TECHNICAL EXHIBIT
APPLICATION FOR LICENSE
RADIO STATION KKBQ-FM
PASADENA, TEXAS
CH 225C 100 KW 585 M

Technical Statement

This Technical Exhibit, of which this statement is part, was prepared on behalf of radio station KKBQ-FM on Channel 225C at Pasadena, Texas. KKBQ-FM has recently replaced its main master non-directional transmitting antenna with a new master non-directional antenna. This application has been prepared to provide the new transmitting model number and transmitter output power pursuant to Section 73.1690(c)(1) of the Commission's Rules.

Figure 1 is a tabulation of the RF transmission system. The maximum effective radiated power remains unchanged at 100 kilowatts. The new antenna has 0.75° of electrical beamtilt. The gain at the horizontal plane is 7.4 dB, which provides an effective radiated power of 93.7 kilowatts at the horizontal plane.

Radiofrequency Electromagnetic Field Exposure

The proposed facility has been evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level in accordance with OET Bulletin No. 65, *Evaluating Compliance with FCC Specified Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields*.

The power density at the base of the tower was calculated using the appropriate procedure contained in Section 2, Supplement A, *Additional Information for Radio and Television Broadcast Stations*, of the Bulletin.

For the calculation, an assumed downward vertical factor of 0.5 was employed with a combined (horizontal and vertical polarization) effective radiated power of 200 kilowatts and radiation center of 581 meters bove ground level. It is calculated that the power density would not exceed 0.005 mW/cm^2 at ground level. This is less than 5 percent of the Commission's guideline value in an uncontrolled environment for a FM radio station.

Access to the transmitting site is restricted and appropriately marked with warning signs. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure.

Charles A. Cooper

February 15, 2006

du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
Sarasota, Florida 34237
941.329.6000

Figure 1

TECHNICAL EXHIBIT
APPLICATION FOR LICENSE
RADIO STATION KKBQ-FM
PASADENA, TEXAS
CH 225C 100 KW 585 M

KKBQ-FM RF Transmission System Specifications

Description	System
Transmitter Power Output (22.5 kW):	13.5 dBk
Andrew Transmission Line Loss (3" Heliax) 100 feet:	0.1 dB
Combiner System*:*	0.4 dB
Dielectric Transmission Line Loss (8-3/16" Rigid) 2,012 feet:	0.7 dB
ERI COG-1083-12CP Antenna Gain (5.9 Power Gain):	7.7 dB
Effective Radiated Power (100 kW):	20.0 dBk

ATTACHMENT A

TRANSMITTING ANTENNA INFORMATION

ELECTRONICS RESEARCH,INC.
7777 GARDNER ROAD
CHANDLER, IN. 47610

FIGURE 1

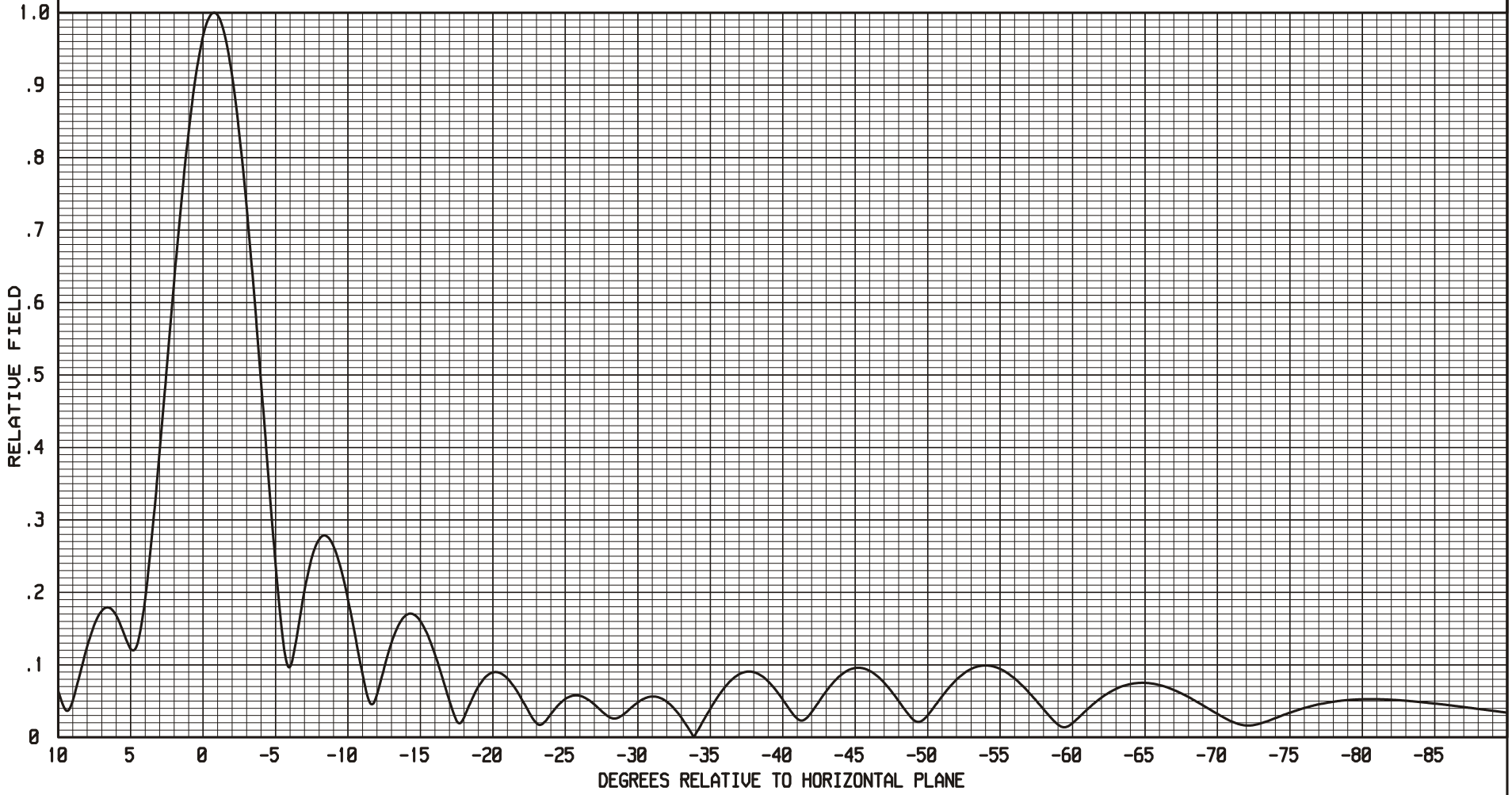
----THEORETICAL----
VERTICAL PLANE RELATIVE FIELD

ERI MODEL COG-1083-12CP ANTENNA
-.75 DEGREE(S) BEAM TILT
10 PERCENT FIRST NULL FILL
5 PERCENT SECOND NULL FILL
POWER GAIN IS 5.509 IN THE HORIZONTAL PLANE(5.880 IN THE MAX.)
[POWER GAINS AT 95% ANTENNA EFFICIENCY]

JANUARY 6, 2006

92.9 MHz.

BAY SPACING:
114.00 INCHES



ATTACHMENT B

INTERMODULATION MEASUREMENT REPORT
FOR FM COMBINER SYSTEM

Report Of Intermodulation Product Findings

SENIOR ROAD COMBINED BROADCAST FACILITY
HOUSTON, TEXAS

KKBQ	***92.9***
KTBZ	***94.5***
KHJZ	***95.7***
KHMX	***96.5***
KBXX	***97.9***
KODA	***99.1***
KILT	***100.3***
KLOL	***101.1***
KRBE	***104.1***

January 2006

Electronics Research Inc.
7777 Gardner Road
Chandler, Indiana 47610
Phone (812) 925-6000 Fax (812) 925- 4030

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HOUSTON, TEXAS

Report of Findings for Intermodulation Product Measurements

Exhibits Accompanying This Report

REPORT OF FINDINGS
SENIOR ROAD COMBINED BROADCAST FACILITY
HOUSTON, TEXAS

Introduction : This report of findings is based on data collected at the KKBQ, KTBZ, KHJZ, KHMX, KBXX, KODA, KILT, KLOL and KRBE Senior Road combined FM broadcast facility located in Houston, TX. The report includes measurements offered as proof that the operations of KKBQ (92.9 MHz.), KTBZ (94.5 MHz.), KHJZ (95.7 MHz.), KHMX (96.5 MHz.), KBXX (97.9 MHz.), KODA (99.1 MHz.), KILT (100.3 MHz.), KLOL (101.1 MHz.), KRBE (104.1 MHz.) and (MHz.) transmitters are in compliance with the FCC Rules and Regulations as required by the Code of Federal Regulations (CFR) Title 47 section 73.317 paragraph (b) through (d). In brief, the collection of measurements presented in this report shows that all possible third order inter-modulation (IM) products generated by this multiplex system are less than the maximum allowable level as required by section 73.317 (b) through (d). Thomas B. Silliman of Electronics Research, Inc. located in Chandler, Indiana performed the measurements summarized herein on January 15, 2006.

The following exhibits are provided:

Exhibit A:

A-1 Drawing Depicting Antenna.
A-2 COG3-20P-12 Antenna Specification Sheet.
A-3 Drawing Depicting Multiplexing Scheme.
A-4 973-8 Multiplexer Specification Sheet.
A-5 Theoretical Vertical Plane Relative Field Antenna Plots

Exhibit B:

B-1 Equipment Employed In Intermodulation Product Measurement.
B-2 Broadcasting Scheme of the Multiplexed Systems.

Table 1. Carrier Reference Levels.
Table 2. Calculated Third Order Products.
Table 3. Intermodulation Analysis Measurements.

Exhibits Accompanying Report: Exhibit A, provides comprehensive information on both antenna and filters used by these radio stations. Exhibit B, illustrates the broadcasting scheme of each station, the layout of the equipment used to isolate and measure potential intermodulation products and forward carrier reference levels. Found within Table 1 are the narrow band carrier frequency measurements that provide relative output signal levels for the IM analysis. Table 2 lists the calculated third order products that can be generated from FM transmitters broadcasting from the multiplexed system. The IM Analysis Measurements, in Table 3, provides detailed information obtained from the product frequency investigation.

The Nature Of Intermodulation Products (IM) : Intermodulation products result from inadequate transmitter-to-transmitter isolation. Intermodulation products are commonly generated from radio stations operating into multiplexed facilities and congested antenna broadcast sites. The mechanics associated with the phenomenon have been well documented. When two or more transmitters are coupled to each other, new spectral components are produced by the mixing of the station frequencies in the active circuits of each transmitter. The common term used to describe this phenomenon is third order product denoted by the mathematical expression [$2(F_1)-(F_2)$], where F_1 signifies the frequency of the transmitter that is generating the intermodulation product, and F_2 signifies the frequency causing the interference.

The Multiplexed System : At the time of my measurements nine FM stations were operating from the combined antenna system. The KKBQ, KTBZ, KHJZ, KHMX, KBXX, KODA, KILT, KLOL, KRBE and multiplexed system is fundamentally comprised of antenna, feed line and multiplexer unit. The COG3-20P-12 antenna and 973-8 multiplexer units are products of Electronics Research, Inc, whereas the feed line is manufactured by Dielectric, Inc, Refer to Exhibit B-1, for an illustration of the Broadcasting Scheme of these stations.

To accomplish the aggregation of nine transmitter signals into a common antenna feed and provide transmitter-to-transmitter isolation, a multiplexing scheme consisting of ERI 973-8 constant Impedance combiner modules were used which is illustrated in the attached Exhibit A-3. The multiplexer, fully assembled, exhibited transmitter port-to-port isolation in excess of - 51 dB. Other performance measurements, such as match, loss, group-delay, etc, revealed that the multiplexer unit was in proper working condition. Refer to Exhibit A-4 for the Combiner Specification Sheet.

The IM Investigation : Directional Couplers were placed at key locations throughout the combiner to monitor and maintain the multiplexers performance. All couplers furnished with the system are factory calibrated and capable of delivering accurate and repeatable RF measurements. To facilitate the taking of the measurements, the couplers located at the antenna outputs of the multiplexed system was used. Care was taken in the selection of the measurement location to insure that the measurements would be made far removed from transmitters and any filtering used to reduce broadcast emissions. The coupler selected would normally be used for antenna reflection measurements and thus would provide greater than 40 dB directivity and a forward signal sample of -57 dB.

The forward port of the coupler was used for sampling the outgoing carrier levels and IM products. The IM sampled signal was fed by shielded cable into a Celwave Model PD500-OS Adjustable Band Pass Filter (Serial # 22828) where all extraneous energy was steeply attenuated. Various attenuation pads were used, when needed, on the band pass filter and/or the FIM71 to ensure an adequate signal level for measurements without overloading the measurement equipment. A Potomac Instruments FIM-71 Field Strength Receiver (Serial # 317) was employed to record the level of all signals investigated. To facilitate the selective tuning of the Receiver and Band Pass Filter a Wavetek Model 3000 signal generator (Serial #3130189) was used. An IFR Model 2399A Spectrum Analyzer (Serial # 02113071) was used to measure the close in spectral attenuation of each carrier and wide band search for any anomalies that may need further investigation. See attached Exhibit B-2 for an illustration of the measurement equipment.

Prior to recording measurements, all pertinent broadcasting equipment including Transmitters, Multiplexer, Feed Line and Antenna were adjusted to optimal performance. Also, it was confirmed before taking any measurements that all stations of concern were operating at their full licensed power level. From the equipment setup described above, the relative output signal level of each stations forward carrier was made. The resulting signal levels of these measurements are listed in Table 1, column labeled "Adjusted Level". This level will be used as the reference level for possible IM products of each carrier and was necessary to confirm that no significant levels of spurious energy, referenced to each carrier, were present from any transmitter operating from the multiplexed system.

Table 1 - Carrier Reference Levels

Carrier Frequency (MHz)	Pad One (dB)	Bandpass Filter Loss (dB)	Scale Reading (Volts)	Adjusted Level (Volts)	Notes
KKBQ (92.9)	---	---	1.05	1.05	
KTBZ (94.5)	---	---	1.05	1.05	
KHJZ (95.7)	---	---	1.05	1.05	
KHMX (96.5)	---	---	1.10	1.10	
KBXX (97.9)	---	---	1.10	1.10	
KODA (99.1)	---	---	1.12	1.12	
KILT (100.3)	---	---	1.20	1.20	
KLOL (101.1)	---	---	1.15	1.15	
KRBE (104.1)	---	---	1.18	1.18	

Predictable third-order products due to system harmonics mixed with all on-site interfering frequencies that could be generated from the multiplexed system are calculated and listed in Table 2.

Table 2 - Third Order Products.

Mix Freq.	Carrier Frequency (MHz)								
	92.9	94.5	95.7	96.5	97.9	99.1	100.3	101.1	104.1
92.9	---	96.1	98.5	100.1	102.9	105.3	107.7	109.3	115.3
94.5	91.3	---	96.9	98.5	101.3	103.7	106.1	107.7	113.7
95.7	90.1	93.3	---	97.3	100.1	102.5	104.9	106.5	112.5
96.5	89.3	92.5	94.9	---	99.3	101.7	104.1	105.7	111.7
97.9	87.9	91.1	93.5	95.1	---	100.3	102.7	104.3	110.3
99.1	86.7	89.9	92.3	93.9	96.7	---	101.5	103.1	109.1
100.3	85.5	88.7	91.1	92.7	95.5	97.9	---	101.9	107.9
101.1	84.7	87.9	90.3	91.9	94.7	97.1	99.5	---	107.1
104.1	81.7	84.9	87.3	88.9	91.7	94.1	96.5	98.1	---

Using the equipment previously described the IM product measurements were recorded and are listed in Table 3. The signal levels referenced to the carriers are calculated and listed in the column labeled "Level Referenced to Carrier". Refer to Exhibit B for a layout of the measurement equipment.

Table 3 Intermodulation Measurements

Product Frequency (MHz)	Carrier Frequency (MHz)	Interfering Frequency (MHz)	Pad (dB)	Bandpass Filter Loss (dB)	Scale Reading (μVolts)	Adjusted Level (μVolts)	Carrier Reference Level (Volts) (See Table 1)	**Level Referenced to Carrier (dB)**	Notes*
81.7	92.9	104.1	-10	-10	18	180.0	1.05	**-75.3**	1
84.7	92.9	101.1	-10	-10	<1	<10.0	1.05	**-100.4**	
84.9	94.5	104.1	0	-10	<1	<10.0	1.05	**-100.4**	
85.5	92.9	100.3	-10	-10	<1	<10.0	1.05	**-100.4**	
86.7	92.9	99.1	-10	-10	<1	<10.0	1.05	**-100.4**	
87.3	95.7	104.1	0	-10	1.7	5.4	1.05	**-105.8**	
87.9	92.9	97.9	-10	-10	<1	<10.0	1.05	**-100.4**	
88.7	94.5	100.3	0	-10	30	94.9	1.05	**-80.9**	2
88.9	96.5	104.1	0	-10	30	94.9	1.10	**-81.3**	2
89.3	92.9	96.5	-10	-10	>1	10.0	1.05	**-100.4**	
89.9	94.5	99.1	0	-10	2	6.3	1.05	**-104.4**	
90.1	92.9	95.7	-10	-10	2	20.0	1.05	**-94.4**	
90.3	95.7	101.1	0	-10	1.5	4.7	1.05	**-107.0**	
91.1	95.7	100.3	0	-10	<1	<10.0	1.05	**-100.4**	
91.3	92.9	94.5	0	-10	1.3	4.1	1.05	**-108.2**	
91.7	97.9	104.1	0	-10	1.2	3.8	1.10	**-109.2**	
91.9	96.5	101.1	0	-10	<1	<10.0	1.10	**-100.8**	
92.3	95.7	99.1	0	-10	<1	<10.0	1.05	**-100.4**	
92.5	94.5	96.5	0	-10	3.2	10.1	1.05	**-100.3**	
92.7	96.5	100.3	0	-10	32	104.4	1.10	**-80.5**	3
93.3	94.5	95.7	0	-10	8	25.3	1.05	**-92.4**	3
93.5	95.7	97.9	0	-10	25	79.1	1.05	**-82.5**	4
93.9	96.5	99.1	0	-10	65	205.5	1.10	**-74.6**	4
94.1	99.1	104.1	0	-10	11	34.8	1.12	**-90.2**	
94.7	97.9	101.1	0	-10	2	6.3	1.10	**-104.8**	5
94.9	95.7	96.5	0	-10	7	22.1	1.05	**-93.5**	
95.1	96.5	97.9	0	-10	13	41.1	1.10	**-88.6**	

Product Frequency (MHz)	Carrier Frequency (MHz)	Interfering Frequency (MHz)	Pad (dB)	Bandpass Filter Loss (dB)	Scale Reading (µVolts)	Adjusted Level (µVolts)	Carrier Reference Level (Volts) (See Table 1)	**Level Referenced to Carrier (dB)**	Notes*
95.5	97.9	100.3	0	-10	2	6.3	1.10	**-104.8**	6
96.1	94.5	92.9	-10	-10	<1	<10.0	1.05	**-100.4**	
96.5	100.3	104.1	0	-10	3	9.5	1.20	**-102.0**	7
96.7	97.9	99.1	0	-10	10	31.6	1.10	**-90.8**	7
96.9	95.7	94.5	0	-10	8	25.3	1.05	**-92.4**	
97.1	99.1	101.1	0	-10	4.5	14.2	1.12	**-97.9**	7
97.3	96.5	95.7	-10	-10	2	20.0	1.10	**-94.8**	
97.9	99.1	100.3	-10	-10	<1	<10.0	1.12	**-101.0**	
98.1	101.1	104.1	-10	-10	<1	<10.0	1.15	**-101.2**	
98.5	96.5	94.5	-10	-10	6	60.0	1.10	**-85.3**	
99.3	97.9	96.5	-10	-10	<1	<10.0	1.10	**-100.8**	
99.5	100.3	101.1	-10	-10	<1	<10.0	1.20	**-101.6**	
100.1	97.9	95.7	-10	-10	<1	<10.0	1.10	**-100.8**	
100.3	99.1	97.9	-10	-10	<1	<10.0	1.12	**-101.0**	
101.3	97.9	94.5	-10	-10	<1	<10.0	1.10	**-100.8**	
101.5	100.3	99.1	-10	-10	<1	<10.0	1.20	**-101.6**	
101.7	99.1	96.5	-10	-10	<1	<10.0	1.12	**-101.0**	
101.9	101.1	100.3	-10	-10	2	20.0	1.15	**-95.2**	
102.5	99.1	95.7	-10	-10	<1	<10.0	1.12	**-101.0**	
102.7	100.3	97.9	-10	-10	<1	<10.0	1.20	**-101.6**	
102.9	97.9	92.9	-10	-10	2	10.0	1.10	**-100.8**	
103.1	101.1	99.1	-10	-10	<1	<10.0	1.15	**-101.2**	
103.7	99.1	94.5	-10	-10	18	180.0	1.12	**-75.9**	
104.1	100.3	96.5	-10	-10	<1	<10.0	1.20	**-101.6**	8
104.3	101.1	97.9	-10	-10	<1	<10.0	1.15	**-101.2**	8
104.9	100.3	95.7	-10	-10	1	10.0	1.20	**-101.6**	
105.3	99.1	92.9	-10	-10	<1	<10.10.	1.12	**-100.9**	
105.7	101.1	96.5	-10	-10	22	220.0	1.15	**-74.4**	9
106.1	100.3	94.5	-10	-10	<1	<10.0	1.20	**-101.6**	
106.5	101.1	95.7	-10	-10	<1	<10.0	1.15	**-101.2**	

Product Frequency (MHz)	Carrier Frequency (MHz)	Interfering Frequency (MHz)	Pad (dB)	Bandpass Filter Loss (dB)	Scale Reading (µVolts)	Adjusted Level (µVolts)	Carrier Reference Level (Volts) (See Table 1)	**Level Referenced to Carrier (dB)**	Notes*
107.1	104.1	101.1	-10	-10	<1	<10.0	1.18	**-101.4**	
107.7	101.1	94.5	-10	-10	<1	<10.0	1.15	**-101.2**	
107.9	104.1	100.3	-10	-10	<1	<10.0	1.18	**-101.4**	
109.1	104.1	99.1	-10	-10	<1	<10.0	1.18	**-101.4**	
109.3	101.1	92.9	-10	-10	<1	<10.0	1.15	**-101.2**	
110.3	104.1	97.9	-10	-10	<1	<10.0	1.18	**-101.4**	
111.7	104.1	96.5	-10	-10	<1	<10.0	1.18	**-101.4**	
112.5	104.1	95.7	-10	-10	<1	<10.0	1.18	**-101.4**	
113.7	104.1	94.5	-10	-10	<1	<10.0	1.18	**-101.4**	
115.3	104.1	92.9	-10	-10	<1	<10.0	1.18	**-101.4**	

*** NOTES**

1) Measured signal is a local TV Carrier ~~KKRO~~ KPXB transmitting at Channel ~~6~~ 5. No discernable signal was measured. TBS 1/25/06

2) Measured signal is a local carrier KUHF transmitting at 88.7 MHz. : No discernable signal was measured.

3) KKBQ 92.9 MHz. System carrier was turned OFF for this measurement.

4) Measured signal is a local carrier KKRD transmitting at 93.7 MHz. : No discernable signal was measured.

5) KTBZ 94.5 MHz. System carrier was turned OFF for this measurement.

6) KHJZ 95.7 MHz. System carrier was turned OFF for this measurement.

7) KHMX 96.5 MHz. System carrier was turned OFF for this measurement.

8) KRBE 104.1 MHz. System carrier was turned OFF for this measurement.

9) Measured signal is a local carrier KHCB transmitting at 105.7 MHz. : No discernable signal was measured.

The Spectrum Analyzer was used to check the close in spectral attenuation of each carrier to confirm the operation of these transmitters are in compliance with Sections (b) and (c) of the FCC Rules and Regulations.

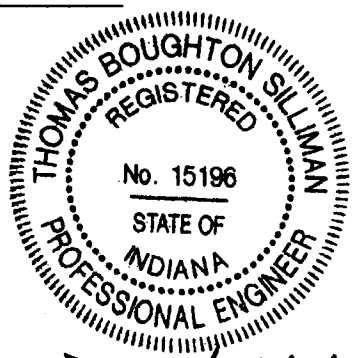
As a final proof of the systems IM Product performance, a wide band search was undertaken using the Spectrum Analyzer . The purpose for this measurement was to look for suspicious anomalies that may warrant further investigation. My search ranged the complete frequency span of the receiver and resulted in no additional investigation.

Conclusion : Based upon my observations and measurements taken January 15, 2006 as summarized in this document, I, Tom Silliman, find the subject multiplexed system- specifically the transmitters and combiner system for the operation of the KKBQ, KTBZ, KHJZ, KHMX, KBXX, KODA, KILT and KLOL into the COG3-20P-12 antenna- to be in proper working order. Furthermore, based on the measured data, it is my opinion that there are no inter-modulation products in excess of 80 dB below carrier levels generated from or within the stations operating on the installed system. Also, based on this recorded data. I conclude that KKBQ, KTBZ, KHJZ, KHMX, KBXX, KODA, KILT, KLOL, KRBE and are in compliance with the requirements of Section 73.317 paragraph (b) through (d) of the FCC Rules and Regulations.

Respectfully submitted,
Electronics Research, Inc.

By Thomas B. Silliman

Thomas B. Silliman



TBS 1/26/06

AFFIDAVIT

WARRICK COUNTY)
) SS:
STATE OF INDIANA)

THOMAS B. SILLIMAN, being duly sworn upon his oath deposes and says:

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

That he is a registered professional engineer in Indiana, Maryland and Minnesota and is the President of Electronics Research, Inc.;

That this corporation has been retained by Senior Road Tower Group, on behalf of radio stations KKBQ, KTBZ, KHJZ, KHMX, KBXX, KODA, KILT and KLOL in Houston, TX to prepare this Report of Findings.

That he has either prepared or directly observed the preparation of all technical information contained in this engineering statement and that the facts stated in this engineering statement are true of his knowledge except as such statements as are herein stated to be on information and belief and as to such statements he believes them to be true.

Thomas B. Silliman

Subscribed and sworn to before me on this 25 day of January, 2006.

Notary Public

My Commission Expires: MAY 19 2007
I Reside in FT BEND County.

DHASAN JAMES
Printed Name

(Seal)

DHASAN JAMES
MY COMMISSION EXPIRES
MAY 19, 2007

THOMAS BOUGHTON SILLIMAN
REGISTERED
No. 15196
STATE OF
INDIANA
PROFESSIONAL ENGINEER