

**SELLMEYER ENGINEERING**

BROADCAST & COMMUNICATION CONSULTING ENGINEERS

P. O. Box 356 McKinney, Texas 75070

MEMBER AFCCE

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EXHIBIT E-1

FCC FORM 301 &

ENGINEERING STATEMENT IN SUPPORT OF

APPLICATION FOR MODIFICATION OF CONSTRUCTION PERMIT

RADIO STATION KMUS

1380 KHZ, 0.25 KW, 7.0 KW-LS, DA-2

SPERRY, OKLAHOMA

C.P. FILE NUMBER BMJP-20001019AAS

FACILITY ID: 25129

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JUNE, 2004

**SELLMEYER ENGINEERING**  
BROADCAST & COMMUNICATION CONSULTING ENGINEERS  
P. O. Box 356 McKinney, Texas 75070  
MEMBER AFCCE

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**1380 KHZ, 0.25 KW, 7.0 KW-LS, DA-2**  
**SPERRY, OKLAHOMA**  
**C.P. FILE NUMBER BMJP-20001019AAS**  
**FACILITY ID: 25129**  
**JUNE, 2004**

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FCC FORM 301, SECTION III

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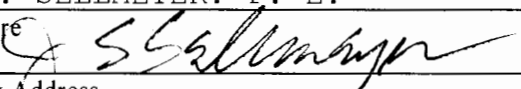
I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith. I acknowledge that all certifications and attached Exhibits are considered material representations. I hereby waive any claim to the use of any particular frequency as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and request an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)

Typed or Printed Name of Person Signing	Typed or Printed Title of Person Signing
Signature	Date

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT  
(U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT  
(U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

### SECTION III PREPARER'S CERTIFICATION

I certify that I have prepared Section III (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name	Relationship to Applicant (e.g., Consulting Engineer)	
J. S. SELLMAYER. P. E.	CONSULTING ENGINEER	
Signature	Date	
	JUNE 30, 2004	
Mailing Address		
P.O. BOX 356		
City	State or Country (if foreign address)	ZIP Code
MCKINNEY	TEXAS	75070
Telephone Number (include area code)	E-Mail Address (if available)	
214-495-9764	jack@sellmeyerengineering.com	

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT  
(U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT  
(U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).



SECTION III-A AM Engineering

TECHNICAL SPECIFICATIONS

Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response “on file” is not acceptable.

TECH BOX

1. Frequency: 1,380 kHz

2. Class: W A ☒ B W C W D

3. Hours of Operation: ☒ Unlimited W Limited W Daytime W Share Time W Specified Hours: \_\_\_\_\_

4. Daytime Operation: ☒ Yes W No

a. Power: 7.0 kW

b. Antenna Location Coordinates: (NAD 27)

36 ° 15 ' 59 " ☒ N W S Latitude

95 ° 58 ' 15 " W E ☒ W Longitude

c. Nondirectional: W Yes ☒ No

If “Yes,” complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

Exhibit No.

Theoretical RMS: \_\_\_\_\_ mV/m per kW at 1 km

Tower	
Overall height above ground (include obstruction lighting) (meters)	
Antenna structure registration	<div>_____ Number</div> <div>W Notification filed with FAA</div> <div>W Not applicable</div>
Height of radiator above base insulator, or above base, if grounded (meters)	
Electrical height of radiator (degrees)	
Top-Loaded/Sectionalized apparent height (degrees)	
A	
B	
C	
D	

# TECH BOX - DAYTIME OPERATION

## d. Directional:

☒ Yes    W No

If "Yes," complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

Exhibit No.  
E-1

Theoretical RMS: 762.7 mV/m at 1 km

Standard RMS: 801.32 mV/m at 1 km

Towers	1	2	3	4
Overall height above ground (include obstruction lighting) (meters)	57.4	57.4	57.4	57.4
Antenna structure registration	<div> <div>Number</div> <div><input checked="" type="checkbox"/> Notification filed with FAA</div> <div>W Not applicable</div> </div>	<div> <div>Number</div> <div><input checked="" type="checkbox"/> Notification filed with FAA</div> <div>W Not applicable</div> </div>	<div> <div>Number</div> <div><input checked="" type="checkbox"/> Notification filed with FAA</div> <div>W Not applicable</div> </div>	<div> <div>Number</div> <div><input checked="" type="checkbox"/> Notification filed with FAA</div> <div>W Not applicable</div> </div>
Height of radiator above base insulator, or above base, if grounded (meters)	54.3	54.3	54.3	54.3
Electrical height of radiator (degrees)	90.0	90.0	90.0	90.0
Field ratio	1.000	0.88	0.84	0.92
Phase (degrees)	0.0	+4.0	+85.0	+98.0
Spacing (degrees)	0.0	170.0	192.0	90.0
Tower orientation (degrees CW from True North)	0.0	70.0	42.0	340.0
Tower reference switch	0	0	0	0
Top-Loaded/Sectionalized apparent height (degrees)	0	0	0	0
A	0	0	0	0
B	0	0	0	0
C	0	0	0	0
D	0	0	0	0

## Augmented:

☒ Yes    W No

If "Yes," complete the following:

Augmented RMS: 801.40 mV/m at 1 km

Azimuth (degrees)	Span (degrees)	Augmentation radiation (mV/m at 1 km)
-------------------	----------------	---------------------------------------

333.5	10	86.7
345.5	10	110.0

# TECH BOX - DAYTIME OPERATION

## d. Directional:

☐ Yes ☐ No

If "Yes," complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

Exhibit No.

Theoretical RMS: \_\_\_\_\_ mV/m at 1 km

Standard RMS: \_\_\_\_\_ mV/m at 1 km

Towers	1	2	3	4
Overall height above ground (include obstruction lighting) (meters)	TWR-5 57.4	TWR-6 57.4		
Antenna structure registration	Number <input checked="" type="checkbox"/> Notification filed with FAA <input type="checkbox"/> Not applicable	Number <input checked="" type="checkbox"/> Notification filed with FAA <input type="checkbox"/> Not applicable	Number <input type="checkbox"/> Notification filed with FAA <input type="checkbox"/> Not applicable	Number <input type="checkbox"/> Notification filed with FAA <input type="checkbox"/> Not applicable
Height of radiator above base insulator, or above base, if grounded (meters)	54.3	54.3		
Electrical height of radiator (degrees)	90.0	90.0		
Field ratio	0.49	0.48		
Phase (degrees)	94.0	10.0		
Spacing (degrees)	192.0	170.0		
Tower orientation (degrees CW from True North)	278.0	250.0		
Tower reference switch	0	0		
Top-Loaded/Sectionalized apparent height (degrees)	0	0		
A	0	0		
B	0	0		
C	0	0		
D	0	0		

## Augmented:

☐ Yes ☐ No

If "Yes," complete the following:

Augmented RMS: \_\_\_\_\_ mV/m at 1 km  
 Azimuth (degrees)      Span (degrees)      Augmentation radiation (mV/m at 1 km)


TECH BOX - NIGHTTIME OPERATION

5. **Nighttime Operation:** ☒ Yes    ☐ No

a. Power: 0.25 kW

b. Antenna Location Coordinates: (NAD 27)

36 ° 15 ' 59 " ☒ N    ☐ S    Latitude  
95 ° 58 ' 15 "    ☐ E    ☒ W    Longitude

c. **Nondirectional:** ☐ Yes    ☒ No

If “Yes,” complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

Exhibit No.

Theoretical RMS: \_\_\_\_\_ mV/m per kW at 1 km

Tower	
Overall height above ground (include obstruction lighting) (meters)	
Antenna structure registration	<div>_____ Number</div> <div><input type="checkbox"/> Notification filed with FAA</div> <div><input type="checkbox"/> Not applicable</div>
Height of radiator above base insulator, or above base, if grounded (meters)	
Electrical height of radiator (degrees)	
Top-Loaded/Sectionalized apparent height (degrees)	
A	
B	
C	
D	



# TECH BOX - NIGHTTIME OPERATION

## d. Directional:

☒ Yes    W No

If "Yes," complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

Exhibit No.  
E-1

Theoretical RMS: 143.99 mV/m at 1 km

Standard RMS: 151.55 mV/m at 1 km

Towers	1	2	3	4
Overall height above ground (include obstruction lighting) (meters)	57.4	57.4	57.4	57.4
Antenna structure registration	<div>Number</div> <input checked="" type="checkbox"/> Notification filed with FAA W Not applicable	<div>Number</div> <input checked="" type="checkbox"/> Notification filed with FAA W Not applicable	<div>Number</div> <input checked="" type="checkbox"/> Notification filed with FAA W Not applicable	<div>Number</div> <input checked="" type="checkbox"/> Notification filed with FAA W Not applicable
Height of radiator above base insulator, or above base, if grounded (meters)	54.3	54.3	54.3	54.3
Electrical height of radiator (degrees)	90.0	90.0	90.0	90.0
Field ratio	1.00	0.88	0.59	0.70
Phase (degrees)	0.0	0.0	80.0	98.0
Spacing (degrees)	0.0	170.0	192.0	90.0
Tower orientation (degrees CW from True North)	0.0	70.0	42.0	340.0
Tower reference switch	0	0	0	0
Top-Loaded/Sectionalized apparent height (degrees)	0	0	0	0
A	0	0	0	0
B	0	0	0	0
C	0	0	0	0
D	0	0	0	0

## Augmented:

☒ Yes    W No

If "Yes," complete the following:

Augmented RMS: 151.63 mV/m at 1 km  
Azimuth (degrees)      Span (degrees)      Augmentation radiation (mV/m at 1 km)

9.0	10	52.1
23.0	10	32.6
208.5	10	53.5

# TECH BOX - NIGHTTIME OPERATION

## d. Directional:

☐ Yes ☐ No

If "Yes," complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

Exhibit No.

Theoretical RMS: \_\_\_\_\_ mV/m at 1 km

Standard RMS: \_\_\_\_\_ mV/m at 1 km

Towers	1	2	3	4
Overall height above ground (include obstruction lighting) (meters)	TWR-5 57.4	TWR-6 57.4		
Antenna structure registration	<div>Number</div> <input checked="" type="checkbox"/> Notification filed with FAA <input type="checkbox"/> Not applicable	<div>Number</div> <input checked="" type="checkbox"/> Notification filed with FAA <input type="checkbox"/> Not applicable	<div>Number</div> <input type="checkbox"/> Notification filed with FAA <input type="checkbox"/> Not applicable	<div>Number</div> <input type="checkbox"/> Notification filed with FAA <input type="checkbox"/> Not applicable
Height of radiator above base insulator, or above base, if grounded (meters)	54.3	54.3		
Electrical height of radiator (degrees)	90.0	90.0		
Field ratio	0.47	0.48		
Phase (degrees)	98.0	10.0		
Spacing (degrees)	192.0	170.0		
Tower orientation (degrees CW from True North)	278.0	250.0		
Tower reference switch	0	0		
Top-Loaded/Sectionalized apparent height (degrees)	0	0		
A	0	0		
B	0	0		
C	0	0		
D	0	0		

## Augmented:

☐ Yes ☐ No

If "Yes," complete the following:

Augmented RMS: \_\_\_\_\_ mV/m at 1 km  
 Azimuth (degrees)      Span (degrees)      Augmentation radiation (mV/m at 1 km)


6. Critical Hours Operation:

W Yes ☒ No

a. Power: \_\_\_\_\_ kW

b. Antenna Location Coordinates: (NAD 27)

\_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ " W N

\_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ " W E

W S Latitude

W W Longitude

c. Nondirectional:

W Yes W No

If “Yes,” complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

Exhibit No.

Theoretical RMS: \_\_\_\_\_ mV/m per kW at 1 km

Tower	
Overall height above ground (include obstruction lighting) (meters)	
Antenna structure registration	<div>_____ Number</div> <div>W Notification filed with FAA</div> <div>W Not applicable</div>
Height of radiator above base insulator, or above base, if grounded (meters)	
Electrical height of radiator (degrees)	
Top-Loaded/Sectionalized apparent height (meters)	
A	
B	
C	
D	

TECH BOX - CRITICAL HOURS OPERATION

d. Directional:

W Yes    W No

If “Yes,” complete the following items. If additional space is needed, please provide the information requested below in an Exhibit.

Exhibit No.

Theoretical RMS: \_\_\_\_\_ mV/m at 1 km

Standard RMS: \_\_\_\_\_ mV/m at 1 km

Towers	1	2	3	4
Overall height above ground (include obstruction lighting) (meters)				
Antenna structure registration	<div>Number</div> <div>W Notification filed with FAA</div> <div>W Not applicable</div>	<div>Number</div> <div>W Notification filed with FAA</div> <div>W Not applicable</div>	<div>Number</div> <div>W Notification filed with FAA</div> <div>W Not applicable</div>	<div>Number</div> <div>W Notification filed with FAA</div> <div>W Not applicable</div>
Height of radiator above base insulator, or above base, if grounded (meters)				
Electrical height of radiator (degrees)				
Field ratio				
Phase (degrees)				
Spacing (degrees)				
Tower orientation (degrees CW from True North)				
Tower reference switch				
Top-Loaded/Sectionalized apparent height (degrees)				
A				
B				
C				
D				

Augmented:

W Yes    W No

If “Yes,” complete the following:

Augmented RMS: \_\_\_\_\_ mV/m at 1 km

Azimuth (degrees)

Span (degrees)

Augmentation radiation (mV/m at 1 kw)


**NOTE: In addition to the information called for in this section, an explanatory exhibit providing full particulars must be submitted for each question for which a “No” response is provided.**

## **CERTIFICATION**

7. **Broadcast Facility.** The proposed facility complies with the engineering standards and assignment requirements of 47 C.F.R. Sections 73.24(e), 73.24(g), 73.33, 73.45, 73.150, 73.152, 73.160, 73.182(a)-(i), 73.186, 73.189, 73.1650. **Exhibit Required.**
- ☒ Yes    W    No
- Exhibit No. E - 1 See Explanation in Exhibit No. E - 1
8. **Community Coverage.** The proposed facility complies with community coverage requirements of 47 C.F.R. Section 73.24(i).
- ☒ Yes    W    No
- E - 1 See Explanation in Exhibit No. E - 1
9. **Main Studio Location.** The proposed main studio location complies with requirements of 47 C.F.R. Section 73.1125.
- ☒ Yes    W    No
- E - 1 See Explanation in Exhibit No. E - 1
10. **Interference.** The proposed facility complies with all of the following applicable rule sections. Check all those that apply. An exhibit is required for each applicable section.
- ☒ Yes    W    No
- E - 1 See Explanation in Exhibit No. E - 1
- Groundwave.**
- a. ☒ #47 C.F.R. Section 73.37
- E - 1 Exhibit No.
- Skywave.**
- b. ☒ #47 C.F.R. Section 73.182.
- E - 1 Exhibit No.
- Critical Hours.**
- c. ☐ #47 C.F.R. Section 73.187.
- N / A Exhibit No.
11. **Environmental Protection Act.** The proposed facility is excluded from environmental processing under 47 C.F.R. Section 1.1306 (*i.e.*, the facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments). Unless the applicant can determine compliance through the use of the RF worksheets in Appendix A, an **Exhibit is required.**
- ☒ Yes    W    No
- E - 1 See Explanation in Exhibit No. E - 1

By checking “Yes” above, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic exposure in excess of FCC guidelines.

**PREPARER’S CERTIFICATION ON PAGE 3 MUST BE COMPLETED AND SIGNED.**

**SELLMEYER ENGINEERING**  
BROADCAST & COMMUNICATION CONSULTING ENGINEERS  
P. O. Box 356 McKinney, Texas 75070  
MEMBER AFCCE

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**ENGINEERING STATEMENT IN SUPPORT OF  
APPLICATION FOR MODIFICATION OF  
CONSTRUCTION PERMIT  
RADIO DISNEY GROUP, LLC  
RADIO STATION KMUS  
1380 KHZ, 0.25 KW, 7.0 KW-LS, DA-2  
SPERRY, OKLAHOMA  
FILE NO. BMJP-20001019AAS  
FACILITY ID: 25129**

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INTRODUCTION

This Firm has been retained by Radio Disney Group, LLC to adjust the directional antenna system of Radio Station KMUS, Sperry, Oklahoma and prepare the instant FCC Form 301 and associated exhibits. This document requests modification of construction permit file number BMJP-20001019AAS to permit augmentation of two radials of the daytime array and three radials of the nighttime pattern as well as a minor correction of the array coordinates.

DESCRIPTION OF ANTENNA SYSTEM

The directional antenna system consists of six towers in a parallelogram configuration. All towers are used in both the daytime and nighttime directional antenna systems.

The antenna system is fully described in Exhibit E1-1

DAYTIME ALLOCATION

Minor augmentations will be required on the 333.5° and 345.5° daytime radials.

A plot of the modified standard pattern appears herein as Exhibit E1-2A. The tabulation of the proposed modified standard daytime pattern appears herein as Exhibit E1-2B.

The daytime co-channel allocation map appears herein as Exhibit E1-2C.

The daytime first adjacent channel allocation map appears herein as Exhibit E1-2D. No second or third adjacent channel stations are pertinent to the instant allocation situation.

Exhibits E1-2E through E1-2K are tabulations of the calculated distances to the relevant contours for the stations pertinent to the KMUS allocation.

Exhibit E1-2L is a listing of measured conductivities for Stations KTPK, Lawton, Oklahoma and KZAR, Rogers, Arkansas which were extracted from application file number BMJP-20001019AAS which led to grant of the instant construction permit. These conductivities were used in analysis. FCC Map M-3 was used for all other stations.

All daytime augmentations were calculated in accordance with the methods of Section 73.152(d)(2) of the Rules. No interference will result to any licensed or proposed station from the minor increases in fields resulting from the augmentations.

NIGHTTIME ALLOCATION

Minor augmentations are required to the 9.0°, 23.0° and 208.5° nighttime radials.

A plot of the modified standard pattern appears herein as Exhibit E1-3A. The tabulation of the proposed modified standard daytime pattern appears herein as Exhibit E1-3B.

The nighttime permissible radiation study appears herein as Exhibit E1-3C. The 9.0° nighttime radial is augmented approximately seven percent. The station nearest the 9.0° radial is Station KCIM, Carroll, Iowa. The maximum permissible radiation toward Station KCIM is 127.6 mV/m between 11.0° and 18.8° above the horizon on a bearing of 8.0°. The actual radiation toward Station KCIM is 57.3 mV/m within the pertinent vertical angles. On the bearing of 23.0° an augmentation of 3.5 percent is proposed. There is no station within ten degrees of this bearing with a permissible radiation near this level. On the bearing of 208.5°, an augmentation of 32.4 percent is proposed. Station KBWD is nearest the limit and bearing, being on a bearing of 209.4° with a maximum radiation limit of 113.3 mV/m. The proposed augmentation is 53.5 mV/m resulting in radiation toward KBWD within the pertinent vertical angles of 51.7 mV/m.

The nighttime allocation study of Exhibit E1-3D shows the detailed studies of the permissible radiation from KMUS to the stations requiring nighttime protection. The nighttime RSS contributions to each station for the 50% and 25% exclusions are shown thereon.

Thus there is no new or increased interference created as a result of the augmentations to the nighttime standard pattern.

#### CORRECTION OF COORDINATES

A post construction survey revealed minor changes in coordinates of the center of the array, the tower positions and the ground elevations. The base piers were required to be elevated due to local zoning regulations. The Federal Aviation administration Southwest Regional Office has been notified of the changes and asked to review the previously issued Determinations of No Hazard to Air Navigation. Study numbers have been assigned by FAA as noted below. The revised locations and elevation pass the FCC ASR slope test of TOWAIR and marking and lighting are not believed to be required for this array. The coordinates are changed by less than 3 seconds in all cases. Exhibit E1-4 is a printed result of the FCC TOWAIR study for the revised coordinates and elevations. Exhibit E1-5 is a tabulation of the tower base elevations and the overall height above ground level and above mean sea level.

The coordinates of the center of the array are:

(NAD-27)	(NAD-83)
(ROUNDED)	(ROUNDED)
N.L.: 36° 15' 59"	36° 16' 00"
W.L.: 95° 58' 15"	95° 58' 16"

The coordinates of the six towers are as follows:

<u>TWR</u>	<u>COORDINATES</u>	<u>FAA STUDY NUMBER</u>
	(NAD-83 ROUNDED)	
1	36° 15' 59" 95° 58' 16"	2004-ASW-3435-OE
2	36° 16' 00" 95° 58' 12"	2004-ASW-3436-OE

<u>TWR</u>	<u>COORDINATES</u> (NAD-83 ROUNDED)	<u>FAA STUDY NUMBER</u>
3	36° 15' 01" 95° 58' 13"	2004-ASW-3437-OE
4	36° 16' 00" 95° 58' 17"	2004-ASW-3438-OE
5	36° 15' 59" 95° 58' 20"	2004-ASW-3439-OE
6	36° 15' 58" 95° 58' 20"	2004-ASW-3440-OE

#### RADIOFREQUENCY RADIATION

The instant proposal has been evaluated under the Guidelines of OET Bulletin 65, August, 1997 edition, Section I, Table 2. Assuming the total daytime power of 7.0 kilowatts in a single tower, the minimum distance from the tower for compliance with the guidelines would be two meters. Each tower is fenced with a wood fence a minimum of three meters from the tower face. Thus, the proposal is believed to be in compliance with the guidelines of OET-65.



**SELLMEYER ENGINEERING**  
BROADCAST & COMMUNICATION CONSULTING ENGINEERS  
P. O. Box 356 McKinney, Texas 75070  
MEMBER AFCCE

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**CERTIFICATION OF ENGINEER**

I hereby state that:

I am President of Sellmeyer Engineering

The Firm of Sellmeyer Engineering has been retained by Radio Disney Group, LLC to prepare this Engineering Exhibit

I am a graduate of Arizona State University with the degree of Bachelor of Science in Engineering

I am a Registered Professional Engineer in the States of Ohio and Texas

My qualifications as an Engineer are a matter of record with the Federal Communications Commission

This Engineering Exhibit was prepared by me personally or under my direct supervision, and

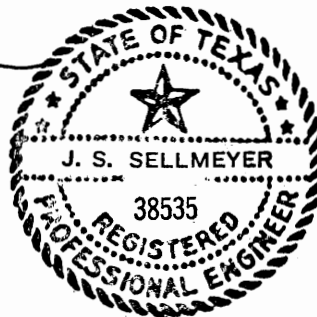
All facts stated herein are true and correct to the best of my knowledge and belief.



J. S. Sellmeyer, P. E.

June 30, 2004

P. O. Box 356  
McKinney, Texas 75070  
214-495-9764



**SELLMEYER ENGINEERING**  
BROADCAST & COMMUNICATION CONSULTING ENGINEERS  
P. O. Box 356 McKinney, Texas 75070  
MEMBER AFCCE

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**EXHIBIT E1-1**  
**DESCRIPTION OF DIRECTIONAL ANTENNA SYSTEM**  
**RADIO STATION KMUS**  
**1380 KHZ, 0.25 KW, 7.0 KW-LS, DA-2**  
**SPERRY, OKLAHOMA**

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**DAYTIME**

POWER: 7.0 KW  
THEORETICAL RMS: 762.70  
STANDARD RMS: 801.32  
AUGMENTED RMS: 801.40  
Q: 26.45

<u>TWR</u>	<u>FIELD RATIO</u>	<u>PHASING (DEG)</u>	<u>SPACING (DEG)</u>	<u>BEARING (DEG)</u>	<u>HEIGHT (DEG)</u>
1	1.000	0.0	0.0	0.0	90.0
2	0.880	4.0	170.0	70.0	90.0
3	0.840	85.0	192.0	42.0	90.0
4	0.920	98.0	90.0	340.0	90.0
5	0.490	94.0	192.0	278.0	90.0
6	0.480	10.0	170.0	250.0	90.0

**NIGHTTIME**

POWER: 0.25 KW  
THEORETICAL RMS: 143.99  
STANDARD RMS: 151.55  
AUGMENTED RMS: 151.63  
Q: 10.0

<u>TWR</u>	<u>FIELD RATIO</u>	<u>PHASING (DEG)</u>	<u>SPACING (DEG)</u>	<u>BEARING (DEG)</u>	<u>HEIGHT (DEG)</u>
1	1.000	0.0	0.0	0.0	90.0
2	0.880	0.0	170.0	70.0	90.0
3	0.590	80.0	192.0	42.0	90.0
4	0.700	98.0	90.0	340.0	90.0
5	0.470	98.0	192.0	278.0	90.0
6	0.480	10.0	170.0	250.0	90.0

## **DESCRIPTION OF GROUND SYSTEM**

120 each #10 copper wire radials, each 54.3 meters in length, buried 10 to 20 centimeters deep  
120 each #10 copper wire radials, each 15.0 meters in length, buried 10 to 20 centimeters deep  
around the base of each tower

Where radials intersect those of an adjacent tower, the radials are foreshortened and bonded to a transverse copper strap.

## **TOWER REGISTRATION NUMBERS**

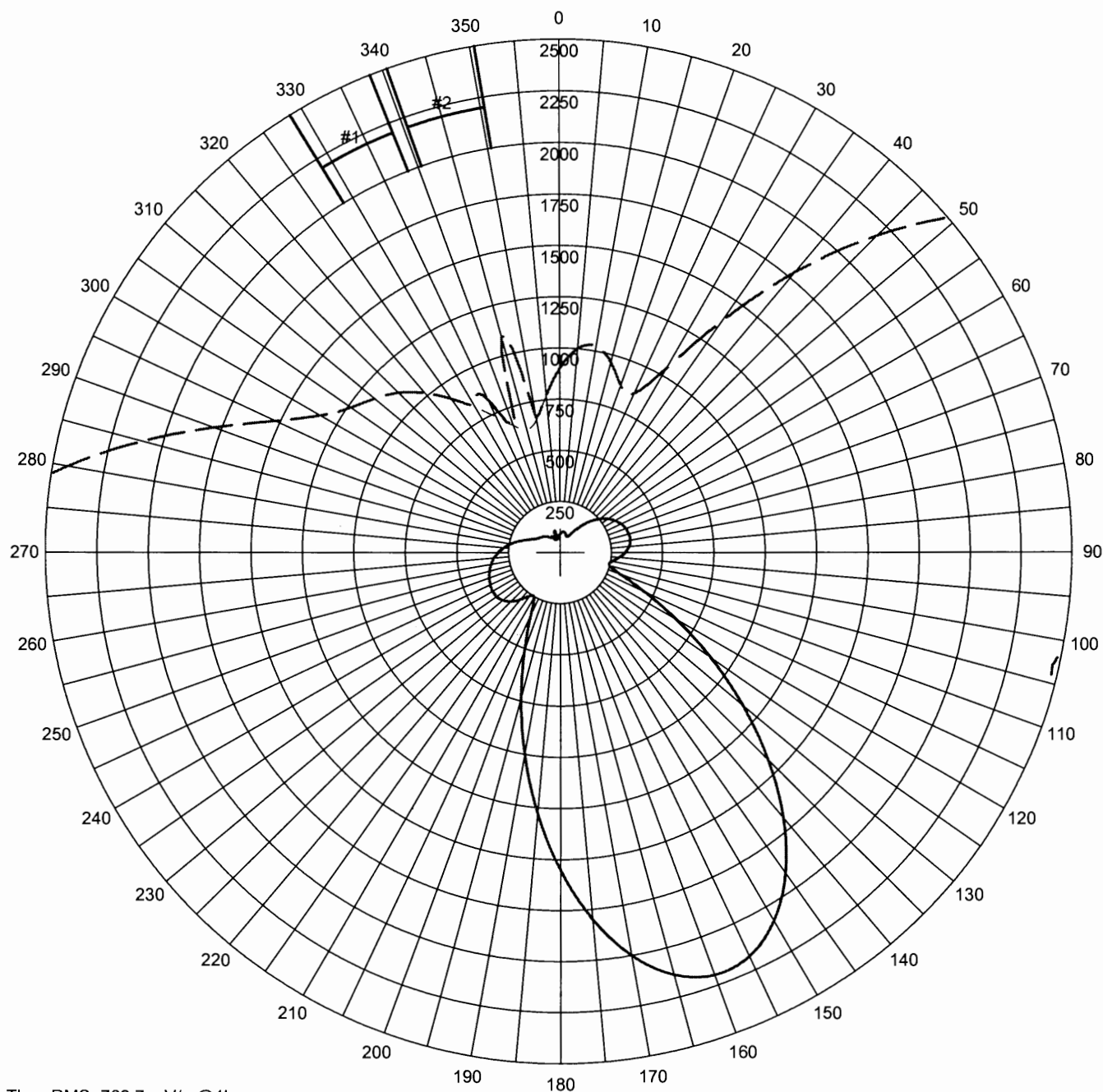
Towers 1 – 6: No marking or lighting required; No registration required.

## **CENTER OF ARRAY:** **(DAYTIME & NIGHTTIME)**

N.L.: 36° 15' 59"

W.L.: 95° 58' 15"

# EXHIBIT E1-2A, MODIFIED STANDARD DAYTIME PATTERN



Theo RMS: 762.7 mV/m@1km  
 Std RMS: 801.316 mV/m@1km  
 Aug RMS: 801.403 mV/m@1km  
 Q: 26.45 mV/m@1km

Horizontal Plane Augmented Pattern

— Aug Pattern (mV/m@1km)  
 — Std Pattern (mV/m@1km)  
 — Aug Pattern X10  
 - - - Std Pattern X10

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Switch	#	Azimuth (deg)	Radiation (mV/m@1km)	Span (deg)	Call: KMUS.C (B) Freq: 1380 kHz SPERRY, OK, US Lat: 36-15-59 N Lng: 095-58-15 W Power: 7.0 kW Theo RMS: 762.70 mV/m @ 1km # of Augmentations: 2
1	1.000	0.0	0.0	0.0	90.0	0	1	333.50	86.70	10.0	
2	0.880	4.0	170.0	70.0	90.0	0	2	345.50	110.00	10.0	
3	0.840	85.0	192.0	42.0	90.0	0					
4	0.920	98.0	90.0	340.0	90.0	0					
5	0.490	94.0	192.0	278.0	90.0	0					
6	0.480	10.0	170.0	250.0	90.0	0					

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**EXHIBIT E1-2B**  
**RADIO STATION KMUS**  
**SPERRY, OKLAHOMA**  
**TABULATION OF MODIFIED STANDARD PATTERN**  
**(DAYTIME)**

Call: KMUS.C (B)                      Freq: 1380 kHz  
 SPERRY, OK, US                      Power: 7.0 kW  
 Lat: 36-15-59 N                      Lng: 095-58-15 W  
 Theo RMS:                              762.70 mV/m @ 1 kM  
 Std RMS:                                801.32 mV/m @ 1 kM  
 Aug Std RMS:                          801.40 mV/m @ 1 kM  
 # of Augmentations: 2

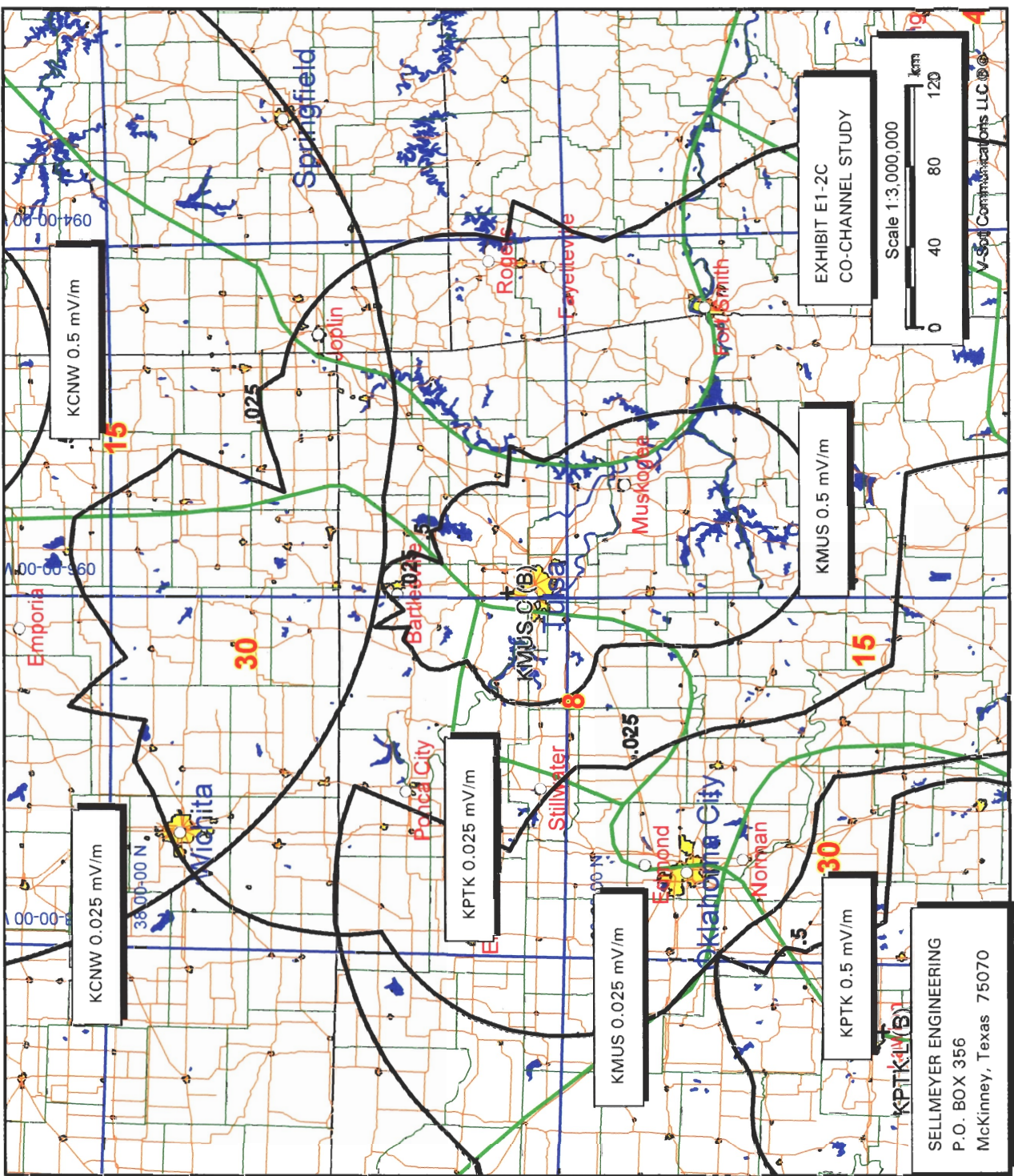
#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	90.0	0	0	0.0	0.0	0.0	0.0
2	0.880	4.0	170.0	70.0	90.0	0	0	0.0	0.0	0.0	0.0
3	0.840	85.0	192.0	42.0	90.0	0	0	0.0	0.0	0.0	0.0
4	0.920	98.0	90.0	340.0	90.0	0	0	0.0	0.0	0.0	0.0
5	0.490	94.0	192.0	278.0	90.0	0	0	0.0	0.0	0.0	0.0
6	0.480	10.0	170.0	250.0	90.0	0	0	0.0	0.0	0.0	0.0

-----  
 Augmented Horizontal Plane Pattern

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	90.23	5.0	100.15	10.0	102.40
15.0	96.39	20.0	86.92	25.0	85.79
30.0	103.98	35.0	138.10	40.0	178.64
45.0	218.92	50.0	255.29	55.0	286.03
60.0	310.66	65.0	329.27	70.0	341.99
75.0	348.56	80.0	347.99	85.0	338.64
90.0	318.77	95.0	288.69	100.0	256.52
105.0	250.24	110.0	312.70	115.0	453.86
120.0	654.64	125.0	896.31	130.0	1161.89
135.0	1433.12	140.0	1689.96	145.0	1911.86
150.0	2079.77	155.0	2178.44	160.0	2198.44
165.0	2137.41	170.0	2000.49	175.0	1799.65
180.0	1552.12	185.0	1278.34	190.0	999.69
195.0	736.79	200.0	509.42	205.0	339.81
210.0	256.12	215.0	260.10	220.0	300.41
225.0	338.46	230.0	363.52	235.0	375.80
240.0	378.35	245.0	374.34	250.0	366.02
255.0	354.55	260.0	340.06	265.0	322.08
270.0	299.92	275.0	273.28	280.0	242.73
285.0	210.12	290.0	178.65	295.0	152.30
300.0	134.05	305.0	123.56	310.0	117.07
315.0	110.43	320.0	101.81	325.0	91.80
330.0	84.17	335.0	82.34	340.0	66.11
345.0	109.10	350.0	67.42	355.0	76.77

**KMUS.C (B)**  
 Freq: 1380 kHz  
 Class: B  
 Latitude: 36-15-59 N  
 Longitude: 095-58-15 W  
 Power: 7 kW  
 RMS: 762.7 mV/m @ 1km  
 # Towers: 6  
 # Augs: 2

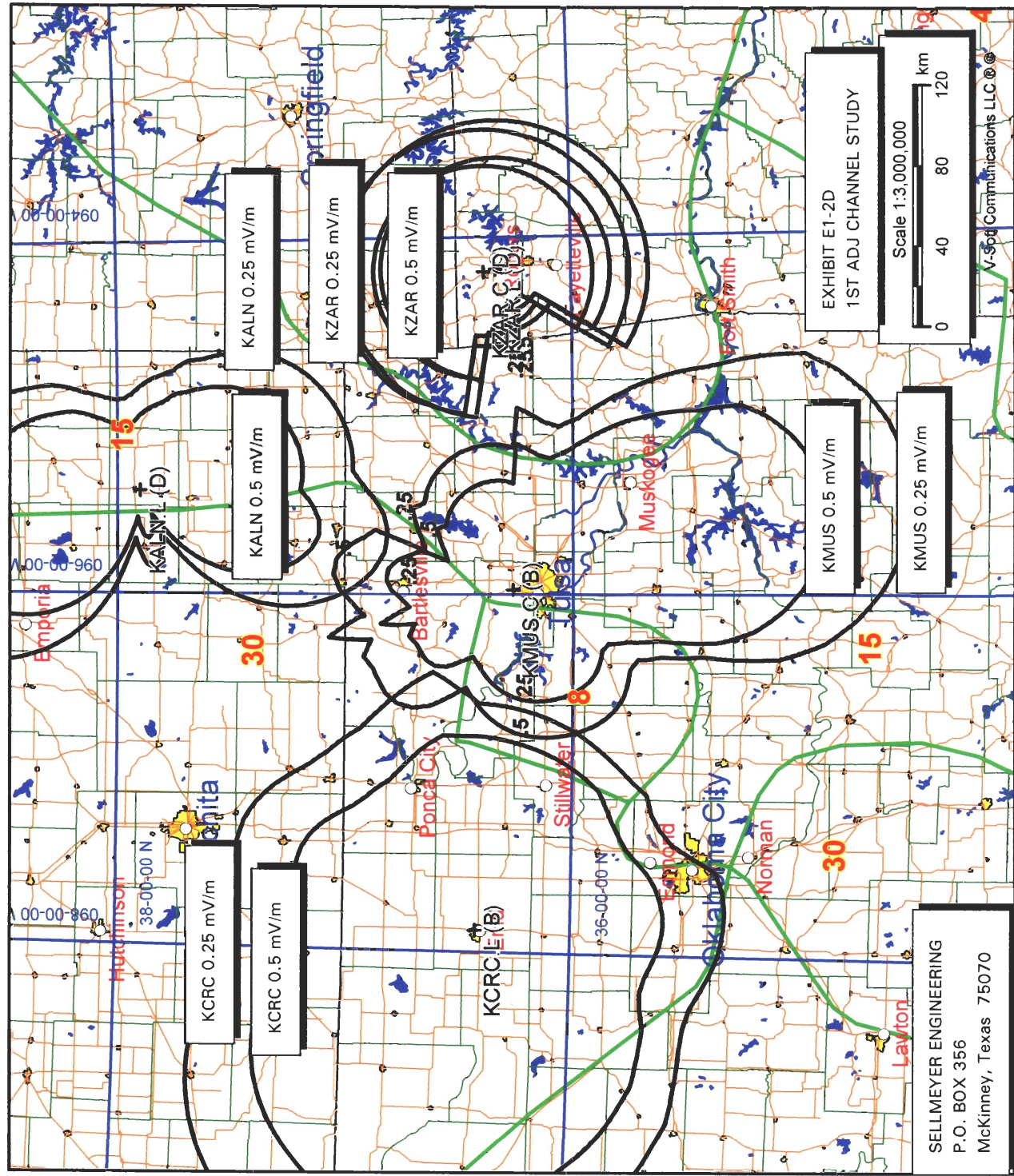
- Causes
- Receives
- No Ix





Freq: 1380 kHz  
Class: B  
Latitude: 36-15-59 N  
Longitude: 095-58-15 W  
Power: 7 kW  
RMS: 762.7 mV/m @1km  
# Towers: 6  
# Augs: 2

Causes  
Receives  
No Ix



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**EXHIBIT E1-2E**  
**TABULATION DISTANCES TO CONTOURS**  
**RADIO STATION KMUS**

SPERRY, OK  
 Call: KMUS.C (B)  
 Coordinates: N 36 15 57 W 95 58 16  
 Frequency: 1380 kHz Number of contours: 4

Azimuth	Radiation (mV/m at one km)	Distances to Contours in Kilometers :			
		Contour levels in mV/m.			
		.025	.500	.250	5.000
0.0	90.23	206.85	59.21	84.24	11.75
5.0	100.15	213.27	61.91	87.67	12.66
10.0	102.40	213.61	61.57	87.51	12.86
15.0	96.39	195.70	58.01	83.49	12.33
20.0	86.92	181.20	52.26	77.04	11.44
24.9	85.64	173.63	48.11	72.77	11.32
25.0	85.79	119.85	34.94	47.18	9.87
25.0	85.79	119.85	34.94	47.18	9.87
30.0	103.98	129.09	38.05	51.12	11.22
35.0	138.10	143.75	43.03	57.47	13.43
39.9	177.81	157.76	47.89	63.73	15.64
40.0	178.64	158.03	47.98	63.85	15.68
40.0	178.64	158.03	47.98	63.85	15.68
45.0	218.92	154.54	45.98	61.36	15.80
45.0	218.92	154.54	45.98	61.36	15.80
45.1	219.69	154.74	46.04	61.45	15.83
50.0	255.29	163.91	49.02	65.40	17.16
54.9	285.48	170.02	51.36	68.51	18.19
55.0	286.03	170.14	51.40	68.57	18.21
55.0	286.03	170.14	51.40	68.57	18.21
60.0	310.66	175.16	53.20	70.96	21.34
60.0	310.66	175.16	53.20	70.96	21.34
60.1	311.09	175.24	53.23	71.00	21.35
65.0	329.27	178.75	54.50	72.70	22.00
69.9	341.79	181.04	55.36	73.84	22.44
70.0	341.99	181.08	55.37	73.85	22.44
70.0	341.99	181.08	55.37	73.85	22.44
75.0	348.56	182.26	55.81	74.44	22.66
75.0	348.56	182.26	55.81	74.44	22.66
75.1	348.62	182.27	55.81	74.44	22.66
80.0	347.99	182.16	55.77	74.39	22.64
85.0	338.64	180.47	55.14	73.55	22.33
90.0	318.77	176.75	53.77	71.73	21.63
90.0	318.77	176.75	53.77	71.73	21.63
90.1	318.26	197.04	74.12	92.07	26.33
95.0	288.69	190.76	71.67	88.90	24.91
100.0	256.52	183.76	69.22	85.63	23.27
105.0	250.24	182.47	68.88	85.13	22.93
110.0	312.70	196.15	73.94	91.75	26.07
115.0	453.86	222.39	83.37	104.13	31.93



SPERRY, OK  
 Call: KMUS.C (B)  
 Coordinates: N 36 15 57 W 95 58 16  
 Frequency: 1380 kHz Number of contours: 4

Azimuth	Radiation (mV/m at one km)	Distances to Contours in Kilometers :			
		Contour levels in mV/m.			
		.025	.500	.250	5.000
120.0	654.64	254.56	94.48	118.48	38.43
125.0	896.31	278.00	105.88	132.87	44.63
130.0	1161.89	299.31	117.18	146.73	50.23
135.0	1433.12	321.49	128.60	166.14	55.08
140.0	1689.96	341.50	145.39	185.70	59.11
145.0	1911.86	352.80	152.04	193.63	62.28
150.0	2079.77	358.28	156.73	199.09	64.50
155.0	2178.44	358.11	159.34	202.16	65.76
160.0	2198.44	356.56	159.86	202.77	66.01
165.0	2137.41	364.05	158.26	200.89	65.24
170.0	2000.49	370.11	154.56	196.55	63.46
175.0	1799.65	371.66	148.74	189.71	60.72
180.0	1552.12	358.49	140.91	180.40	57.01
185.0	1278.34	339.91	131.16	168.64	52.40
190.0	999.69	317.47	119.60	154.53	46.93
195.0	736.79	287.20	102.72	134.46	40.69
200.0	509.42	240.76	74.57	98.46	33.46
205.0	339.81	208.07	61.58	80.02	26.25
210.0	256.12	184.24	53.85	70.25	21.95
215.0	260.10	184.32	53.16	69.67	21.08
220.0	300.41	193.96	55.55	73.06	21.76
225.0	338.46	201.51	57.74	76.15	22.46
230.0	363.52	205.32	59.06	78.02	22.84
235.0	375.80	204.34	59.60	78.81	22.93
240.0	378.35	207.56	59.57	78.84	22.81
245.0	374.34	213.66	59.16	78.35	22.55
250.0	366.02	223.07	58.52	77.53	22.21
255.0	354.55	225.16	57.68	76.44	21.79
260.0	340.06	224.92	56.65	75.09	21.31
265.0	322.08	222.91	55.37	73.40	20.73
270.0	299.92	219.03	53.77	71.28	20.00
275.0	273.28	213.01	51.77	68.61	19.12
280.0	242.73	204.44	49.34	65.38	18.04
285.0	210.12	193.65	46.55	61.67	16.80
290.0	178.65	181.01	43.61	57.78	15.50
295.0	152.30	189.41	40.91	54.21	14.32
300.0	134.05	196.09	38.89	62.01	13.46
305.0	123.56	202.85	43.90	71.16	12.99
310.0	117.07	207.25	50.26	77.16	12.75
315.0	110.43	208.83	53.95	80.40	12.53
320.0	101.81	207.15	55.18	81.08	12.17
325.0	91.80	203.02	54.77	79.92	11.73
330.0	84.17	199.61	54.41	78.94	11.17
335.0	82.34	200.24	55.84	80.20	11.00
340.0	66.11	187.43	50.66	73.51	9.33
345.0	109.10	221.11	66.67	93.02	13.45
350.0	67.42	188.57	51.11	74.09	9.47
355.0	76.77	196.56	54.63	78.53	10.44

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**EXHIBIT E1-2F**  
**TABULATION DISTANCES TO CONTOURS**  
**RADIO STATION KCNW**

FAIRWAY, KS  
 Call: KCNW.L (D)  
 Coordinates: N 39 4 19 W 94 40 57  
 Frequency: 1380 kHz Number of contours: 2

Azimuth	Radiation (mV/m at one km)	Distances to Contours in Kilometers :	
		Contour levels in mV/m.	
		.500	.025
0.0	483.51	90.49	258.73
5.0	483.51	90.49	258.73
10.0	483.51	90.49	258.73
15.0	483.51	90.49	258.73
20.0	483.51	90.49	258.73
25.0	483.51	90.49	258.73
30.0	483.51	90.49	258.73
35.0	483.51	90.49	258.73
40.0	483.51	90.49	258.73
45.0	483.51	90.49	258.73
50.0	483.51	90.49	258.73
55.0	483.51	90.49	258.73
60.0	483.51	90.49	258.73
65.0	483.51	90.49	258.73
70.0	483.51	90.49	258.73
75.0	483.51	90.49	258.70
80.0	483.51	90.49	256.90
85.0	483.51	90.49	255.19
90.0	483.51	90.49	253.20
95.0	483.51	90.49	251.17
100.0	483.51	90.49	249.27
105.0	483.51	90.49	247.44
110.0	483.51	90.49	245.93
115.0	483.51	90.49	244.72
120.0	483.51	90.49	243.79
125.0	483.51	90.49	243.10
130.0	483.51	90.49	242.64
135.0	483.51	90.49	242.40
140.0	483.51	90.49	242.38
145.0	483.51	90.49	243.21
150.0	483.51	90.49	244.28
155.0	483.51	90.49	245.85
160.0	483.51	90.49	247.81
165.0	483.51	90.49	250.19
170.0	483.51	90.49	251.10
175.0	483.51	90.49	251.88
180.0	483.51	90.49	255.46
185.0	483.51	90.49	258.73
190.0	483.51	90.49	258.73
195.0	483.51	90.49	259.83
200.0	483.51	90.49	267.53

FAIRWAY, KS

Call: KCNW.L (D)

Coordinates: N 39 4 19 W 94 40 57

Frequency: 1380 kHz Number of contours: 2

Azimuth	Radiation (mV/m at one km)	Distances to Contours in Kilometers :	
		Contour levels in mV/m. .500	.025
205.0	483.51	90.49	273.30
210.0	483.51	90.49	279.05
215.0	483.51	90.49	284.17
220.0	483.51	90.49	288.48
225.0	483.51	90.49	292.13
230.0	483.51	90.49	295.21
235.0	483.51	90.49	297.79
240.0	483.51	91.29	299.87
245.0	483.51	93.19	301.77
250.0	483.51	94.98	303.56
255.0	483.51	96.36	304.93
260.0	483.51	97.41	305.99
265.0	483.51	98.13	306.71
270.0	483.51	99.06	307.64
275.0	483.51	99.70	300.78
280.0	483.51	100.04	294.18
285.0	483.51	100.09	290.23
290.0	483.51	99.87	286.67
295.0	483.51	99.35	283.51
300.0	483.51	98.57	280.79
305.0	483.51	97.63	279.00
310.0	483.51	96.31	280.73
315.0	483.51	94.66	281.81
320.0	483.51	92.63	282.83
325.0	483.51	90.49	284.35
330.0	483.51	90.49	278.37
335.0	483.51	90.49	280.01
340.0	483.51	90.49	280.01
345.0	483.51	90.49	277.58
350.0	483.51	90.49	272.88
355.0	483.51	90.49	259.27

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**EXHIBIT E1-2G**  
**TABULATION DISTANCES TO CONTOURS**  
**RADIO STATION KPTK**

LAWTON, OK  
 Call: KPTK.L (B)  
 Coordinates: N 34 35 24 W 98 21 44  
 Frequency: 1380 kHz Number of contours: 2

Azimuth	Radiation (mV/m at one km)	Distances to Contours in Kilometers :	
		Contour levels in mV/m.	
		.500	.025
0.0	314.29	77.09	253.85
5.0	332.40	79.65	263.53
10.0	347.09	82.56	272.65
15.0	357.94	84.84	278.51
20.0	364.78	87.63	283.72
24.9	367.59	89.32	285.65
25.0	367.60	64.60	203.44
25.0	367.60	64.60	203.44
30.0	366.40	64.51	203.17
35.0	361.16	64.13	202.00
39.9	352.13	63.47	199.92
40.0	351.90	63.46	199.88
40.0	351.90	63.46	199.88
45.0	338.72	55.15	181.80
45.0	338.72	55.15	181.80
45.1	338.42	55.13	181.74
50.0	321.90	53.99	178.88
54.9	302.57	52.62	175.71
55.0	302.15	52.59	175.62
55.0	302.15	52.59	175.62
60.0	280.87	51.01	172.27
60.0	280.87	51.01	172.27
60.1	280.44	50.98	172.17
65.0	260.69	50.50	167.10
69.9	250.25	50.50	164.32
70.0	250.19	50.50	164.30
70.0	250.19	50.50	164.30
75.0	254.83	50.00	163.78
75.0	254.83	50.00	163.78
75.1	255.08	50.00	163.85
80.0	273.62	50.46	168.68
85.0	302.34	52.60	175.66
90.0	336.35	54.99	183.19
90.0	336.35	54.99	183.19
90.1	337.06	115.61	277.68
95.0	376.24	120.78	285.98
100.0	420.86	126.23	293.89
105.0	464.02	131.07	304.47
110.0	500.66	134.93	310.82
115.0	527.19	137.58	316.23
120.0	540.52	138.88	324.00

LAWTON, OK  
 Call: KPTK.L (B)  
 Coordinates: N 34 35 24 W 98 21 44  
 Frequency: 1380 kHz Number of contours: 2

Azimuth	Radiation (mV/m at one km)	Distances to Contours in Kilometers :	
		Contour levels in mV/m.	
		.500	.025
125.0	538.37	138.67	338.25
130.0	522.71	137.14	340.71
135.0	497.24	134.59	339.51
140.0	466.70	131.37	326.74
145.0	434.61	127.80	309.73
150.0	399.24	123.65	293.92
155.0	362.83	119.06	281.18
160.0	328.15	114.36	272.33
165.0	297.68	109.91	264.25
170.0	273.31	106.09	257.39
175.0	255.97	103.22	253.02
180.0	245.46	98.05	249.16
185.0	241.05	93.60	247.98
190.0	240.91	88.80	247.83
195.0	240.82	85.26	249.21
200.0	241.78	80.51	250.50
205.0	241.77	76.81	246.09
210.0	241.49	74.64	241.44
215.0	240.48	72.94	244.61
220.0	239.46	71.07	251.41
225.0	239.69	69.12	252.41
230.0	242.91	68.92	250.07
235.0	251.00	69.83	245.95
240.0	265.51	71.42	248.76
245.0	287.12	73.70	252.25
250.0	315.33	76.51	255.66
255.0	348.60	79.63	260.96
260.0	384.64	82.79	272.14
265.0	420.77	85.76	274.33
270.0	454.17	88.37	274.66
275.0	485.23	90.68	275.98
280.0	512.18	92.61	275.88
285.0	528.68	93.77	273.80
290.0	530.01	93.86	268.72
295.0	516.09	92.89	265.85
300.0	494.49	91.36	267.10
305.0	469.42	89.52	264.44
310.0	442.89	87.52	259.75
315.0	409.90	84.90	252.55
320.0	369.25	81.49	241.91
325.0	323.62	77.33	229.48
330.0	279.62	72.94	219.26
335.0	248.30	69.53	211.11
340.0	241.33	68.76	209.23
345.0	253.52	70.21	219.28
350.0	272.44	72.36	231.65
355.0	293.71	74.74	243.37

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**EXHIBIT E1-2H**  
**TABULATION DISTANCES TO CONTOURS**  
**RADIO STATION KCRC**

ENID, OK  
Call: KCRC.L (B)  
Coordinates: N 36 25 10 W 97 52 28  
Frequency: 1390 kHz Number of contours: 2

Azimuth	Radiation (mV/m at one km)	Distances to Contours in Kilometers :	
		Contour levels in mV/m.	
		.500	.250
0.0	169.08	86.16	115.76
5.0	168.65	86.06	115.64
10.0	178.59	88.31	118.32
15.0	191.79	91.15	121.71
20.0	202.07	93.28	124.25
25.0	206.00	94.07	125.19
30.0	202.59	93.39	124.37
35.0	192.99	91.40	122.01
40.0	180.19	88.66	118.74
45.0	168.59	86.04	115.63
50.0	164.96	85.19	114.61
55.0	166.95	85.66	115.17
60.0	168.25	85.96	115.53
65.0	180.63	88.76	118.85
70.0	196.82	92.20	122.96
75.0	214.40	95.71	127.14
80.0	231.26	98.89	130.91
85.0	245.81	97.59	121.37
90.0	256.92	97.35	113.78
95.0	263.85	96.77	113.37
100.0	266.21	96.23	112.90
105.0	263.85	95.71	112.31
110.0	256.92	95.19	111.61
115.0	245.81	94.69	110.82
120.0	231.26	93.88	109.61
125.0	214.40	93.15	108.40
130.0	196.82	92.20	107.44
135.0	180.63	88.76	106.97
140.0	168.25	85.96	107.74
145.0	161.84	84.45	103.76
150.0	162.25	84.04	103.25
155.0	168.34	85.79	105.23
160.0	178.94	88.39	111.91
165.0	188.04	90.35	120.76
170.0	193.25	91.45	122.07
175.0	195.51	91.93	121.93
180.0	192.71	91.34	120.70
185.0	185.41	89.79	119.00
190.0	175.87	87.71	116.41
195.0	168.40	86.00	113.55
200.0	169.08	86.16	111.62
205.0	183.23	89.32	112.59

ENID, OK  
 Call: KCRC.L (B)  
 Coordinates: N 36 25 10 W 97 52 28  
 Frequency: 1390 kHz Number of contours: 2

Azimuth	Radiation (mV/m at one km)	Distances to Contours in Kilometers :	
		Contour levels in mV/m.	
		.500	.250
210.0	212.02	95.21	116.14
215.0	252.49	99.12	121.30
220.0	301.95	103.71	127.25
225.0	364.52	109.18	134.27
230.0	403.81	112.37	138.36
235.0	454.21	116.46	143.50
240.0	501.36	120.27	148.23
245.0	544.12	123.84	152.58
250.0	581.74	127.20	156.58
255.0	613.78	130.52	160.43
260.0	639.99	133.88	164.21
265.0	671.39	137.97	168.79
270.0	680.52	141.28	172.23
275.0	683.41	145.38	176.38
280.0	686.29	150.73	181.77
285.0	683.41	151.48	192.95
290.0	674.77	150.77	192.13
295.0	660.32	149.58	190.72
300.0	658.29	149.42	190.52
305.0	618.78	146.07	186.57
310.0	581.74	142.77	182.70
315.0	544.12	139.22	178.60
320.0	501.36	135.00	173.61
325.0	454.21	130.00	167.74
330.0	403.81	124.21	160.88
335.0	351.78	117.61	153.09
340.0	300.35	110.31	144.50
345.0	252.49	102.63	135.37
350.0	212.02	95.25	126.59
355.0	183.23	89.32	119.53

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**EXHIBIT E1-2I**  
**TABULATION DISTANCES TO CONTOURS**  
**RADIO STATION KALN**

IOLA, KS  
Call: KALN.L (D)  
Coordinates: N 37 54 7 W 95 24 25  
Frequency: 1370 kHz Number of contours: 2

Azimuth	Radiation (mV/m at one km)	Distances to Contours in Kilometers :	
		Contour levels in mV/m.	
		.500	.250
0.0	343.57	79.09	103.68
5.0	332.52	78.06	102.39
10.0	316.24	76.51	100.43
15.0	295.55	74.47	97.84
20.0	271.44	71.95	94.67
25.0	244.96	69.00	90.96
30.0	217.21	65.68	86.78
35.0	189.23	62.01	82.19
40.0	161.97	58.05	77.25
45.0	139.14	54.38	72.68
50.0	119.65	50.89	68.34
55.0	96.99	46.29	62.65
60.0	76.91	41.54	56.79
65.0	64.37	38.11	52.57
70.0	55.18	35.30	49.09
75.0	49.95	33.55	46.91
80.0	48.28	32.96	46.20
85.0	52.63	34.47	48.04
90.0	62.22	37.48	51.78
95.0	72.42	40.36	55.34
100.0	82.11	42.84	58.39
105.0	94.33	45.71	61.93
110.0	120.70	51.08	68.59
115.0	136.30	53.89	72.07
120.0	164.96	58.51	77.82
125.0	198.35	63.24	83.73
130.0	232.12	67.49	89.07
135.0	263.18	71.05	93.54
140.0	289.68	73.87	97.08
145.0	311.29	76.03	99.83
150.0	328.32	77.67	101.89
155.0	341.01	78.85	103.38
160.0	349.70	79.65	104.39
165.0	354.58	80.09	104.95
170.0	354.06	80.04	104.89
175.0	346.60	79.37	104.03
180.0	332.50	78.06	110.09
185.0	312.49	83.74	118.24
190.0	287.65	88.34	122.12
195.0	259.37	89.88	122.84
200.0	229.21	88.20	120.16
205.0	198.09	84.44	115.25



IOLA, KS  
 Call: KALN.L (D)  
 Coordinates: N 37 54 7 W 95 24 25  
 Frequency: 1370 kHz Number of contours: 2

Azimuth	Radiation (mV/m at one km)	Distances to Contours in Kilometers :	
		Contour levels in mV/m.	
		.500	.250
210.0	166.52	79.14	108.63
215.0	135.51	72.58	100.52
220.0	105.98	64.72	90.88
225.0	78.71	55.58	79.65
230.0	54.36	45.14	66.66
235.0	33.59	33.30	51.54
240.0	17.54	20.65	34.57
245.0	10.50	13.33	24.03
250.0	14.59	18.03	30.75
255.0	19.33	22.76	37.32
260.0	21.07	24.39	39.51
265.0	19.33	22.86	37.42
270.0	14.59	18.23	30.96
275.0	10.50	13.65	24.34
280.0	17.56	21.13	35.05
285.0	33.92	34.15	52.46
290.0	54.72	46.15	67.72
295.0	78.85	56.74	80.82
300.0	105.99	66.20	92.37
305.0	135.51	74.59	102.54
310.0	166.52	81.97	111.45
315.0	198.09	88.32	119.13
320.0	229.21	93.59	125.55
325.0	258.80	97.71	130.65
330.0	285.75	100.50	134.23
335.0	308.98	101.53	135.94
340.0	327.55	100.09	134.97
345.0	340.68	94.35	129.55
350.0	347.85	79.52	114.90
355.0	348.79	79.57	104.28

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**EXHIBIT E1-2J**  
**TABULATION DISTANCES TO CONTOURS**  
**RADIO STATION KZAR-L**

ROGERS, AR  
 Call: KZAR.L (D)  
 Coordinates: N 36 20 3 W 94 10 41  
 Frequency: 1390 kHz Number of contours: 2

Azimuth	Radiation (mV/m at one km)	Distances to Contours in Kilometers :	
		Contour levels in mV/m.	
		.500	.250
0.0	350.84	55.96	74.64
5.0	350.84	55.96	74.64
10.0	350.84	55.96	74.64
15.0	350.84	55.96	74.64
20.0	350.84	55.96	74.64
25.0	350.84	55.96	74.64
30.0	350.84	55.96	74.64
35.0	350.84	55.96	74.64
40.0	350.84	55.96	74.64
45.0	350.84	55.96	74.64
50.0	350.84	55.96	74.64
55.0	350.84	55.96	74.64
60.0	350.84	55.96	74.64
65.0	350.84	55.96	74.64
70.0	350.84	55.96	74.64
75.0	350.84	55.96	74.64
80.0	350.84	55.96	74.64
85.0	350.84	55.96	74.64
90.0	350.84	55.96	74.64
95.0	350.84	55.96	74.64
100.0	350.84	55.96	74.64
105.0	350.84	55.96	74.64
110.0	350.84	55.96	74.64
115.0	350.84	55.96	74.64
120.0	350.84	55.96	74.64
125.0	350.84	55.96	74.64
130.0	350.84	55.96	74.64
135.0	350.84	55.96	74.64
140.0	350.84	55.96	74.64
145.0	350.84	55.96	74.64
150.0	350.84	55.96	74.64
155.0	350.84	55.96	74.64
160.0	350.84	55.96	74.64
165.0	350.84	55.96	74.64
170.0	350.84	55.96	74.64
175.0	350.84	55.96	74.64
180.0	350.84	55.96	74.64
185.0	350.84	55.96	74.64
190.0	350.84	55.96	74.64
195.0	350.84	55.96	74.64
200.0	350.84	55.96	74.64

ROGERS, AR  
 Call: KZAR.L (D)  
 Coordinates: N 36 20 3 W 94 10 41  
 Frequency: 1390 kHz Number of contours: 2

Azimuth	Radiation (mV/m at one km)	Distances to Contours in Kilometers :	
		Contour levels in mV/m.	
		.500	.250
205.0	350.84	55.96	74.64
210.0	350.84	55.96	74.64
215.0	350.84	55.96	74.64
220.0	350.84	55.96	74.64
225.0	350.84	55.96	74.64
230.0	350.84	55.96	74.64
235.0	350.84	55.96	74.64
240.0	350.84	55.96	74.64
245.0	350.84	55.96	74.64
250.0	350.84	55.96	74.64
255.0	350.84	55.96	74.64
260.0	350.84	55.96	74.64
265.0	350.84	55.96	74.64
270.0	350.84	55.96	74.64
275.0	350.84	55.96	74.64
280.0	350.84	55.96	74.64
285.0	350.84	55.96	74.64
290.0	350.84	55.96	74.64
295.0	350.84	55.96	74.64
300.0	350.84	55.96	75.23
305.0	350.84	55.96	75.70
310.0	350.84	55.96	75.66
315.0	350.84	55.96	75.44
320.0	350.84	55.96	74.64
325.0	350.84	55.96	74.64
330.0	350.84	55.96	74.64
335.0	350.84	55.96	74.64
340.0	350.84	55.96	74.64
345.0	350.84	55.96	74.64
350.0	350.84	55.96	74.64
355.0	350.84	55.96	74.64

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**EXHIBIT E1-2K**  
**TABULATION DISTANCES TO CONTOURS**  
**RADIO STATION KZAR-C**

ROGERS, AR  
 Call: KZAR.C (D)  
 Coordinates: N 36 23 18 W 94 11 33  
 Frequency: 1390 kHz Number of contours: 2

Azimuth	Radiation (mV/m at one km)	Distances to Contours in Kilometers :	
		Contour levels in mV/m. .500	.250
0.0	315.11	53.52	71.38
5.0	315.11	53.52	71.38
10.0	315.11	53.52	71.38
15.0	315.11	53.52	71.38
20.0	315.11	53.52	71.38
25.0	315.11	53.52	71.38
30.0	315.11	53.52	71.38
35.0	315.11	53.52	71.38
40.0	315.11	53.52	71.38
45.0	315.11	53.52	71.38
50.0	315.11	53.52	71.38
55.0	315.11	53.52	71.38
60.0	315.11	53.52	71.38
65.0	315.11	53.52	71.38
70.0	315.11	53.52	71.38
75.0	315.11	53.52	71.38
80.0	315.11	53.52	71.38
85.0	315.11	53.52	71.38
90.0	315.11	53.52	71.38
95.0	315.11	53.52	71.38
100.0	315.11	53.52	71.38
105.0	315.11	53.52	71.38
110.0	315.11	53.52	71.38
115.0	315.11	53.52	71.38
120.0	315.11	53.52	71.38
125.0	315.11	53.52	71.38
130.0	315.11	53.52	71.38
135.0	315.11	53.52	71.38
140.0	315.11	53.52	71.38
145.0	315.11	53.52	71.38
150.0	315.11	53.52	71.38
155.0	315.11	53.52	71.38
160.0	315.11	53.52	71.38
165.0	315.11	53.52	71.38
170.0	315.11	53.52	71.38
175.0	315.11	53.52	71.38
180.0	315.11	53.52	71.38
185.0	315.11	53.52	71.38
190.0	315.11	53.52	71.38
195.0	315.11	53.52	71.38
200.0	315.11	53.52	71.38

ROGERS, AR  
 Call: KZAR.C (D)  
 Coordinates: N 36 23 18 W 94 11 33  
 Frequency: 1390 kHz Number of contours: 2

Azimuth	Radiation (mV/m at one km)	Distances to Contours in Kilometers :	
		Contour levels in mV/m. .500	.250
205.0	315.11	53.52	71.38
210.0	315.11	53.52	71.38
215.0	315.11	53.52	71.38
220.0	315.11	53.52	71.38
225.0	315.11	53.52	71.38
230.0	315.11	53.52	71.38
235.0	315.11	53.52	71.38
240.0	315.11	53.52	71.38
245.0	315.11	53.52	71.38
250.0	315.11	53.52	71.38
255.0	315.11	53.52	71.38
260.0	315.11	53.52	71.38
265.0	315.11	53.52	71.38
270.0	315.11	53.52	71.38
275.0	315.11	53.52	71.38
280.0	315.11	53.52	71.38
285.0	315.11	53.52	71.38
290.0	315.11	53.52	71.38
295.0	315.11	53.52	72.03
300.0	315.11	53.52	72.77
305.0	315.11	53.52	72.91
310.0	315.11	53.52	72.87
315.0	315.11	53.52	72.24
320.0	315.11	53.52	71.38
325.0	315.11	53.52	71.38
330.0	315.11	53.52	71.38
335.0	315.11	53.52	71.38
340.0	315.11	53.52	71.38
345.0	315.11	53.52	71.38
350.0	315.11	53.52	71.38
355.0	315.11	53.52	71.38

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**EXHIBIT E1-2L**  
**TABULATION OF MEASURED CONDUCTIVITIES**

STATION: KREB

<u>AZ</u>	<u>COND</u>	<u>DISTANCE</u>
<u>DEG</u>	<u>mS/m</u>	<u>KILOMETERS</u>
223	1.0	2.5
223	2.0	13.0
223	1.0	39.5

<u>AZ</u>	<u>COND</u>	<u>DISTANCE</u>
<u>DEG</u>	<u>mS/m</u>	<u>KILOMETERS</u>
238	1.0	7.0
238	2.0	18.0
238	2.0	41.0

<u>AZ</u>	<u>COND</u>	<u>DISTANCE</u>
<u>DEG</u>	<u>mS/m</u>	<u>KILOMETERS</u>
253	1.0	0.8
253	2.0	9.0
253	3.0	20.5
253	2.0	32.0

<u>AZ</u>	<u>COND</u>	<u>DISTANCE</u>
<u>DEG</u>	<u>mS/m</u>	<u>KILOMETERS</u>
267.3	1.0	1.4
267.3	4.0	32.0
267.3	2.0	46.0

STATION: KPTK

<u>AZ</u>	<u>COND</u>	<u>DISTANCE</u>
<u>DEG</u>	<u>mS/m</u>	<u>KILOMETERS</u>
035	10.0	200

<u>AZ</u>	<u>COND</u>	<u>DISTANCE</u>
<u>DEG</u>	<u>mS/m</u>	<u>KILOMETERS</u>
050	8.0	160

<u>AZ</u>	<u>COND</u>	<u>DISTANCE</u>
<u>DEG</u>	<u>mS/m</u>	<u>KILOMETERS</u>
065	6.0	5.0
065	10.0	50.5
065	8.0	150.0

<u>AZ</u>	<u>COND</u>	<u>DISTANCE</u>
<u>DEG</u>	<u>mS/m</u>	<u>KILOMETERS</u>
080	10.0	50
080	8.0	150

All conductivities taken from measurements included in Application file number  
BMJP-20001019AAS

Horizontal Plane Augmented Pattern

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Switch	#	Azimuth (deg)	Radiation (mV/m@1 km)	Span (deg)
1	1.000	0.0	0.0	0.0	90.0	0	1	9.00	52.10	10.0
2	0.880	0.0	170.0	70.0	90.0	0	2	23.00	32.60	10.0
3	0.590	80.0	192.0	42.0	90.0	0	3	208.50	53.50	10.0
4	0.700	98.0	90.0	340.0	90.0	0				
5	0.470	98.0	192.0	278.0	90.0	0				
6	0.480	10.0	170.0	250.0	90.0	0				

Call: KMUS.C (B)  
Freq: 1380 kHz  
SPERRY, OK, US  
Lat: 36-15-59 N  
Lng: 095-58-15 W  
Power: 0.25 kW  
Theo RMS: 143.99 mV/m @ 1km  
# of Augmentations: 3

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**EXHIBIT E1-3B**  
**RADIO STATION KMUS**  
**SPERRY, OKLAHOMA**  
**TABULATION OF MODIFIED STANDARD PATTERN**  
**(NIGHTTIME)**

Call: KMUS.C (B) Freq: 1380 kHz  
 SPERRY, OK, US Power: 0.25 kW  
 Lat: 36-15-59 N Lng: 095-58-15 W  
 Theo RMS: 143.99 mV/m @ 1 kM  
 Std RMS: 151.55 mV/m @ 1 kM  
 Aug Std RMS: 151.63 mV/m @ 1 kM  
 # of Augmentations: 3

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	90.0	0	0	0.0	0.0	0.0	0.0
2	0.880	0.0	170.0	70.0	90.0	0	0	0.0	0.0	0.0	0.0
3	0.590	80.0	192.0	42.0	90.0	0	0	0.0	0.0	0.0	0.0
4	0.700	98.0	90.0	340.0	90.0	0	0	0.0	0.0	0.0	0.0
5	0.470	98.0	192.0	278.0	90.0	0	0	0.0	0.0	0.0	0.0
6	0.480	10.0	170.0	250.0	90.0	0	0	0.0	0.0	0.0	0.0

Augmented Horizontal Plane Pattern

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	53.02	5.0	51.28	10.0	51.10
15.0	43.13	20.0	36.68	25.0	28.87
30.0	19.90	35.0	16.02	40.0	20.08
45.0	28.24	50.0	36.77	55.0	44.34
60.0	50.51	65.0	55.15	70.0	58.23
75.0	59.69	80.0	59.36	85.0	56.93
90.0	52.13	95.0	45.19	100.0	38.47
105.0	39.71	110.0	56.94	115.0	87.99
120.0	128.56	125.0	175.66	130.0	226.41
135.0	277.51	140.0	325.23	145.0	365.73
150.0	395.45	155.0	411.59	160.0	412.45
165.0	397.71	170.0	368.52	175.0	327.31
180.0	277.54	185.0	223.26	190.0	168.69
195.0	117.91	200.0	75.16	205.0	49.35
210.0	51.71	215.0	51.20	220.0	62.22
225.0	69.82	230.0	73.78	235.0	74.95
240.0	74.31	245.0	72.67	250.0	70.59
255.0	68.38	260.0	66.09	265.0	63.65
270.0	60.93	275.0	57.85	280.0	54.48
285.0	51.12	290.0	48.28	295.0	46.60
300.0	46.54	305.0	48.19	310.0	51.17
315.0	54.87	320.0	58.59	325.0	61.67
330.0	63.55	335.0	63.87	340.0	62.64
345.0	60.28	350.0	57.51	355.0	55.03



Augmented Pattern  
Calculated at 5.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	53.33	5.0	51.65	10.0	51.45
15.0	43.57	20.0	37.15	25.0	29.37
30.0	20.36	35.0	16.10	40.0	19.63
45.0	27.52	50.0	35.93	55.0	43.43
60.0	49.57	65.0	54.18	70.0	57.23
75.0	58.65	80.0	58.26	85.0	55.79
90.0	50.98	95.0	44.15	100.0	37.86
105.0	39.99	110.0	57.85	115.0	89.01
120.0	129.39	125.0	176.13	130.0	226.40
135.0	276.96	140.0	324.12	145.0	364.11
150.0	393.44	155.0	409.34	160.0	410.15
165.0	395.56	170.0	366.69	175.0	325.94
180.0	276.72	185.0	223.00	190.0	168.94
195.0	118.55	200.0	75.98	205.0	49.81
210.0	51.29	215.0	50.30	220.0	61.24
225.0	68.92	230.0	73.03	235.0	74.35
240.0	73.84	245.0	72.30	250.0	70.29
255.0	68.10	260.0	65.81	265.0	63.35
270.0	60.60	275.0	57.49	280.0	54.11
285.0	50.75	290.0	47.93	295.0	46.27
300.0	46.24	305.0	47.90	310.0	50.86
315.0	54.51	320.0	58.18	325.0	61.21
330.0	63.08	335.0	63.44	340.0	62.30
345.0	60.09	350.0	57.51	355.0	55.21

Augmented Pattern  
Calculated at 10.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	54.27	5.0	52.76	10.0	52.50
15.0	44.89	20.0	38.58	25.0	30.87
30.0	21.81	35.0	16.54	40.0	18.45
45.0	25.44	50.0	33.43	55.0	40.72
60.0	46.73	65.0	51.24	70.0	54.20
75.0	55.50	80.0	54.97	85.0	52.38
90.0	47.59	95.0	41.19	100.0	36.37
105.0	41.14	110.0	60.67	115.0	92.04
120.0	131.81	125.0	177.46	130.0	226.30
135.0	275.24	140.0	320.77	145.0	359.27
150.0	387.44	155.0	402.64	160.0	403.30
165.0	389.14	170.0	361.22	175.0	321.84
180.0	274.22	185.0	222.16	190.0	169.62
195.0	120.42	200.0	78.41	205.0	51.32
210.0	50.23	215.0	47.69	220.0	58.32
225.0	66.21	230.0	70.72	235.0	72.47
240.0	72.35	245.0	71.10	250.0	69.28
255.0	67.17	260.0	64.88	265.0	62.37
270.0	59.54	275.0	56.37	280.0	52.96
285.0	49.62	290.0	46.87	295.0	45.31
300.0	45.37	305.0	47.05	310.0	49.97
315.0	53.52	320.0	57.05	325.0	59.97
330.0	61.80	335.0	62.27	340.0	61.43
345.0	59.67	350.0	57.63	355.0	55.81

Augmented Pattern  
Calculated at 15.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	55.90	5.0	54.62	10.0	54.28
15.0	47.09	20.0	40.95	25.0	33.41
30.0	24.40	35.0	17.94	40.0	17.21
45.0	22.35	50.0	29.45	55.0	36.28
60.0	42.00	65.0	46.32	70.0	49.10
75.0	50.21	80.0	49.50	85.0	46.81
90.0	42.24	95.0	36.93	100.0	35.10
105.0	43.96	110.0	65.53	115.0	96.92
120.0	135.60	125.0	179.40	130.0	225.90
135.0	272.21	140.0	315.10	145.0	351.22
150.0	377.53	155.0	391.62	160.0	392.06
165.0	378.60	170.0	352.21	175.0	315.01
180.0	269.97	185.0	220.60	190.0	170.54
195.0	123.31	200.0	82.37	205.0	54.20
210.0	49.16	215.0	43.79	220.0	53.57
225.0	61.63	230.0	66.68	235.0	69.08
240.0	69.55	245.0	68.77	250.0	67.26
255.0	65.31	260.0	63.06	265.0	60.49
270.0	57.59	275.0	54.36	280.0	50.94
285.0	47.69	290.0	45.10	295.0	43.74
300.0	43.98	305.0	45.76	310.0	48.66
315.0	52.10	320.0	55.47	325.0	58.26
330.0	60.10	335.0	60.80	340.0	60.44
345.0	59.38	350.0	58.12	355.0	56.98

Augmented Pattern  
Calculated at 20.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	58.28	5.0	57.23	10.0	56.76
15.0	50.10	20.0	44.25	25.0	36.99
30.0	28.24	35.0	20.91	40.0	17.20
45.0	19.13	50.0	24.47	55.0	30.37
60.0	35.57	65.0	39.53	70.0	42.02
75.0	42.90	80.0	42.06	85.0	39.49
90.0	35.74	95.0	32.91	100.0	35.94
105.0	49.28	110.0	72.45	115.0	103.37
120.0	140.33	125.0	181.55	130.0	224.85
135.0	267.65	140.0	307.02	145.0	340.00
150.0	363.88	155.0	376.53	160.0	376.69
165.0	364.15	170.0	339.79	175.0	305.48
180.0	263.88	185.0	218.10	190.0	171.39
195.0	126.91	200.0	87.64	205.0	58.76
210.0	49.05	215.0	39.49	220.0	47.33
225.0	55.22	230.0	60.78	235.0	63.90
240.0	65.09	245.0	64.91	250.0	63.83
255.0	62.13	260.0	59.98	265.0	57.43
270.0	54.51	275.0	51.28	280.0	47.97
285.0	44.92	290.0	42.65	295.0	41.67
300.0	42.24	305.0	44.23	310.0	47.20
315.0	50.58	320.0	53.84	325.0	56.59
330.0	58.55	335.0	59.61	340.0	59.89
345.0	59.68	350.0	59.29	355.0	58.89

Augmented Pattern  
Calculated at 25.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	61.36	5.0	60.48	10.0	59.88
15.0	53.85	20.0	48.37	25.0	41.56
30.0	33.32	35.0	25.73	40.0	19.92
45.0	17.86	50.0	19.90	55.0	23.93
60.0	28.06	65.0	31.38	70.0	33.48
75.0	34.18	80.0	33.48	85.0	31.74
90.0	30.25	95.0	32.01	100.0	40.66
105.0	57.33	110.0	81.11	115.0	110.88
120.0	145.46	125.0	183.37	130.0	222.73
135.0	261.26	140.0	296.43	145.0	325.68
150.0	346.69	155.0	357.66	160.0	357.52
165.0	346.09	170.0	324.15	175.0	293.30
180.0	255.81	185.0	214.36	190.0	171.78
195.0	130.76	200.0	93.83	205.0	65.01
210.0	51.02	215.0	36.51	220.0	40.53
225.0	47.34	230.0	53.05	235.0	56.78
240.0	58.69	245.0	59.18	250.0	58.61
255.0	57.27	260.0	55.33	265.0	52.91
270.0	50.11	275.0	47.06	280.0	44.03
285.0	41.41	290.0	39.71	295.0	39.34
300.0	40.45	305.0	42.82	310.0	45.98
315.0	49.42	320.0	52.71	325.0	55.55
330.0	57.76	335.0	59.31	340.0	60.31
345.0	60.94	350.0	61.36	355.0	61.58

Augmented Pattern  
Calculated at 30.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	64.95	5.0	64.19	10.0	63.49
15.0	58.14	20.0	53.16	25.0	46.96
30.0	39.47	35.0	32.20	40.0	25.68
45.0	20.97	50.0	19.00	55.0	19.65
60.0	21.65	65.0	23.78	70.0	25.35
75.0	26.15	80.0	26.42	85.0	27.06
90.0	29.84	95.0	36.92	100.0	49.47
105.0	67.59	110.0	90.88	115.0	118.73
120.0	150.25	125.0	184.22	130.0	219.03
135.0	252.74	140.0	283.24	145.0	308.38
150.0	326.27	155.0	335.42	160.0	334.98
165.0	324.81	170.0	305.55	175.0	278.54
180.0	245.64	185.0	209.08	190.0	171.21
195.0	134.30	200.0	100.40	205.0	72.60
210.0	55.66	215.0	37.11	220.0	35.15
225.0	39.10	230.0	44.04	235.0	47.94
240.0	50.38	245.0	51.46	250.0	51.44
255.0	50.55	260.0	48.97	265.0	46.87
270.0	44.40	275.0	41.78	280.0	39.34
285.0	37.50	290.0	36.69	295.0	37.23
300.0	39.10	305.0	42.01	310.0	45.49
315.0	49.12	320.0	52.56	325.0	55.62
330.0	58.18	335.0	60.25	340.0	61.91
345.0	63.23	350.0	64.27	355.0	64.92

Augmented Pattern  
Calculated at 35.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	68.74	5.0	68.08	10.0	67.32
15.0	62.71	20.0	58.33	25.0	52.90
30.0	46.37	35.0	39.85	40.0	33.63
45.0	28.27	50.0	24.30	55.0	22.02
60.0	21.30	65.0	21.66	70.0	22.64
75.0	24.09	80.0	26.40	85.0	30.37
90.0	36.99	95.0	47.07	100.0	61.04
105.0	79.00	110.0	100.78	115.0	125.98
120.0	153.87	125.0	183.41	130.0	213.25
135.0	241.82	140.0	267.40	145.0	288.28
150.0	302.96	155.0	310.28	160.0	309.57
165.0	300.74	170.0	284.31	175.0	261.32
180.0	233.27	185.0	201.94	190.0	169.19
195.0	136.86	200.0	106.60	205.0	80.78
210.0	62.65	215.0	42.38	220.0	34.30
225.0	33.06	230.0	35.41	235.0	38.44
240.0	40.84	245.0	42.25	250.0	42.70
255.0	42.30	260.0	41.23	265.0	39.68
270.0	37.85	275.0	36.04	280.0	34.61
285.0	33.96	290.0	34.41	295.0	36.09
300.0	38.84	305.0	42.31	310.0	46.14
315.0	50.00	320.0	53.65	325.0	56.96
330.0	59.86	335.0	62.37	340.0	64.51
345.0	66.30	350.0	67.69	355.0	68.57

Augmented Pattern  
Calculated at 40.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	72.28	5.0	71.72	10.0	71.00
15.0	67.17	20.0	63.49	25.0	58.96
30.0	53.53	35.0	48.05	40.0	42.69
45.0	37.82	50.0	33.80	55.0	30.87
60.0	29.17	65.0	28.72	70.0	29.52
75.0	31.65	80.0	35.36	85.0	41.03
90.0	49.06	95.0	59.81	100.0	73.49
105.0	90.15	110.0	109.65	115.0	131.61
120.0	155.43	125.0	180.23	130.0	204.93
135.0	228.28	140.0	248.95	145.0	265.63
150.0	277.19	155.0	282.75	160.0	281.84
165.0	274.39	170.0	260.78	175.0	241.83
180.0	218.67	185.0	192.65	190.0	165.21
195.0	137.78	200.0	111.63	205.0	88.58
210.0	70.87	215.0	51.12	220.0	39.53
225.0	32.99	230.0	30.76	235.0	31.06
240.0	32.21	245.0	33.26	250.0	33.82
255.0	33.83	260.0	33.37	265.0	32.62
270.0	31.81	275.0	31.24	280.0	31.24
285.0	32.09	290.0	33.93	295.0	36.68
300.0	40.14	305.0	44.04	310.0	48.08
315.0	52.07	320.0	55.84	325.0	59.31
330.0	62.43	335.0	65.18	340.0	67.57
345.0	69.56	350.0	71.10	355.0	72.05

Augmented Pattern  
Calculated at 45.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	75.07	5.0	74.65	10.0	74.06
15.0	71.03	20.0	68.12	25.0	64.56
30.0	60.33	35.0	56.03	40.0	51.81
45.0	47.94	50.0	44.68	55.0	42.26
60.0	40.87	65.0	40.65	70.0	41.72
75.0	44.25	80.0	48.40	85.0	54.38
90.0	62.37	95.0	72.54	100.0	84.95
105.0	99.58	110.0	116.24	115.0	134.58
120.0	154.10	125.0	174.09	130.0	193.71
135.0	212.01	140.0	228.01	145.0	240.76
150.0	249.43	155.0	253.42	160.0	252.38
165.0	246.27	170.0	235.39	175.0	220.31
180.0	201.85	185.0	181.00	190.0	158.83
195.0	136.38	200.0	114.63	205.0	94.93
210.0	78.85	215.0	61.03	220.0	48.73
225.0	39.65	230.0	33.67	235.0	30.33
240.0	28.83	245.0	28.34	250.0	28.25
255.0	28.27	260.0	28.31	265.0	28.43
270.0	28.81	275.0	29.62	280.0	31.04
285.0	33.15	290.0	35.94	295.0	39.30
300.0	43.06	305.0	47.03	310.0	51.03
315.0	54.94	320.0	58.64	325.0	62.07
330.0	65.18	335.0	67.95	340.0	70.36
345.0	72.35	350.0	73.86	355.0	74.80

Augmented Pattern  
Calculated at 50.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	76.57	5.0	76.33	10.0	75.96
15.0	73.72	20.0	71.62	25.0	69.05
30.0	66.00	35.0	62.93	40.0	59.93
45.0	57.22	50.0	54.98	55.0	53.43
60.0	52.72	65.0	53.02	70.0	54.46
75.0	57.18	80.0	61.31	85.0	66.95
90.0	74.21	95.0	83.13	100.0	93.71
105.0	105.85	110.0	119.37	115.0	133.96
120.0	149.20	125.0	164.55	130.0	179.39
135.0	193.05	140.0	204.83	145.0	214.07
150.0	220.22	155.0	222.87	160.0	221.79
165.0	216.95	170.0	208.57	175.0	197.04
180.0	182.93	185.0	166.91	190.0	149.73
195.0	132.13	200.0	114.80	205.0	98.76
210.0	85.11	215.0	69.98	220.0	58.65
225.0	49.41	230.0	42.25	235.0	37.02
240.0	33.46	245.0	31.22	250.0	29.97
255.0	29.44	260.0	29.47	265.0	29.99
270.0	31.00	275.0	32.52	280.0	34.57
285.0	37.12	290.0	40.11	295.0	43.44
300.0	46.99	305.0	50.66	310.0	54.32
315.0	57.88	320.0	61.28	325.0	64.44
330.0	67.33	335.0	69.91	340.0	72.14
345.0	73.98	350.0	75.37	355.0	76.26

Augmented Pattern  
Calculated at 55.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	76.27	5.0	76.24	10.0	76.13
15.0	74.65	20.0	73.32	25.0	71.68
30.0	69.74	35.0	67.82	40.0	65.97
45.0	64.37	50.0	63.15	55.0	62.47
60.0	62.46	65.0	63.24	70.0	64.94
75.0	67.64	80.0	71.43	85.0	76.38
90.0	82.52	95.0	89.84	100.0	98.30
105.0	107.78	110.0	118.12	115.0	129.06
120.0	140.28	125.0	151.40	130.0	162.00
135.0	171.60	140.0	179.76	145.0	186.05
150.0	190.12	155.0	191.70	160.0	190.66
165.0	186.99	170.0	180.82	175.0	172.41
180.0	162.13	185.0	150.41	190.0	137.75
195.0	124.63	200.0	111.53	205.0	99.18
210.0	88.35	215.0	76.24	220.0	66.72
225.0	58.57	230.0	51.83	235.0	46.45
240.0	42.35	245.0	39.39	250.0	37.43
255.0	36.32	260.0	35.95	265.0	36.23
270.0	37.09	275.0	38.47	280.0	40.31
285.0	42.55	290.0	45.12	295.0	47.94
300.0	50.92	305.0	53.99	310.0	57.06
315.0	60.06	320.0	62.94	325.0	65.64
330.0	68.12	335.0	70.34	340.0	72.27
345.0	73.87	350.0	75.09	355.0	75.90

Augmented Pattern  
Calculated at 60.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	73.73	5.0	73.89	10.0	74.04
15.0	73.21	20.0	72.56	25.0	71.73
30.0	70.73	35.0	69.77	40.0	68.90
45.0	68.23	50.0	67.86	55.0	67.88
60.0	68.40	65.0	69.50	70.0	71.25
75.0	73.72	80.0	76.95	85.0	80.98
90.0	85.79	95.0	91.37	100.0	97.66
105.0	104.55	110.0	111.91	115.0	119.54
120.0	127.24	125.0	134.74	130.0	141.77
135.0	148.05	140.0	153.29	145.0	157.24
150.0	159.69	155.0	160.49	160.0	159.57
165.0	156.91	170.0	152.62	175.0	146.83
180.0	139.77	185.0	131.70	190.0	122.91
195.0	113.73	200.0	104.43	205.0	95.54
210.0	87.58	215.0	78.50	220.0	71.15
225.0	64.65	230.0	59.06	235.0	54.39
240.0	50.63	245.0	47.72	250.0	45.61
255.0	44.24	260.0	43.51	265.0	43.38
270.0	43.78	275.0	44.64	280.0	45.90
285.0	47.49	290.0	49.36	295.0	51.44
300.0	53.67	305.0	55.98	310.0	58.32
315.0	60.62	320.0	62.85	325.0	64.97
330.0	66.92	335.0	68.69	340.0	70.24
345.0	71.54	350.0	72.57	355.0	73.30

**SELLMEYER ENGINEERING**  
 BROADCAST & COMMUNICATION CONSULTING ENGINEERS  
 P. O. Box 356 McKinney, Texas 75070  
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**EXHIBIT E1-3C**  
**TABULATION OF NIGHTTIME PERMISSIBLE RADIATION**  
**RADIO STATION KMUS**  
**SPERRY, OKLAHOMA**

Night Radiation Limit Report for KMUS.C (B)

Frequency: 1380 kHz

Latitude: 36-15-59 N      Longitude: 095-58-15 W

	Ct	St	City	Azimuth (Deg)	Min Theta (Deg)	Max Theta (Deg)	Limit (mV/m @ 1km)
	--	--	----	-----	-----	-----	-----
7:							
KLIZ.L (B)	US	MN	BRAINERD	7.1	4.7	9.4	1036.8
8:							
KCIM.L (B)	US	IA	CARROLL	8.0	11.0	18.8	127.6
19:							
NEW.A (B)	US	IA	PLEASANT HILL	18.9	11.5	19.4	1261.9
NEW.A (B)	US	IA	URBANDALE	19.0	11.4	19.3	1281.1
32:							
KDTH.L (B)	US	IA	DUBUQUE	31.8	8.0	14.2	1473.7
39:							
WTJK.L (B)	US	IL	SOUTH BELOIT	38.8	6.9	12.6	751.9
47:							
WGCI.L (B)	US	IL	CHICAGO	47.0	6.6	12.2	1383.1
54:							
WPHM.L (B)	US	MI	PORT HURON	53.4	2.9	6.8	581.5
56:							
CKPC (B)/O	CA	ON	BRANTFORD	55.8	3.7	3.7	477.6
CKLC (B)/	CA	ON	KINGSTON	55.9	1.6	1.6	911.2
58:							
WKJG.L (B)	US	IN	FORT WAYNE	57.5	5.2	10.0	310.0
WKJG.A (B)	US	IN	FORT WAYNE	57.5	5.2	10.0	310.0
60:							
WSYB.L (B)	US	VT	RUTLAND	60.3	0.0	1.7	1355.4

Night Radiation Limit Report for KMUS.C (B)

Frequency: 1380 kHz

Latitude: 36-15-59 N Longitude: 095-58-15 W

	Ct	St	City	Azimuth (Deg)	Min Theta (Deg)	Max Theta (Deg)	Limit (mV/m @ 1km)
	--	--	----	-----	-----	-----	-----
62:							
KSLG.L (B)	US	MO	ST. LOUIS	61.9	13.0	21.6	48.8
WABH.A (B)	US	NY	BATH	61.5	0.8	3.9	688.2
67:							
WFW.L (B)	US	CT	NAUGATUCK	66.6	0.0	2.0	994.1
68:							
WKDM.A (B)	US	NY	NEW YORK	68.4	0.0	2.5	680.9
WKDM.L (B)	US	NY	NEW YORK	68.4	0.0	2.5	680.9
79:							
WBT.K.A (B)	US	VA	LAKE SIDE	79.0	1.3	4.6	393.3
WBT.K.L (B)	US	VA	RICHMOND	79.2	1.3	4.5	398.7
86:							
WTOB.L (B)	US	NC	WINSTON-SALEM	85.9	2.7	6.5	469.9
90:							
WKJV.L (B)	US	NC	ASHEVILLE	89.5	4.1	8.5	349.4
94:							
WTJS.L (B)	US	TN	JACKSON	94.0	11.1	18.8	945.3
99:							
WLRM.L (B)	US	TN	MILLINGTON	99.2	13.3	22.0	175.3
101:							
WAOK.L (B)	US	GA	ATLANTA	101.6	5.1	10.0	275.0
113:							
KDXE.L (B)	US	AR	NORTH LITTLE RO	113.4	20.3	31.9	112.6
115:							
WELE.L (B)	US	FL	ORMOND BEACH	115.0	1.6	4.9	1342.7
152:							
NEW.A (B)	US	LA	BOSSIER CITY	152.5	16.7	26.9	381.9
164:							
KFRO.L (B)	US	TX	LONGVIEW	164.1	17.4	27.8	525.4
190:							
KBEC.L (B)	US	TX	WAXAHACHIE	190.4	17.5	28.0	902.4
197:							
KFNI.L (B)	US	TX	PLEASANTON	197.2	7.8	13.9	258.3



Night Radiation Limit Report for KMUS.C (B)  
Frequency: 1380 kHz  
Latitude: 36-15-59 N Longitude: 095-58-15 W

	Ct	St	City	Azimuth (Deg)	Min Theta (Deg)	Max Theta (Deg)	Limit (mV/m @ 1km)
	--	--	----	-----	-----	-----	-----
209:							
XEVD (B)/A	MX	CI	CD.ALLENDE	208.8	8.7	8.7	376.0
210:							
KBWD.L (B)	US	TX	BROWNWOOD	209.4	12.7	21.2	113.3
213:							
XERS (B)/O	MX	DU	GOMEZ PALACIO	213.0	4.7	4.7	984.5
230:							
KPTK.L (B)	US	OK	LAWTON	230.0	26.1	39.3	54.7
245:							
KHEY.L (B)	US	TX	EL PASO	245.4	5.1	10.0	228.2
268:							
NEW.A (B)	US	NM	BERNALILLO	267.6	6.5	12.1	289.4
276:							
KCRC.L (B)	US	OK	ENID	276.3	39.6	54.0	192.6
279:							
KZFX.L (B)	US	CA	SALINAS	278.9	0.0	0.8	645.2
284:							
KTKZ.L (B)	US	CA	SACRAMENTO	284.2	0.0	1.1	824.4
296:							
KGNO.L (B)	US	KS	DODGE CITY	295.6	18.8	29.8	495.9
302:							
KSRV.L (B)	US	OR	ONTARIO	302.4	0.0	2.4	356.8
309:							
KRKO.A (B)	US	WA	EVERETT	309.3	0.0	0.0	648.7
KRKO.L (B)	US	WA	EVERETT	309.4	0.0	0.0	656.0
314:							
NEW.A (B)	US	MT	BOZMAN	314.4	1.3	4.6	605.8
327:							
KOTA.L (B)	US	SD	RAPID CITY	326.9	5.4	10.3	122.2

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**EXHIBIT E1-3D**  
**NIGHTTIME ALLOCATION STUDY**  
**RADIO STATION KMUS**  
**SPERRY, OKLAHOMA**

Call: KMUS.C (B)  
 Freq: 1380 kHz  
 SPERRY, OK, US  
 Lat: 36-15-59 N  
 Lng: 095-58-15 W  
 Power: 0.25 kW  
 Theo RMS: 143.99 mV/m @ 1km  
 # of Augmentations: 3

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	90.0	0	0	0.0	0.0	0.0	0.0
2	0.880	0.0	170.0	70.0	90.0	0	0	0.0	0.0	0.0	0.0
3	0.590	80.0	192.0	42.0	90.0	0	0	0.0	0.0	0.0	0.0
4	0.700	98.0	90.0	340.0	90.0	0	0	0.0	0.0	0.0	0.0
5	0.470	98.0	192.0	278.0	90.0	0	0	0.0	0.0	0.0	0.0
6	0.480	10.0	170.0	250.0	90.0	0	0	0.0	0.0	0.0	0.0

Call Letters	Ct St City	Azi (deg)	Ang Low (deg)	Ang High (deg)	SWFF (100uV/m)	Req Prot (mV/m)	Permis (mV/m)	Cur Rad (mV/m)	Margin (mV/m)
KDXE.L (B)	US AR NORTH LITTLE RO	113.42	20.34	31.91	171.32	3.86	112.63	112.68	-0.06
50% = 14.188, 25% = 14.703; KMUS.L (B)=9.30 WLRM.L (B)=7.88 KPTK.L (B)=7.26 KMUS.C (B)=3.86									

\* **KMUS (L) contribution is 9.289 mV/m, lead contributor to 50% RSS**

NEW.A (B)	US LA BOSSIER CITY	152.55	16.71	26.94	137.72	10.52	381.87	381.84	0.03
50% = 33.64, 25% = 40.387; KDXE.L (B)=33.64 KPTK.L (B)=14.97 KMUS.L (B)=12.84 KMUS.C (B)=10.52									

Call Letters	Ct St City	Azi (deg)	Ang Low (deg)	Ang High (deg)	SWFF (100uV/m)	Req Prot (mV/m)	Permis (mV/m)	Cur Rad (mV/m)	Margin (mV/m)
KSLG.L (B)	US MO ST. LOUIS	61.91	13.02	21.65	99.87	0.97	48.76	45.98	2.78
50% = 2.808, 25% = 3.898; KBWD.L (B)=1.68 XECO (B)/A=1.60 WTJS.L (B)=1.59 KMUS.L (B)=1.30 KPTK.L (B)=1.12 WMMI.L (B)=1.09 WKJG.L (B)=1.08 WAOK.L (B)=1.03 WTJK.L (B)=0.97									
KPTK.L (B)	US OK LAWTON	229.99	26.09	39.25	224.18	2.45	54.74	51.13	3.60
50% = 7.676, 25% = 9.817; KBWD.L (B)=7.68 KMUS.L (B)=3.52 KHEY.L (B)=3.04 XECO (B)/A=2.95 KFNI.L (B)=2.66									
KOTA.L (B)	US SD RAPID CITY	326.89	5.36	10.33	35.89	0.88	122.22	62.01	60.22
50% = 2.613, 25% = 3.509; KMUS.L (B)=1.42 WKJG.L (B)=1.41 KHEY.L (B)=1.20 KPTK.L (B)=1.18 XECO (B)/A=1.05 KBWD.L (B)=1.03 KSRV.L (B)=0.94 KTKZ.L (B)=0.91 KCIM.L (B)=0.90 KLIZ.L (B)=0.89									
KBWD.L (B)	US TX BROWNWOOD	209.39	12.71	21.21	100.93	2.29	113.34	51.66	61.68
50% = 7.946, 25% = 9.152; KPTK.L (B)=5.02 KFNI.L (B)=4.40 XECO (B)/A=4.31 KHEY.L (B)=3.71 XEVD (B)/A=2.61									
KCIM.L (B)	US IA CARROLL	7.96	11.04	18.75	79.88	2.04	127.65	57.29	70.35
50% = 6.55, 25% = 8.157; KSLG.L (B)=5.30 KLIZ.L (B)=3.84 WFCL.L (B)=2.74 WKJG.L (B)=2.60 KPTK.L (B)=2.19 WSCG.L (B)=2.14									
XEVD (B)/A	MX CI CD.ALLENDE	208.79	8.67	8.67	64.47	4.85	375.96	52.73	323.23
50% = 9.695, 25% = 13.359; XECO (B)/A=8.08 KBWD.L (B)=5.36 XEPIC (B)/A=4.73 KHEY.L (B)=4.71 KPTK.L (B)=3.91 XEAPM (B)/A=3.63 KDXE.L (B)=3.39									
WLRM.L (B)	US TN MILLINGTON	99.19	13.27	22.02	104.19	3.65	175.32	35.82	139.50
50% = 13.315, 25% = 14.614; KDXE.L (B)=11.43 KSLG.L (B)=6.84 KMUS.L (B)=4.47 KPTK.L (B)=4.04									
KFRO.L (B)	US TX LONGVIEW	164.11	17.35	27.83	143.83	1.51	525.40	375.41	149.99
50% = 4.07, 25% = 6.046; WCOA.L (B)=2.94 WSPD.L (B)=2.00 KAHZ.L (B)=1.98 XEHAY (B)/A=1.92 KGNO.L (B)=1.91 KJCE.L (B)=1.89 KDXE.L (B)=1.87 KPTK.L (B)=1.68 XEA (B)/A=1.66									
KCRC.L (B)	US OK ENID	276.27	39.64	53.97	328.98	1.27	192.62	37.62	155.00
50% = 3.479, 25% = 5.103; XEOR (B)/A=2.26 KLTX.L (B)=1.95 KBEC.L (B)=1.79 XEV (B)/A=1.59 KFRA.L (B)=1.49 KWON.L (C)=1.41 KHOB.L (B)=1.39 KREF.L (C)=1.38 KRRZ.L (B)=1.33 KTMCL (C)=1.27									
KFNI.L (B)	US TX PLEASANTON	197.23	7.79	13.93	59.78	3.09	258.33	103.20	155.12
50% = 11.525, 25% = 12.573; KBWD.L (B)=7.97 XECO (B)/A=6.41 KDXE.L (B)=5.31 XEVD (B)/A=3.97 KHEY.L (B)=3.09									

Call Letters	Ct St City	Azi (deg)	Ang Low (deg)	Ang High (deg)	SWFF (100uV/m)	Req Prot (mV/m)	Permis (mV/m)	Cur Rad (mV/m)	Margin (mV/m)
KHEY.L (B)	US TX EL PASO	245.39	5.15	10.02	40.30	1.84	228.20	72.15	156.06
50% = 5.61, 25% = 7.5; XECO (B)/A=3.56 KBWD.L (B)=3.38 KTKZ.L (B)=2.71 XEPIC (B)/A=2.61 XEPAB (B)/A=2.43 KOTA.L (B)=2.22 KFNI.L (B)=1.94 XEAPM (B)/A=1.84									
NEW.A (B)	US NM BERNALILLO	267.60	6.54	12.07	48.50	2.81	289.39	61.74	227.65
50% = 9.993, 25% = 11.229; KPTK.L (B)=7.50 KHEY.L (B)=6.60 KTKZ.L (B)=3.66 KOTA.L (B)=3.58									
WAOK.L (B)	US GA ATLANTA	101.56	5.14	10.01	38.71	2.13	275.01	37.10	237.92
50% = 6.204, 25% = 8.64; WMMI.L (B)=4.40 WDEF.L (B)=3.27 WKJV.L (B)=2.91 WTOB.L (B)=2.72 WKJG.L (B)=2.66 KPTK.L (B)=2.59 WELE.L (B)=2.36 KMUS.L (B)=2.21 WBTk.L (B)=2.13									
WKJG.L (B)	US IN FORT WAYNE	57.53	5.16	10.04	35.29	2.19	309.96	46.65	263.31
50% = 6.746, 25% = 8.75; WAOK.L (B)=5.35 WSCG.L (B)=4.10 WSPD.L (B)=2.63 WFCL.L (B)=2.63 WTJK.L (B)=2.48 WTOB.L (B)=2.44 WPHM.L (B)=2.28									
WKJG.A (B)	US IN FORT WAYNE	57.52	5.16	10.04	35.29	2.19	309.98	46.63	263.34
50% = 6.745, 25% = 8.752; WAOK.L (B)=5.35 WSCG.L (B)=4.11 WSPD.L (B)=2.63 WFCL.L (B)=2.63 WTJK.L (B)=2.48 WTOB.L (B)=2.43 WPHM.L (B)=2.28									
WMMI.L (B)	US FL ST. PETERSBURG	122.86	1.73	5.16	22.03	1.97	446.21	155.55	290.66
50% = 5.283, 25% = 7.864; WBTk.L (B)=4.38 WCOA.L (B)=2.95 XECO (B)/A=2.55 WAOK.L (B)=2.55 KPTK.L (B)=2.53 WROA.L (B)=2.48 WLRM.L (B)=2.08 KMUS.L (B)=2.01									
WKJV.L (B)	US NC ASHEVILLE	89.54	4.09	8.49	31.52	2.20	349.35	51.90	297.46
50% = 7.854, 25% = 8.808; WAOK.L (B)=4.32 WBTk.L (B)=3.88 WKJG.L (B)=3.85 WTOB.L (B)=3.62 WDEF.L (B)=3.09 WMMI.L (B)=2.52									
KSRV.L (B)	US OR ONTARIO	302.41	0.00	2.44	11.32	0.81	356.84	47.14	309.70
50% = 2.986, 25% = 3.232; KXTL.L (B)=1.86 KRKO.L (B)=1.79 KPTK.L (B)=1.50 KHEY.L (B)=0.91 KTKZ.L (B)=0.84									
XEVD (B)/A	MX CI CD.ALLENDE	208.79	8.67	8.67	64.47	4.85	375.96	52.73	323.23
50% = 9.695, 25% = 13.359; XECO (B)/A=8.08 KBWD.L (B)=5.36 XEPIC (B)/A=4.73 KHEY.L (B)=4.71 KPTK.L (B)=3.91 XEAPM (B)/A=3.63 KDxE.L (B)=3.39									
WBTk.A (B)	US VA LAKESIDE	78.99	1.32	4.59	17.29	1.36	393.29	59.51	333.79
50% = 3.497, 25% = 5.439; WKDM.L (B)=2.66 WABH.L (B)=1.63 WSPD.L (B)=1.59 WAOK.L (B)=1.57 WTOB.L (B)=1.55 WXXI.L (B)=1.53 WSYB.L (B)=1.51 WKJG.L (B)=1.42 WKJV.L (B)=1.41 WMMI.L (B)=1.40 WWLG.L (B)=1.37									

# TOWAIR Determination Results

EXHIBIT E1-4

## DETERMINATION Results

**Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided. However, because the airport database we use is updated periodically, it does not take into account the most recent airport construction, nor does it include proposed airports. You still must register with the FCC if your structure is located near one of these airports or if the FAA specifically asks you to register.**

## Your Specifications

### NAD83 Coordinates

Latitude	36-15-59.6 north
Longitude	095-58-16.2 west

### Measurements (Meters)

Overall Structure Height (AGL)	57.4
Support Structure Height (AGL)	57.4
Site Elevation (AMSL)	242

### Structure Type

TOWER - Free standing or Guyed Structure used for Communications Purposes

### Tower Construction Notification

Notify Tribes and Historic Preservation Officers of your plans to build a tower.

Note: Notification does NOT replace [Section 106 Consultation](#).

CLOSE WINDOW

**SELLMEYER ENGINEERING**  
BROADCAST & COMMUNICATION CONSULTING ENGINEERS  
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MEMBER AFCCE

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**EXHIBIT E1-5**  
**TABULATION OF TOWER ELEVATION DATA**  
**RADIO STATION KMUS**  
**SPERRY, OKLAHOMA**

<u>TWR</u>	<u>GROUND ELEV</u> <u>(MTRS)</u>	<u>RADIATOR HT</u> <u>(MTRS)</u>	<u>ABOVE GROUND</u> <u>(MTRS)</u>	<u>HT AMSL</u> <u>(MTRS)</u>
1	184.5	54.3	57.4	241.9
2	184.1	54.3	57.4	241.5
3	184.3	54.3	57.4	241.7
4	184.6	54.3	57.4	242.0
5	184.8	54.3	57.4	242.2
6	184.3	54.3	57.4	241.7