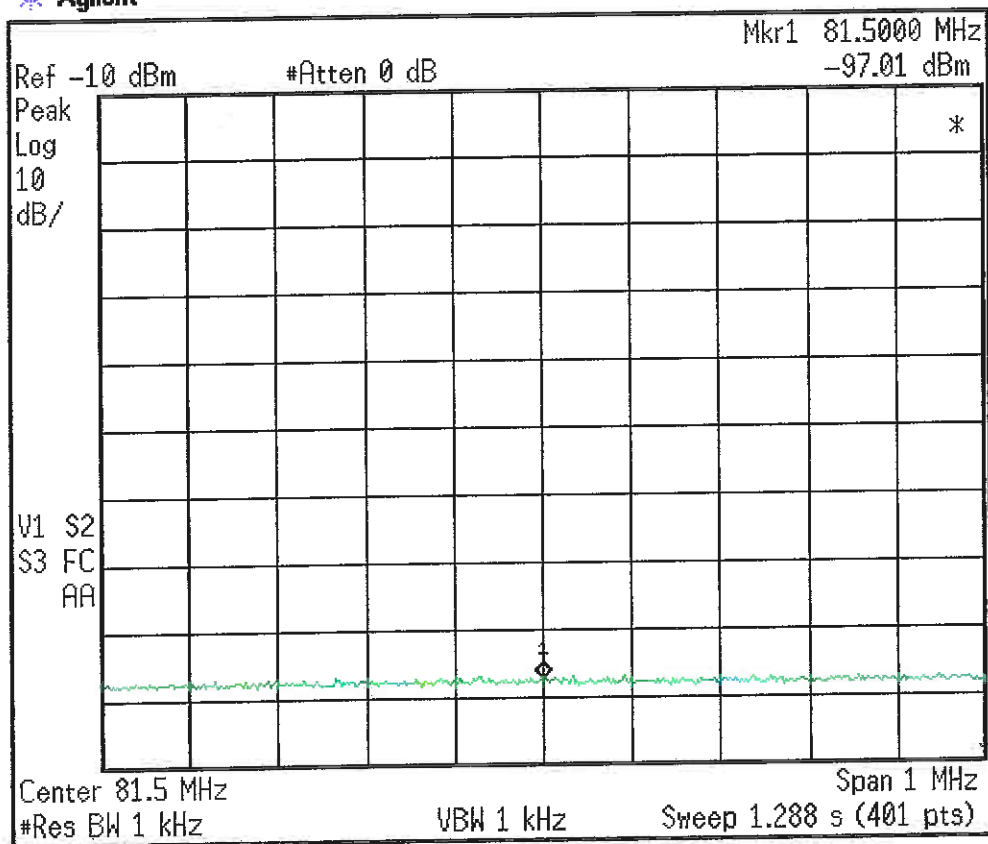
EXHIBIT B28



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B29

* Agilent



APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B30

Brunswick GA

INTERMOD STUDY

Brunswick, GA

0 : 0 : 00.000 0 : 0 : 00.000
3 station branched
// -----

TRANSMIT FREQUENCIES

93.7MHz : 104.1MHz : 105.9MHz :
// -----

HIT WINDOW LIMITS

LOWER LIMIT: 75MHz : UPPER LIMIT: 136MHz :

// -----

IN THE THIRD ORDER:

10 products checked, 7 hits found
93.7 MHz is involved in 5 hits 71.4%
104.1 MHz is involved in 5 hits 71.4%
105.9 MHz is involved in 5 hits 71.4%

IN THE FIFTH ORDER:

21 products checked, 9 hits found
104.1 MHz is involved in 8 hits 88.9%
105.9 MHz is involved in 8 hits 88.9%
93.7 MHz is involved in 7 hits 77.8%

// -----

THIRD ORDER HITS:

105.900000 - 93.700000 - 93.700000 = ± 81.500000
104.100000 - 93.700000 - 93.700000 = ± 83.300000
105.900000 - 104.100000 - 104.100000 = ±102.300000
105.900000 + 105.900000 - 104.100000 = ±107.700000
104.100000 + 104.100000 - 93.700000 = ±114.500000
105.900000 + 104.100000 - 93.700000 = ±116.300000
105.900000 + 105.900000 - 93.700000 = ±118.100000

// -----

FIFTH ORDER HITS:

105.900000 + 105.900000 - 104.100000 - 104.100000 + 93.700000 = ± 97.300000
105.900000 + 105.900000 - 104.100000 - 104.100000 - 104.100000 = ±100.500000
105.900000 + 105.900000 + 105.900000 - 104.100000 - 104.100000 = ±109.500000
105.900000 - 104.100000 - 104.100000 - 104.100000 + 93.700000 = ±112.700000
105.900000 + 105.900000 + 105.900000 - 104.100000 - 93.700000 = ±119.900000
104.100000 + 104.100000 + 104.100000 - 93.700000 - 93.700000 = ±124.900000
105.900000 + 104.100000 + 104.100000 - 93.700000 - 93.700000 = ±126.700000
105.900000 + 105.900000 + 104.100000 - 93.700000 - 93.700000 = ±128.500000
105.900000 + 105.900000 + 105.900000 - 93.700000 - 93.700000 = ±130.300000

// -----

APPLICATION FOR STATION LICENSE
GOLDEN ISLES BROADCASTING, LLC
WRJY FM RADIO STATION
CH 281A - 104.1 MHZ - 3.9 KW
BRUNSWICK, GEORGIA
October 2015

EXHIBIT B31

**Three frequency
intermodulation products**

| | |
|--------------|---------|
| Frequency 1: | 93.700 |
| Frequency 2: | 104.100 |
| Frequency 3: | 105.900 |

Intermodulation products:

| | |
|-----------|---------|
| 3rd order | 91.900 |
| 3rd order | 100.500 |
| 3rd order | 102.300 |
| 3rd order | 83.300 |
| 3rd order | 114.500 |
| 3rd order | 95.500 |
| 3rd order | 116.300 |
| 3rd order | 107.700 |
| 3rd order | 118.100 |
| 5th order | 89.300 |
| 5th order | 79.700 |
| 5th order | 90.100 |
| 5th order | 71.100 |
| 5th order | 100.500 |
| 5th order | 72.900 |
| 5th order | 112.700 |
| 5th order | 85.100 |
| 5th order | 124.900 |
| 5th order | 97.300 |
| 5th order | 126.700 |
| 5th order | 128.500 |
| 5th order | 109.500 |
| 5th order | 119.900 |
| 5th order | 130.300 |