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April 7, 2015

Ms. Marlene Dortch
Secretary
Federal Communications Commission
445 12th St., N.W.
Washington, DC 20554

Re: ***Intelli LLC***
Station KCLE(AM)
Facility No. 59263
FRN: 0017702846

Dear Ms. Dortch:

Transmitted herewith, on behalf of Intelli LLC is an application (FCC Form 302-AM) for filing of a partial proof of performance as required by the construction permit issued in conjunction with BPFT-20150209ADZ.

139324

No Filing Fee is required with respect to this application.

If there are any further questions, please contact this office.

Very truly yours,

Dan J. Alpert

Counsel for Intelli LLC

Accepted / Filed

Federal Communications Commission
Washington, D. C. 20554

Approved by OMB
3060-0627
Expires 01/31/98

FOR FCC USE ONLY

APR - 7 2015

Federal Communications Commission
Office of the Secretary

FCC 302-AM
APPLICATION FOR AM BROADCAST STATION LICENSE

(Please read instructions before filling out form.

FOR COMMISSION USE ONLY
FILE NO. BAML-20150407ACC

SECTION I - APPLICANT FEE INFORMATION

1. PAYOR NAME (Last, First, Middle Initial)

Intelli LLC

MAILING ADDRESS (Line 1) (Maximum 35 characters)
1382 Senter Rd.

MAILING ADDRESS (Line 2) (Maximum 35 characters)

CITY	STATE OR COUNTRY (if foreign address)	ZIP CODE
San Jose	CA	95112

TELEPHONE NUMBER (include area code)	CALL LETTERS	OTHER FCC IDENTIFIER (If applicable)
408-838-4075	KCLE	59263

2. A. Is a fee submitted with this application? ☐ Yes ☑ No

B. If No, indicate reason for fee exemption (see 47 C.F.R. Section

☐ Governmental Entity ☐ Noncommercial educational licensee ☑ Other (Please explain):

C. If Yes, provide the following information:

Enter in Column (A) the correct Fee Type Code for the service you are applying for. Fee Type Codes may be found in the "Mass Media Services Fee Filing Guide." Column (B) lists the Fee Multiple applicable for this application. Enter fee amount due in Column (C).

(A) FEE TYPE CODE	(B) FEE MULTIPLE	(C) FEE DUE FOR FEE TYPE CODE IN COLUMN (A)	FOR FCC USE ONLY
	0001	$	

To be used only when you are requesting concurrent actions which result in a requirement to list more than one Fee Type Code.

(A)	(B)	(C)	FOR FCC USE ONLY
	0001	$	

ADD ALL AMOUNTS SHOWN IN COLUMN C, AND ENTER THE TOTAL HERE. THIS AMOUNT SHOULD EQUAL YOUR ENCLOSED REMITTANCE.	TOTAL AMOUNT REMITTED WITH THIS APPLICATION	FOR FCC USE ONLY
	$	

SECTION II - APPLICANT INFORMATION		
1. NAME OF APPLICANT Intelli LLC		
MAILING ADDRESS 1982 Senter Rd.		
CITY San Jose	STATE CA	ZIP CODE 95112

2. This application is for:

☑ Commercial ☐ Noncommercial

☑ AM Directional ☐ AM Non-Directional

Call letters	Community of License	Construction Permit File No.	Modification of Construction Permit File No(s).	Expiration Date of Last Construction Permit
KCLE	Burleson, CA	N/A	N/A	N/A

3. Is the station now operating pursuant to automatic program test authority in accordance with 47 C.F.R. Section 73.1620?

☐ Yes ☑ No

If No, explain in an Exhibit.

Exhibit No. N/A

4. Have all the terms, conditions, and obligations set forth in the above described construction permit been fully met?

☐ Yes ☐ No

If No, state exceptions in an Exhibit.

Exhibit No. N/A

5. Apart from the changes already reported, has any cause or circumstance arisen since the grant of the underlying construction permit which would result in any statement or representation contained in the construction permit application to be now incorrect?

☐ Yes ☐ No

If Yes, explain in an Exhibit.

Exhibit No. N/A

6. Has the permittee filed its Ownership Report (FCC Form 323) or ownership certification in accordance with 47 C.F.R. Section 73.3615(b)?

☑ Yes ☐ No

☐ Does not apply

If No, explain in an Exhibit.

Exhibit No.

7. Has an adverse finding been made or an adverse final action been taken by any court or administrative body with respect to the applicant or parties to the application in a civil or criminal proceeding, brought under the provisions of any law relating to the following: any felony; mass media related antitrust or unfair competition; fraudulent statements to another governmental unit; or discrimination?

☐ Yes ☑ No

If the answer is Yes, attach as an Exhibit a full disclosure of the persons and matters involved, including an identification of the court or administrative body and the proceeding (by dates and file numbers), and the disposition of the litigation. Where the requisite information has been earlier disclosed in connection with another application or as required by 47 U.S.C. Section 1.65(c), the applicant need only provide: (i) an identification of that previous submission by reference to the file number in the case of an application, the call letters of the station regarding which the application or Section 1.65 information was filed, and the date of filing; and (ii) the disposition of the previously reported matter.

Exhibit No.

8. Does the applicant, or any party to the application, have a petition on file to migrate to the expanded band (1605-1705 kHz) or a permit or license either in the existing band or expanded band that is held in combination (pursuant to the 5 year holding period allowed) with the AM facility proposed to be modified herein?

☐ Yes ☑ No

If Yes, provide particulars as an Exhibit.

Exhibit No. N/A

The APPLICANT hereby waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because use of the same, whether by license or otherwise, and requests and authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended).

The APPLICANT acknowledges that all the statements made in this application and attached exhibits are considered material representations and that all the exhibits are a material part hereof and are incorporated herein as set out in full in

CERTIFICATION

1. By checking Yes, the applicant certifies, that, in the case of an individual applicant, he or she is not subject to a denial of federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862, or, in the case of a non-individual applicant (e.g., corporation, partnership or other unincorporated association), no party to the application is subject to a denial of federal benefits that includes FCC benefits pursuant to that section. For the definition of a "party" for these purposes, see 47 C.F.R. Section 1.2002(b).

☑ Yes ☐ No

2. 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.

Name	Signature	
Tron Dinh Do		
Title	Date	Telephone Number
Managing Member	4/6/2015	408-838-4075

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

FCC NOTICE TO INDIVIDUALS REQUIRED BY THE PRIVACY ACT AND THE PAPERWORK REDUCTION ACT

The solicitation of personal information requested in this application is authorized by the Communications Act of 1934, as amended. The Commission will use the information provided in this form to determine whether grant of the application is in the public interest. In reaching that determination, or for law enforcement purposes, it may become necessary to refer personal information contained in this form to another government agency. In addition, all information provided in this form will be available for public inspection. If information requested on the form is not provided, the application may be returned without action having been taken upon it or its processing may be delayed while a request is made to provide the missing information. Your response is required to obtain the requested authorization.

Public reporting burden for this collection of information is estimated to average 639 hours and 53 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, can be sent to the Federal Communications Commission, Records Management Branch, Paperwork Reduction Project (3060-0627), Washington, D. C. 20554. Do NOT send completed forms to this address.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e)(3), AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-511, DECEMBER 11, 1980, 44 U.S.C. 3507.

SECTION III - LICENSE APPLICATION ENGINEERING DATA

Name of Applicant

PURPOSE OF AUTHORIZATION APPLIED FOR: (check one)

☐ Station License ☐ Direct Measurement of Power

1. Facilities authorized in construction permit					
Call Sign	File No. of Construction Permit (if applicable)	Frequency (kHz)	Hours of Operation	Power in kilowatts	
				Night	Day
KCLE		1460	Unlimited	.7	11

2. Station location	
State	City or Town
TEXAS	BURLESON

3. Transmitter location			
State	County	City or Town	Street address (or other identification)
TEXAS	TARRANT	RENDON	FM 1187

4. Main studio location			
State	County	City or Town	Street address (or other identification)
TEXAS	JOHNSON	CLEBURNE	919 N Main

5. Remote control point location (specify only if authorized directional antenna)			
State	County	City or Town	Street address (or other identification)
TEXAS	JOHNSON	CLEBURNE	919 N Main

6. Has type-approved stereo generating equipment been installed? ☐ Yes ☑ No

7. Does the sampling system meet the requirements of 47 C.F.R. Section 73.68? ☑ Yes ☐ No ☐ Not Applicable

Attach as an Exhibit a detailed description of the sampling system as installed. see technical exhibit

8. Operating constants:	
RF common point or antenna current (in amperes) without modulation for night system 3.88	RF common point or antenna current (in amperes) without modulation for day system 15.22
Measured antenna or common point resistance (in ohms) at operating frequency Night 50 Day 50	Measured antenna or common point reactance (in ohms) at operating frequency Night 0 Day 0

Antenna indications for directional operation

Towers	Antenna monitor Phase reading(s) in degrees		Antenna monitor sample current ratio(s)		Antenna base currents	
	Night	Day	Night	Day	Night	Day
1	0	67.8	1	.423		
2	-20.2	74.1	.609	.142		
3		0		1		

Manufacturer and type of antenna monitor: Potomac Instruments AM 1901-3 SN 506

SECTION III - Page 2

9. Description of antenna system ((f directional antenna is used, the information requested below should be given for each element of the array. Use separate sheets if necessary.)

Type Radiator	Overall height in meters of radiator above base insulator, or above base, if grounded.	Overall height in meters above ground (without obstruction lighting)	Overall height in meters above ground (include obstruction lighting)	If antenna is either top loaded or sectionalized, describe fully in an Exhibit.
Uniform guyed tower	T1, T2 59.9 m, T3 48.8m	T1, T2 60.9 m T3 49.8 m	no lighting is used or required	Exhibit No. n/a

Excitation ☑ Series ☐ Shunt

Geographic coordinates to nearest second. For directional antenna give coordinates of center of array. For single vertical radiator give tower location.

North Latitude	West Longitude
32 ° 34 ' 43 "	97 ° 16 ' 50 "

If not fully described above, attach as an Exhibit further details and dimensions including any other antenna mounted on tower and associated isolation circuits. Exhibit No. see technical exhibit

Also, if necessary for a complete description, attach as an Exhibit a sketch of the details and dimensions of ground system. Exhibit No. see technical exhibit

10. In what respect, if any, does the apparatus constructed differ from that described in the application for construction permit or in the permit?

none see exhibit

11. Give reasons for the change in antenna or common point resistance.

n/a no change

I certify that I represent the applicant in the capacity indicated below and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.

Name (Please Print or Type)	Signature (check appropriate box below)
Charles W. Staples	Charles W Staples
Address (include ZIP Code)	Date
4424 Glenwick Lane University Park, TX 75205-1037	04/06/2015
	Telephone No. (Include Area Code)
	214 526 6200

☐ Technical Director ☐ Registered Professional Engineer

☐ Chief Operator ☑ Technical Consultant

☐ Other (specify)

INTELLI, LLC
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas
TECHNICAL EXHIBIT FORM 302AM

INTELLI, LLC
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas

FORM AM302 TECHNICAL EXHIBIT

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EXHIBIT EIGHT

DESCRIPTION OF CONSTRUCTED SITE

INTELLI, LLC
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas
EXHIBIT ONE
PURPOSE OF APPLICATION AND METHODOLOGY

Engineering Exhibit
Application For Modification of License
BMML20110223ACM
INTELLI, LLC
KCLE (AM) 1460 kHz
11 kW DA-Day, .7 kW DA-Night
Facility ID 59263
Burleson, Texas

Background and Purpose of Application

INTELLI, LLC ("INTELLI") the licensee of KCLE has made alterations to the facility licensed under BMML-20110223AAC and herby submits the application to modify the licensed facility per special conditions in BPFT20150209ADZ for K239CC to locate tower one. INTELLI has chosen to use the method of moments proof authorized under 47 CFR 73.151(c). The modification consisted of adding an antenna and FM isocoupler to tower one, re-measuring self impedances and remodeling and re-adjusting the array. The site is otherwise as described in the original construction permit BP20090716ACD. See constructed facility exhibit. The towers utilized are three identical cross section twenty three inch face, (.5842 m) uniform guyed triangular towers. Towers one and two (ASR 1230673 & 1230675) have a 59.9 meter radiator height. Tower 3, utilized for day only, is a 48.8 meter height radiator and is not registered. Tower 3 is detuned with a +j 484.3 Ohm reactance at the base or the equivalent of +J390 at the ATU during night directional operation. See night modeling exhibit for details.

Methodology

Each tower was driven individually with all other towers floated by disconnecting the feeds from the other towers. There were no other components shunted across the bases of the other towers with the exception of the isocoupler at tower one. Self impedances were measured at each tower, directly at the location where the feed is attached to the tower. Towers in the array were modeled using Mininec Broadcast Professional Expert Version 23. Twenty segments were used to represent each of the three towers using the geometry of the array specified in the above referenced construction permit. Each individual

tower base impedance was calculated as a driven source with all other towers floating to obtain a modeled self-impedance at the tower base. The modeled values of the tower self impedance were then calculated to include the base components, such as stray capacitance of the Austin A4197L base insulator, and in the case of Tower 1, the isocoupler. All modeled values of were found to be equivalent to measured values within ±2 ohms and ±4 percent for both resistance and reactance of the measured self impedances. See the following the Verification of Modeling Exhibit for details and verification of the modeling procedure. Impedance measurements of the tower base self-impedances were measured using a Delta OIB-3 Bridge driven with approximately 200 Watts from the KCLE transmitter. In addition to the measurements at the tower feed point, measurements were made at the j plugs at the location of the current transformers in the antenna tuning units. These values were converted to a modeled value at this point, using the Phasetek Basenet nodal analysis computer program. After verification of the modeling procedure, Mininec Broadcast Professional Expert Version 23 computer program was use to create a method of moments model of the array for calculation of directional antenna system complex voltage values at ground level under each tower using the theoretical parameters of the day and night parameters in the above referenced construction permit. Using these voltage sources, current magnitudes and phases for each element of the array were derived for the day night arrays. Using the drive impedances from the array synthesis, the base and feed components were taken into consideration to calculate corrections for parameters at location of the current transformers in the ATU, using the Phasetek Basenet computer nodal analysis program. The base components include the feed reactance, base capacitance, and static drain choke reactance. The static drain chokes utilized are extremely high reactance and in this case are slightly capacitive (-j8100 ohms at 1460 kHz) according to manufacturer's specifications. See the "Day and Night for details of these calculations. These values of current and phase were normalized to the reference tower and corrected with the factors calculated above for antenna monitor parameters. See the "Tower Base Circuit Analysis

Model" included in the "Verification of Modeling" exhibit for details of the calculations for values at the sampling point using the nodal analysis program utilized. See the "Normalization Exhibit" for the final antenna monitor parameters specified on the Form 302AM.

Impedance measurements made on the sampling system were made with an Array Solutions VNA2180 network analyzer in a calibrated measurement system. Measurements were made at the antenna monitor end of the sample lines connected to the sampling transformers at the tower bases while under open circuit conditions. Additionally measurements were made at the antenna monitor end of the sample lines without the sample lines connected to the sampling transformers. Frequencies above and below carrier frequency where resonance occurred were determined with the sample lines disconnected from the transformers. As the length of a distortionless transmission line is 180 electrical degrees at the difference frequency between adjacent frequencies of resonance, and frequencies of resonance occur at odd multliples of 90 degrees electrical length, the sample line length at resonant frequency below or above carrier frequency (closest one to carrier frequency in terms of the ratio of frequencies) was found to be 90 degrees. The resonant frequency closer to the carrier frequency above carrier frequency at approximately 803 KHz was found to be 90 degrees. The lengths were calculated by the ratio of the frequencies. To determine characteristic impedance values of the lines, open circuit measurements were made with frequencies offset to produce $\pm$ 45 degrees of electrical line length at the resonant frequency (approximately 401.5 KHz and 1205 KHz). The characteristic impedance was calculated (using the equation $Z_0=((R_1^2+X_1^2)^{1/2} \times (R_2^2+X_2^2))^{1/2})^{1/2}$ the electrical length of the sample lines was determined to be within .5° of each other. The characteristic impedance of the sample lines was well within 2 ohms of the characteristic manufacturer's stated impedance of the line. The sample transformers utilized are three Phasetek P600-202 .5V/A. They were removed from the new antenna tuning units, and tested utilizing the Array Solutions VNA 2180 Network Analyzer and determined to be within .08% ratio and .34° accuracy. The devices tested exceeded the

manufacturer specifications of ±1.5% magnitude and ±2.0 degrees phase. See the "Sampling System and Antenna Monitor Exhibit for details of sample system measurements, antenna monitor sample transformer verification.

After all modeling and calculations, the antenna system was adjusted to the parameters specified on the 302. The common point for both day and night phasing systems was adjusted to 50 + j0 Ohms.

This facility was previously licensed under BMML20110223ACM, so no survey is attached or required.

INTELLI, LLC
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas
EXHIBIT TWO
VERIFICATION OF MODEL

INTELLI, LLC
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas

Verification of Modeling

All towers are 23" (.58419 m) face width. This is equivalent to a radius of .2789 m. The minimum radius that is permitted to be used in the model, per 73.151(c) is 80% of .2789 m or .2231m. The .2231m radius was used for all three towers and is in compliance with the rule. The tower one height is 105 degrees at 1460 kHz and was modeled with 20 segments to be 113 degrees tall. Tower two is 105 degrees at 1460 KHz and was modeled with 20 segments to be 111 electrical degrees. Tower three is 85.5 degrees at 1460 kHz, was modeled with 20 segments to be 90.9 electrical degrees. All are in compliance with 73.151(c).

Tower One

Tower one has an FM antenna for K239CC at 59.9 meters, and a Phasetek P600-407 FM isocoupler across the tower base for the transmission line to cross the base of the tower. Other than this antenna and the isocoupler across the base, the tower is identical to tower two. All tower self impedances were measured at the point where the feed attaches to the tower using a Delta OIB3 bridge. All other towers not being measured were floating. The tower one measured self impedance equaled 123.5 + j151.7. The tower one modeled self impedance was 108.05 + j155.22. Tower one modeled self impedance was calculated including 44 pf for isocoupler and base insulator capacitance (total of –j2477.51) was calculated = (108.05 +j 155.22) (-j 2477.51) / (108.05 - j 2322.29) = 122.71 +j159.89. The tolerance is (±2 Ohms and ±4 percent per 73.151(c)) is 6.9 Ohms for resistance and 8.395 Ohms for reactance and is in compliance with this rule as the measured resistance is within .79 Ohm for resistance and 8.19 Ohms for reactance.

Tower Two

Tower two self impedance was measured at the point where the feed attaches to the tower. The tower two measured self impedance equaled 105.0 + j146. The tower two modeled self impedance was 99.67 + j141.39. Tower two modeled self impedance calculated to include 20 pf of the base insulator capacitance (-j5450) was = (99.67+j141.39)(-j5450) / (99.67-j5308.61) = 105.01 + j143.18. The tolerance is (±2 Ohms and ±4 percent per 73.151(c)) 6.2 Ohms for resistance and 7.7 Ohms for reactance and is in compliance with this rule as the measured resistance is within .01 Ohm and 2.82 Ohm for reactance.

Tower Three

Tower three self impedance was measured at the point where the feed attaches to the tower. It equaled 37 + j29.2. The tower three modeled self impedance was 37.131 + j27.112. Tower three modeled self impedance was calculated to include the 20 pf of the base insulator capacitance (-j5450) was = (37.131+j27.112)(-j5450) / (37.131-j5422.88) = 37.5 + j26.99. The tolerance is (±2 Ohms and ±4 percent per 73.151(c)) 3.5 ohms for resistance and 3.07 Ohms for reactance and is in compliance with this rule as the measured impedance is within .369 Ohm for resistance and .122 Ohm for reactance.

Tower measurements were also made at the j plug output of the matching network at each tower, the location where the current sampling transformer is located. All impedance measurements were made with a Delta OIB3 using 200 watts drive from the KCLE transmitter on 1460 kHz. All other towers were opened with the feed removed.

The measurements made at the j plug and compared to the modeled self impedances, corrected at the j plug using the Phasetek nodal analysis program mentioned previously, for compliance with the tolerance of ±2 ohms and ±4 percent and are as follow:

	Measurement At J plug	Modeled Base Impedance	Feed Reactance	ATU Reactance	Base Reactance	Modeled At J plug	Resistance ± (Ohms)	Reactance ± (Ohms)	Resistance Δ Ohms	Reactance Δ Ohms
T1	131 +j179.58	108.05+j155.22	+j18	-j8100	-2477.51	128.25+j179.89	7.13	9.19	2.75	.31
T2	114.5+j180.31	99.67+j141.39	+j39	-j8100	-j5450	109.88+j184.92	6.36	9.39	4.62	4.61
T3	40+62.5	37.131+j27.112	+j35	-j8100	-j5450	38.08+j62.29	3.52	4.49	1.92	0.21

Both of these sets of measurements confirm the verification of modeling to comply with 73.151(c).

KCLE TOWER ONE SELF IMPEDANCE (OTHER TOWERS FLOATING)

GEOMETRY
Wire coordinates in degrees; other dimensions in meters
Environment: perfect ground

wire	caps	Radius	Angle	Z	radius	segs
1	none	0	0	0	.2232	20
		0	0	113.		
2	none	198.	238.	0	.2232	20
		198.	238.	111.		
3	none	99.	238.	0	.2232	20
		99.	238.	90.9		

Number of wires = 3
current nodes = 60

	minimum		maximum	
Individual wires	wire	value	wire	value
segment length	3	4.545	1	5.65
radius	1	.2232	1	.2232

ELECTRICAL DESCRIPTION
Frequencies (MHz)

	frequency		no. of	segment length (wavelengths)	
no.	lowest	step	steps	minimum	maximum
1	1.46	0	1	.012625	.0156944

Sources

source	node	sector	magnitude	phase	type
1	1	1	1.	0	voltage

Lumped loads

load	node	resistance (ohms)	reactance (ohms)	inductance (mH)	capacitance (uF)	passive circuit
2	21	0	-5,450.	0	0	0
3	41	0	-5,450.	0	0	0

IMPEDANCE
normalization = 50.

freq (MHz)	resist (ohms)	react (ohms)	imped (ohms)	phase (deg)	VSWR	S11 dB	S12 dB
source = 1; node 1, sector 1							
1.46	108.05	155.22	189.12	55.2	6.9394	-2.5209	-3.562

KCLE TOWER TWO SELF IMPEDANCE (OTHER TOWERS FLOATING)

GEOMETRY
Wire coordinates in degrees; other dimensions in meters
Environment: perfect ground

wire	caps	Radius	Angle	Z	radius	segs
1	none	0	0	0	.2231	20
		0	0	113.		
2	none	198.	238.	0	.2231	20
		198.	238.	111.		
3	none	99.	238.	0	.2231	20
		99.	238.	90.9		

Number of wires = 3
current nodes = 60

	minimum		maximum	
Individual wires	wire	value	wire	value
segment length	3	4.545	1	5.65
radius	1	.2231	1	.2231

ELECTRICAL DESCRIPTION
Frequencies (MHz)

	frequency		no. of	segment length (wavelengths)	
no.	lowest	step	steps	minimum	maximum
1	1.46	0	1	.012625	.0156944

Sources

source	node	sector	magnitude	phase	type
1	21	1	1.	0	voltage

Lumped loads

load	node	resistance (ohms)	reactance (ohms)	inductance (mH)	capacitance (uF)	passive circuit
1	1	0	-2,477.51	0	0	0
3	41	0	-5,450.	0	0	0

IMPEDANCE
normalization = 50.

freq (MHz)	resist (ohms)	react (ohms)	imped (ohms)	phase (deg)	VSWR	S11 dB	S12 dB
source = 1; node 21, sector 1							
1.46	99.67	141.39	172.99	54.8	6.3493	-2.759	-3.277

KCLE TOWER THREE SELF IMPEDANCE (OTHER TOWERS FLOATING)

GEOMETRY
Wire coordinates in degrees; other dimensions in meters
Environment: perfect ground

wire	caps	Radius	Angle	Z	radius	segs
1	none	0	0	0	.2231	20
		0	0	113.		
2	none	198.	238.	0	.2231	20
		198.	238.	111.		
3	none	99.	238.	0	.2231	20
		99.	238.	90.9		

Number of wires = 3
current nodes = 60

	minimum		maximum	
Individual wires	wire	value	wire	value
segment length	3	4.545	1	5.65
radius	1	.2231	1	.2231

ELECTRICAL DESCRIPTION
Frequencies (MHz)

	frequency		no. of	segment length (wavelengths)	
no.	lowest	step	steps	minimum	maximum
1	1.46	0	1	.012625	.0156944

Sources

source	node	sector	magnitude	phase	type
1	41	1	1.	0	voltage

Lumped loads

load	node	resistance (ohms)	reactance (ohms)	inductance (mH)	capacitance (uF)	passive circuit
1	1	0	-2,477.5	0	0	0
2	21	0	-5,450.	0	0	0

IMPEDANCE
normalization = 50.

freq (MHz)	resist (ohms)	react (ohms)	imped (ohms)	phase (deg)	VSWR	S11 dB	S12 dB
source = 1; node 41, sector 1							
1.46	37.131	27.112	45.975	36.1	1.9801	-9.6591	-.49716

BASE NETWORK COMPUTATION
PHASETEK INC.
QUAKERTOWN PA

CUSTOMER : KCLE
NETWORK ID : Tower One Self

FREQUENCY : 1460.00 kHz
ATU SHUNT IMPEDANCE (R,X) : 0.00, -8100.00 OHMS
TOWER FEED IMPEDANCE (R,X) : 0.00, 18.00 OHMS
TOWER SHUNT IMPEDANCE (R,X) : 0.00, -2477.51 OHMS
TOWER IMPEDANCE (R,X) : 108.05, 155.22 OHMS

NODE	TO	NODE	IMPEDANCE (OHMS) R	X
1		GROUND	0.00	-8100.00
2		GROUND	122.71	159.89
1		2	0.00	18.00

NODE	VOLTAGE MAGNITUDE	PHASE
1	1.00	0.00
2	0.93	-2.91

	REAL	IMAGINARY	MAGNITUDE	PHASE
INPUT IMPEDANCE (OHMS) :	128.25	179.89	220.93	54.51
INPUT CURRENT (AMPS) :	0.00	0.00	0.00	-54.51
OUTPUT CURRENT (AMPS) :	0.00	0.00	0.00	-58.06

INPUT/OUTPUT CURRENT RATIO = 0.9179
INPUT/OUTPUT PHASE = 3.55 DEGREES

BASE NETWORK COMPUTATION
PHASETEK INC.
QUAKERTOWN PA

CUSTOMER : KCLE
NETWORK ID : TOWER TWO SELF

FREQUENCY : 1460.00 kHz
ATU SHUNT IMPEDANCE (R,X) : 0.00, -8100.00 OHMS
TOWER FEED IMPEDANCE (R,X) : 0.00, 39.00 OHMS
TOWER SHUNT IMPEDANCE (R,X) : 0.00, -5450.00 OHMS
TOWER IMPEDANCE (R,X) : 99.67, 141.39 OHMS

NODE	TO	NODE	IMPEDANCE (OHMS) R	X
1		GROUND	0.00	-8100.00
2		GROUND	105.01	143.18
1		2	0.00	39.00

NODE	VOLTAGE MAGNITUDE	PHASE
1	1.00	0.00
2	0.84	-6.30

	REAL	IMAGINARY	MAGNITUDE	PHASE
INPUT IMPEDANCE (OHMS) :	109.88	184.92	215.10	59.28
INPUT CURRENT (AMPS) :	0.00	0.00	0.00	-59.28
OUTPUT CURRENT (AMPS) :	0.00	0.00	0.00	-61.12

INPUT/OUTPUT CURRENT RATIO = 0.9524
INPUT/OUTPUT PHASE = 1.84 DEGREES

BASE NETWORK COMPUTATION
PHASETEK INC.
QUAKERTOWN PA

CUSTOMER : KCLE
NETWORK ID : TOWER 3 SELF

FREQUENCY : 1460.00 kHz
ATU SHUNT IMPEDANCE (R,X) : 0.00, -8100.00 OHMS
TOWER FEED IMPEDANCE (R,X) : 0.00, 35.00 OHMS
TOWER SHUNT IMPEDANCE (R,X) : 0.00, -5450.00 OHMS
TOWER IMPEDANCE (R,X) : 37.13, 27.11 OHMS

NODE	TO NODE	IMPEDANCE (OHMS) R	X
1	GROUND	0.00	-8100.00
2	GROUND	37.50	26.99
1	2	0.00	35.00

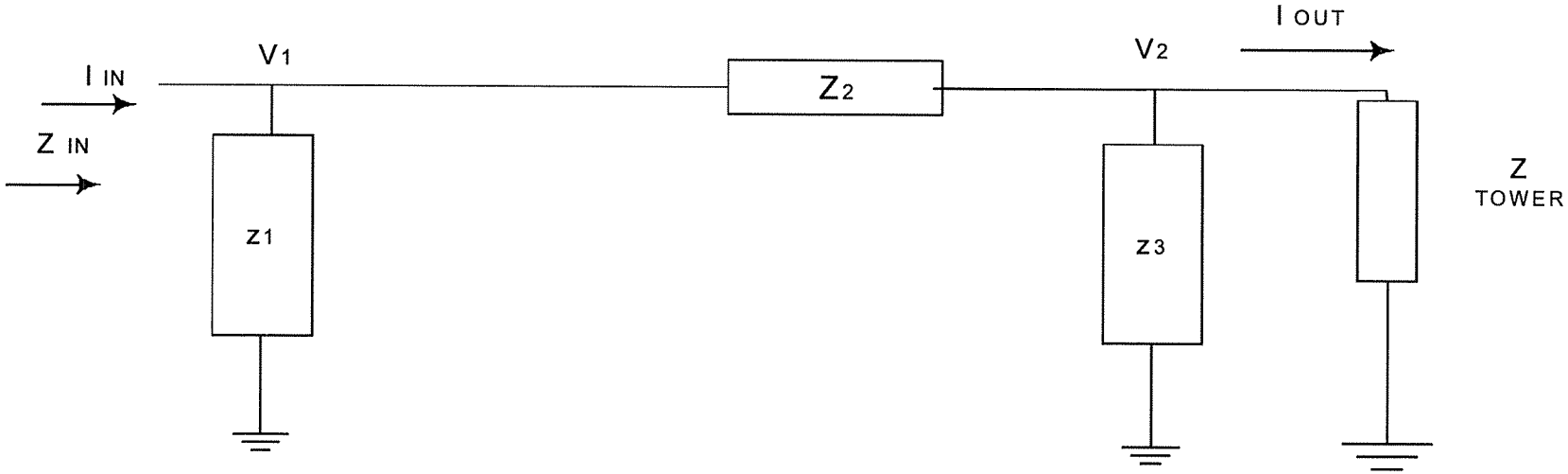
NODE	VOLTAGE MAGNITUDE	PHASE
1	1.00	0.00
2	0.64	-23.08

	REAL	IMAGINARY	MAGNITUDE	PHASE
INPUT IMPEDANCE (OHMS) :	38.08	62.29	73.01	58.56
INPUT CURRENT (AMPS) :	0.01	-0.01	0.01	-58.56
OUTPUT CURRENT (AMPS) :	0.01	-0.01	0.01	-59.22

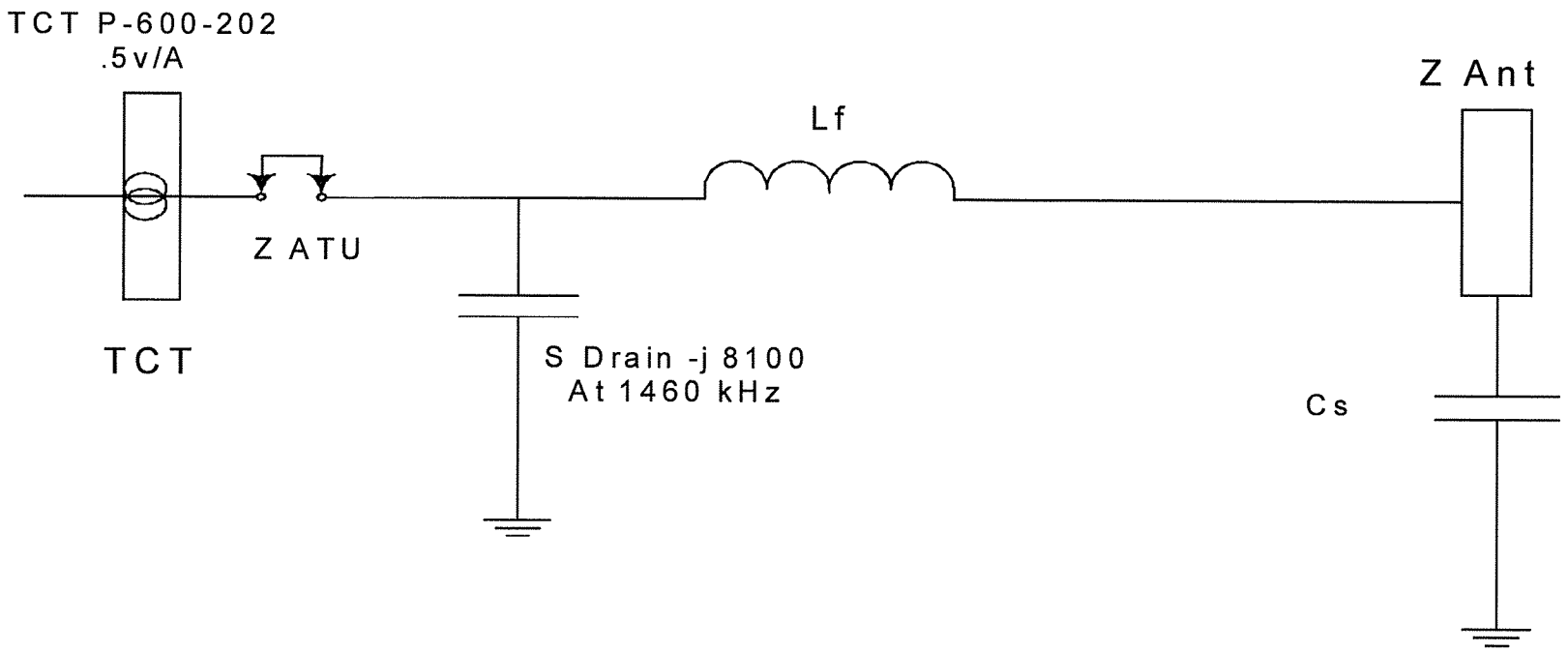
INPUT/OUTPUT CURRENT RATIO = 0.9874
INPUT/OUTPUT PHASE = 0.66 DEGREES

TOWER BASE CIRCUIT ANALYSIS MODEL

Circuit analysis ws performed on each tower of the KCLE model. The Phasetek Nodal analysis program was used to compute base model input / output voltages and currents. For directional operation, the calculated Mininec tower base drive voltge was used to determine the Base network input cvurent. This point is the location of the sampling TCT. " Z1" represents the ATU shunt impedance, "Z2" represents the tower feed impedance, and "Z3" represents the tower base shunt impedance.



ATU MEASUREMENT POINT



INTELLI, LLC
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas
EXHIBIT THREE
DAY DIRECTIONAL MODELING

KCLE DAY GEOMETRY MODEL

GEOMETRY
Wire coordinates in degrees; other dimensions in meters
Environment: perfect ground

wire	caps	Radius	Angle	Z	radius	segs
1	none	0	0	0	.2231	20
		0	0	113.		
2	none	198.	238.	0	.2231	20
		198.	238.	111.		
3	none	99.	238.	0	.2231	20
		99.	238.	90.9		

Number of wires = 3
current nodes = 60

	minimum		maximum	
Individual wires	wire	value	wire	value
segment length	3	4.545	1	5.65
radius	1	.2231	1	.2231

ELECTRICAL DESCRIPTION
Frequencies (MHz)

	frequency		no. of	segment length (wavelengths)	
no.	lowest	step	steps	minimum	maximum
1	1.46	0	1	.012625	.0156944

Sources

source	node	sector	magnitude	phase	type
1	1	1	650.676	125.6	voltage
2	21	1	640.692	291.1	voltage
3	41	1	1,267.95	35.6	voltage

IMPEDANCE
normalization = 50.

freq (MHz)	resist (ohms)	react (ohms)	imped (ohms)	phase (deg)	VSWR	S11 dB	S12 dB
source = 1; node 1, sector 1							
1.46	49.675	64.282	81.239	52.3	3.3667	-5.3202	-1.5104
source = 2; node 21, sector 1							
1.46	-229.31	-112.25	255.31	206.1	****	****	****
source = 3; node 41, sector 1							
1.46	60.918	33.52	69.532	28.8	1.8746	-10.336	-.42185

CURRENT rms
Frequency = 1.46 MHz
Input power = 11,000. watts
Efficiency = 100. %
coordinates in degrees

current	mag	phase	real	imaginary

KCLE DAY ARRAY SYNTHESIS

MEDIUM WAVE ARRAY SYNTHESIS FROM FIELD RATIOS

Frequency = 1.46 MHz

tower	field ratio magnitude	phase (deg)
1	.578	67.
2	.14	122.
3	1.	0

VOLTAGES AND CURRENTS - rms

source node	voltage magnitude	phase (deg)	current magnitude	phase (deg)
1	460.097	125.6	5.66348	73.3
21	453.038	291.1	1.77447	85.
41	896.572	35.6	12.8945	6.7

Sum of square of source currents = 402.983
Total power = 11,000. watts

TOWER ADMITTANCE MATRIX

admittance	real (mhos)	imaginary (mhos)
Y(1, 1)	.00268169	-.00351503
Y(1, 2)	-.000158631	-.000254166
Y(1, 3)	.00329686	.0023791
Y(2, 1)	-.000158632	-.000254164
Y(2, 2)	.00291436	-.00384303
Y(2, 3)	.00340489	.00252521
Y(3, 1)	.0032967	.00237952
Y(3, 2)	.00340473	.00252562
Y(3, 3)	.0130173	-.00663937

TOWER IMPEDANCE MATRIX

impedance	real (ohms)	imaginary (ohms)
Z(1, 1)	108.063	155.404
Z(1, 2)	-40.9947	-18.9285
Z(1, 3)	25.1215	-33.3928
Z(2, 1)	-40.9948	-18.9283
Z(2, 2)	99.3143	141.933
Z(2, 3)	24.584	-31.566
Z(3, 1)	25.1172	-33.3945
Z(3, 2)	24.5802	-31.5676
Z(3, 3)	38.1313	26.8022

no.	X	Y	Z	(amps)	(deg)	(amps)	(amps)
GND	0	0	0	5.66348	73.3	1.62775	5.42452
2	0	0	5.65	5.89107	71.5	1.87187	5.58577
3	0	0	11.3	5.99268	70.4	2.01125	5.64509
4	0	0	16.95	6.03217	69.5	2.11221	5.65028
5	0	0	22.6	6.01658	68.7	2.18189	5.60701
6	0	0	28.25	5.94928	68.1	2.22332	5.51822
7	0	0	33.9	5.83239	67.4	2.23794	5.38594
8	0	0	39.55	5.66771	66.9	2.22667	5.21199
9	0	0	45.2	5.45705	66.3	2.19023	4.99822
10	0	0	50.85	5.20232	65.8	2.12926	4.74661
11	0	0	56.5	4.90566	65.4	2.04447	4.45933
12	0	0	62.15	4.56937	64.9	1.93663	4.13867
13	0	0	67.8	4.19593	64.5	1.80658	3.7871
14	0	0	73.45	3.78794	64.1	1.65527	3.40713
15	0	0	79.1	3.348	63.7	1.48367	3.0013
16	0	0	84.75	2.87861	63.3	1.29274	2.572
17	0	0	90.4	2.38182	62.9	1.08328	2.12122
18	0	0	96.05	1.85865	62.6	.855649	1.64999
19	0	0	101.7	1.30753	62.2	.608988	1.15705
20	0	0	107.35	.720122	61.9	.339242	.635209
END	0	0	113.	0	0	0	0
GND	-104.924	-167.914	0	1.77448	85.	.154784	1.76771
22	-104.924	-167.914	5.55	1.65979	94.3	-.123642	1.65518
23	-104.924	-167.914	11.1	1.60089	100.6	-.2952	1.57344
24	-104.924	-167.914	16.65	1.55574	106.2	-.434629	1.4938
25	-104.924	-167.914	22.2	1.51656	111.3	-.549871	1.41337
26	-104.924	-167.914	27.75	1.47884	115.8	-.644206	1.33115
27	-104.924	-167.914	33.3	1.43941	120.	-.719135	1.2469
28	-104.924	-167.914	38.85	1.39592	123.7	-.775499	1.16069
29	-104.924	-167.914	44.4	1.34653	127.2	-.813831	1.07276
30	-104.924	-167.914	49.95	1.28986	130.3	-.834599	.983452
31	-104.924	-167.914	55.5	1.2249	133.2	-.838226	.893168
32	-104.924	-167.914	61.05	1.15093	135.8	-.825187	.802319
33	-104.924	-167.914	66.6	1.06752	138.2	-.795984	.711343
34	-104.924	-167.914	72.15	.974401	140.4	-.751153	.620667
35	-104.924	-167.914	77.7	.871479	142.5	-.69127	.530681
36	-104.924	-167.914	83.25	.758715	144.4	-.616861	.441737
37	-104.924	-167.914	88.8	.636045	146.2	-.528365	.354095
38	-104.924	-167.914	94.35	.503172	147.8	-.425956	.26785
39	-104.924	-167.914	99.9	.359088	149.4	-.309113	.182739
40	-104.924	-167.914	105.45	.200864	150.9	-.175544	.0976253
END	-104.924	-167.914	111.	0	0	0	0
GND	-52.462	-83.9568	0	12.8945	6.7	12.8055	1.51223
42	-52.462	-83.9568	4.545	13.1203	4.7	13.0758	1.0792
43	-52.462	-83.9568	9.09	13.1728	3.5	13.1476	.814524
44	-52.462	-83.9568	13.635	13.1256	2.6	13.1122	.591267
45	-52.462	-83.9568	18.18	12.9855	1.8	12.9795	.397102
46	-52.462	-83.9568	22.725	12.7566	1.	12.7546	.226603
47	-52.462	-83.9568	27.27	12.4414	.4	12.4412	.0773102
48	-52.462	-83.9568	31.815	12.0423	359.8	12.0422	-.0520236
49	-52.462	-83.9568	36.36	11.5617	359.2	11.5606	-.162064
50	-52.462	-83.9568	40.905	11.0022	358.7	10.9993	-.253183
51	-52.462	-83.9568	45.45	10.3666	358.2	10.3615	-.325607
52	-52.462	-83.9568	49.995	9.65785	357.7	9.65039	-.379486
53	-52.462	-83.9568	54.54	8.87909	357.3	8.86939	-.414943
54	-52.462	-83.9568	59.085	8.03327	356.9	8.02164	-.432083

55	-52.462	-83.9568	63.63	7.1233	356.5	7.11025	-.430997
56	-52.462	-83.9568	68.175	6.15148	356.2	6.13768	-.411731
57	-52.462	-83.9568	72.72	5.11874	355.8	5.10504	-.374224
58	-52.462	-83.9568	77.265	4.02351	355.5	4.01091	-.318162
59	-52.462	-83.9568	81.81	2.85781	355.1	2.84749	-.242574
60	-52.462	-83.9568	86.355	1.59885	354.8	1.59227	-.144938
END	-52.462	-83.9568	90.9	0	0	0	0

BASE NETWORK COMPUTATION
PHASETEK INC.
QUAKERTOWN PA

CUSTOMER : KCLE
NETWORK ID : TOWER ONE DAY

FREQUENCY : 1460.00 kHz
ATU SHUNT IMPEDANCE (R,X) : 0.00, -8100.00 OHMS
TOWER FEED IMPEDANCE (R,X) : 0.00, 18.00 OHMS
TOWER SHUNT IMPEDANCE (R,X) : 0.00, -2477.51 OHMS
TOWER IMPEDANCE (R,X) : 49.67, 64.28 OHMS

NODE	TO	NODE	IMPEDANCE (OHMS) R	X
1		GROUND	0.00	-8100.00
2		GROUND	52.33	64.92
1		2	0.00	18.00

NODE	VOLTAGE MAGNITUDE	PHASE
1	541.02	132.22
2	460.10	125.60

	REAL	IMAGINARY	MAGNITUDE	PHASE
INPUT IMPEDANCE (OHMS) :	53.42	83.43	99.06	57.37
INPUT CURRENT (AMPS) :	1.43	5.27	5.46	74.85
OUTPUT CURRENT (AMPS) :	1.63	5.42	5.66	73.30

INPUT/OUTPUT CURRENT RATIO = 0.9643
INPUT/OUTPUT PHASE = 1.55 DEGREES

BASE NETWORK COMPUTATION
PHASETEK INC.
QUAKERTOWN PA

CUSTOMER : KCLE
NETWORK ID : TOWER TWO DAY

FREQUENCY : 1460.00 kHz
ATU SHUNT IMPEDANCE (R,X) : 0.00, -8100.00 OHMS
TOWER FEED IMPEDANCE (R,X) : 0.00, 39.00 OHMS
TOWER SHUNT IMPEDANCE (R,X) : 0.00, -5450.00 OHMS
TOWER IMPEDANCE (R,X) :-229.31, -112.25 OHMS

NODE	TO	NODE	IMPEDANCE (OHMS) R	X
1		GROUND	0.00	-8100.00
2		GROUND	-219.77	-119.05
1		2	0.00	39.00

NODE	VOLTAGE MAGNITUDE	PHASE
1	423.95	-77.33
2	453.04	291.10

	REAL	IMAGINARY	MAGNITUDE	PHASE
INPUT IMPEDANCE (OHMS) :	-215.34	-85.05	231.53	-158.45
INPUT CURRENT (AMPS) :	0.28	1.81	1.83	81.12
OUTPUT CURRENT (AMPS) :	0.15	1.77	1.77	85.02

INPUT/OUTPUT CURRENT RATIO = 1.0319
INPUT/OUTPUT PHASE = -3.90 DEGREES

BASE NETWORK COMPUTATION
PHASETEK INC.
QUAKERTOWN PA

CUSTOMER : KCLE
NETWORK ID : TOWER THREE DAY

FREQUENCY : 1460.00 kHz
ATU SHUNT IMPEDANCE (R,X) : 0.00, 8100.00 OHMS
TOWER FEED IMPEDANCE (R,X) : 0.00, 35.00 OHMS
TOWER SHUNT IMPEDANCE (R,X) : 0.00, -5400.00 OHMS
TOWER IMPEDANCE (R,X) : 60.92, 33.52 OHMS

NODE	TO	NODE	IMPEDANCE (OHMS) R	X
1		GROUND	0.00	8100.00
2		GROUND	61.67	33.03
1		2	0.00	35.00

NODE	VOLTAGE MAGNITUDE	PHASE
1	1176.75	55.23
2	896.57	35.60

	REAL	IMAGINARY	MAGNITUDE	PHASE
INPUT IMPEDANCE (OHMS) :	60.65	67.92	91.06	48.24
INPUT CURRENT (AMPS) :	12.83	1.57	12.92	7.00
OUTPUT CURRENT (AMPS) :	12.80	1.52	12.89	6.78

INPUT/OUTPUT CURRENT RATIO = 1.0022
INPUT/OUTPUT PHASE = 0.22 DEGREES

INTELLI, LLC
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas

EXHIBIT FOUR

NIGHT DIRECTIONAL MODELING

KCLE NIGHT ARRAY SYNTHESIS

MEDIUM WAVE ARRAY SYNTHESIS FROM FIELD RATIOS

Frequency = 1.46 MHz

tower	field ratio magnitude	phase (deg)
1	1.	0
2	.5	-15.

VOLTAGES AND CURRENTS - rms

source node	voltage magnitude	phase (deg)	current magnitude	phase (deg)
1	451.617	69.	2.59297	9.
21	153.387	50.9	1.49865	350.7

Sum of square of source currents = 17.9388
Total power = 700. watts

TOWER ADMITTANCE MATRIX

admittance	real (mhos)	imaginary (mhos)
Y(1, 1)	.00296211	-.00453269
Y(1, 2)	.000147558	-.00131135
Y(2, 1)	.000147564	-.00131135
Y(2, 2)	.00324796	-.00494106

TOWER IMPEDANCE MATRIX

impedance	real (ohms)	imaginary (ohms)
Z(1, 1)	111.397	154.706
Z(1, 2)	-37.7914	-19.5438
Z(2, 1)	-37.7914	-19.5436
Z(2, 2)	102.391	141.395

KCLE NIGHT GEOMETRY WITH TOWER THREE DETUNED

GEOMETRY
Wire coordinates in degrees; other dimensions in meters
Environment: perfect ground

wire	caps	Radius	Angle	Z	radius	segs
1	none	0	0	0	.2231	20
		0	0	113.		
2	none	198.	238.	0	.2231	20
		198.	238.	111.		
3	none	99.	238.	0	.2231	20
		99.	238.	90.9		

Number of wires = 3
current nodes = 60

	minimum		maximum	
Individual wires	wire	value	wire	value
segment length	3	4.545	1	5.65
radius	1	.2231	1	.2231

ELECTRICAL DESCRIPTION
Frequencies (MHz)

	frequency		no. of	segment length (wavelengths)	
no.	lowest	step	steps	minimum	maximum
1	1.46	0	1	.012625	.0156944

Sources

source	node	sector	magnitude	phase	type
1	1	1	638.683	69.	voltage
2	21	1	216.922	50.9	voltage

Lumped loads

load	node	resistance (ohms)	reactance (ohms)	inductance (mH)	capacitance (uF)	passive circuit
1	41	0	484.3	0	0	0

IMPEDANCE
normalization = 50.

freq (MHz)	resist (ohms)	react (ohms)	imped (ohms)	phase (deg)	VSWR	S11 dB	S12 dB
source = 1; node 1, sector 1							
1.46	87.117	150.82	174.17	60.	7.4031	-2.361	-3.7741
source = 2; node 21, sector 1							
1.46	50.88	88.808	102.35	60.2	4.8963	-3.5986	-2.4923

CURRENT rms
Frequency = 1.46 MHz
Input power = 700. watts
Efficiency = 100. %
coordinates in degrees

current	mag	phase	real	imaginary

no.	X	Y	Z	(amps)	(deg)	(amps)	(amps)
GND	0	0	0	2.59297	9.	2.56119	.404701
2	0	0	5.65	2.84895	6.	2.83358	.295619
3	0	0	11.3	2.99109	4.3	2.98259	.225315
4	0	0	16.95	3.08749	3.1	3.08307	.165122
5	0	0	22.6	3.14523	2.	3.14324	.11204
6	0	0	28.25	3.16739	1.2	3.16673	.0649038
7	0	0	33.9	3.15559	.4	3.1555	.0232579
8	0	0	39.55	3.11095	359.8	3.11092	-.0130741
9	0	0	45.2	3.03452	359.2	3.0342	-.0441445
10	0	0	50.85	2.92735	358.6	2.92651	-.0699535
11	0	0	56.5	2.79061	358.1	2.78914	-.0904849
12	0	0	62.15	2.62557	357.7	2.62344	-.105727
13	0	0	67.8	2.43364	357.3	2.43089	-.115683
14	0	0	73.45	2.2163	356.9	2.21303	-.120371
15	0	0	79.1	1.97508	356.5	1.97144	-.119829
16	0	0	84.75	1.71145	356.2	1.70764	-.114108
17	0	0	90.4	1.42662	355.8	1.42288	-.103248
18	0	0	96.05	1.12119	355.5	1.11779	-.0872499
19	0	0	101.7	.794167	355.2	.791422	-.0659665
20	0	0	107.35	.440354	354.9	.438637	-.0388451
END	0	0	113.	0	0	0	0
GND	-104.924	-167.914	0	1.49864	350.7	1.47908	-.241345
22	-104.924	-167.914	5.55	1.5824	348.9	1.55289	-.30419
23	-104.924	-167.914	11.1	1.62357	347.9	1.58738	-.340921
24	-104.924	-167.914	16.65	1.64552	347.1	1.6037	-.368649
25	-104.924	-167.914	22.2	1.65079	346.4	1.60425	-.389216
26	-104.924	-167.914	27.75	1.64053	345.8	1.59016	-.403413
27	-104.924	-167.914	33.3	1.61546	345.2	1.56214	-.411629
28	-104.924	-167.914	38.85	1.57614	344.8	1.52076	-.414111
29	-104.924	-167.914	44.4	1.52308	344.3	1.46656	-.411053
30	-104.924	-167.914	49.95	1.45684	344.	1.4001	-.402634
31	-104.924	-167.914	55.5	1.37803	343.6	1.32198	-.389036
32	-104.924	-167.914	61.05	1.28731	343.3	1.23285	-.370459
33	-104.924	-167.914	66.6	1.18536	343.	1.13339	-.347116
34	-104.924	-167.914	72.15	1.07292	342.7	1.02432	-.319235
35	-104.924	-167.914	77.7	.950719	342.4	.906348	-.287054
36	-104.924	-167.914	83.25	.819466	342.2	.780144	-.250798
37	-104.924	-167.914	88.8	.679713	341.9	.646244	-.210663
38	-104.924	-167.914	94.35	.531739	341.7	.504916	-.166752
39	-104.924	-167.914	99.9	.375044	341.5	.35569	-.118921
40	-104.924	-167.914	105.45	.207183	341.3	.196257	-.0663938
END	-104.924	-167.914	111.	0	0	0	0
GND	-52.462	-83.9568	0	.324981	44.1	.233541	.22599
42	-52.462	-83.9568	4.545	.231561	44.1	.1664	.161033
43	-52.462	-83.9568	9.09	.174506	44.1	.12538	.121376
44	-52.462	-83.9568	13.635	.126422	44.1	.090796	.0879697
45	-52.462	-83.9568	18.18	.0846503	44.1	.0607388	.0589616
46	-52.462	-83.9568	22.725	.0480163	44.3	.0343677	.0335326
47	-52.462	-83.9568	27.27	.0159871	45.	.0113015	.0113076
48	-52.462	-83.9568	31.815	.0117213	222.4	-8.65E-03	-7.91E-03
49	-52.462	-83.9568	36.36	.0352396	223.4	-.0255991	-.0242181
50	-52.462	-83.9568	40.905	.0546667	223.6	-.039597	-.0376899
51	-52.462	-83.9568	45.45	.070057	223.7	-.0506842	-.0483641
52	-52.462	-83.9568	49.995	.0814519	223.7	-.0588888	-.0562718
53	-52.462	-83.9568	54.54	.0888876	223.7	-.0642355	-.0614395
54	-52.462	-83.9568	59.085	.0923984	223.7	-.0667485	-.0638913

55	-52.462	-83.9568	63.63	.092016	223.8	-.0664511	-.063649
56	-52.462	-83.9568	68.175	.0877642	223.8	-.0633616	-.0607278
57	-52.462	-83.9568	72.72	.0796452	223.8	-.0574831	-.0551275
58	-52.462	-83.9568	77.265	.0676079	223.8	-.0487811	-.0468105
59	-52.462	-83.9568	81.81	.0514646	223.8	-.0371226	-.0356443
60	-52.462	-83.9568	86.355	.0306998	223.9	-.0221383	-.021269
END	-52.462	-83.9568	90.9	0	0	0	0

KCLE NIGHT GEOMETRY WITH TOWER THREE FLOATED

GEOMETRY
Wire coordinates in degrees; other dimensions in meters
Environment: perfect ground

wire	caps	Radius	Angle	Z	radius	segs
1	none	0	0	0	.2231	20
		0	0	113.		
2	none	198.	238.	0	.2231	20
		198.	238.	111.		
3	none	99.	238.	0	.2231	20
		99.	238.	90.9		

Number of wires = 3
current nodes = 60

	minimum		maximum	
Individual wires	wire	value	wire	value
segment length	3	4.545	1	5.65
radius	1	.2231	1	.2231

ELECTRICAL DESCRIPTION
Frequencies (MHz)

	frequency		no. of	segment length (wavelengths)	
no.	lowest	step	steps	minimum	maximum
1	1.46	0	1	.012625	.0156944

Sources

source	node	sector	magnitude	phase	type
1	1	1	638.651	69.	voltage
2	21	1	216.846	50.9	voltage
3	41	1	222.588	314.1	voltage

C:\kcle2015\KCLENIGHT1 03-26-2015 10:53:43

IMPEDANCE
normalization = 50.

freq (MHz)	resist (ohms)	react (ohms)	imped (ohms)	phase (deg)	VSWR	S11 dB	S12 dB
source = 1; node 1, sector 1							
1.46	87.119	150.81	174.16	60.	7.4025	-2.3612	-3.7738
source = 2; node 21, sector 1							
1.46	50.869	88.793	102.33	60.2	4.8958	-3.5989	-2.492
source = 3; node 41, sector 1							
1.46	.65328	-484.3	484.3	270.1	7,257.2	-2.4E-03	-32.588

CURRENT rms
Frequency = 1.46 MHz
Input power = 700. watts
Efficiency = 100. %
coordinates in degrees

current	mag	phase	real	imaginary

no.	X	Y	Z	(amps)	(deg)	(amps)	(amps)
GND	0	0	0	2.59292	9.	2.56114	.404711
2	0	0	5.65	2.84889	6.	2.83351	.295627
3	0	0	11.3	2.99102	4.3	2.98252	.225322
4	0	0	16.95	3.0874	3.1	3.08298	.165128
5	0	0	22.6	3.14514	2.	3.14314	.112044
6	0	0	28.25	3.1673	1.2	3.16664	.0649071
7	0	0	33.9	3.15548	.4	3.1554	.0232602
8	0	0	39.55	3.11085	359.8	3.11082	-.0130728
9	0	0	45.2	3.03442	359.2	3.0341	-.044144
10	0	0	50.85	2.92725	358.6	2.92642	-.0699537
11	0	0	56.5	2.79051	358.1	2.78905	-.0904863
12	0	0	62.15	2.62548	357.7	2.62335	-.105729
13	0	0	67.8	2.43356	357.3	2.43081	-.115684
14	0	0	73.45	2.21622	356.9	2.21295	-.120373
15	0	0	79.1	1.97502	356.5	1.97138	-.119831
16	0	0	84.75	1.71139	356.2	1.70758	-.11411
17	0	0	90.4	1.42657	355.8	1.42283	-.10325
18	0	0	96.05	1.12115	355.5	1.11775	-.0872513
19	0	0	101.7	.794138	355.2	.791394	-.0659679
20	0	0	107.35	.440339	354.9	.438622	-.038846
END	0	0	113.	0	0	0	0
GND	-104.924	-167.914	0	1.49839	350.7	1.47886	-.241179
22	-104.924	-167.914	5.55	1.58212	348.9	1.55264	-.303994
23	-104.924	-167.914	11.1	1.62327	347.9	1.58711	-.340707
24	-104.924	-167.914	16.65	1.64521	347.1	1.60343	-.368422
25	-104.924	-167.914	22.2	1.65046	346.4	1.60397	-.388981
26	-104.924	-167.914	27.75	1.64021	345.8	1.58989	-.403172
27	-104.924	-167.914	33.3	1.61514	345.2	1.56187	-.411385
28	-104.924	-167.914	38.85	1.57582	344.8	1.5205	-.413869
29	-104.924	-167.914	44.4	1.52276	344.3	1.4663	-.410814
30	-104.924	-167.914	49.95	1.45654	344.	1.39985	-.402401
31	-104.924	-167.914	55.5	1.37775	343.6	1.32175	-.388812
32	-104.924	-167.914	61.05	1.28703	343.3	1.23263	-.370247
33	-104.924	-167.914	66.6	1.1851	343.	1.13319	-.346918
34	-104.924	-167.914	72.15	1.07269	342.7	1.02414	-.319054
35	-104.924	-167.914	77.7	.950515	342.4	.906185	-.286891
36	-104.924	-167.914	83.25	.819281	342.2	.779995	-.250657
37	-104.924	-167.914	88.8	.679564	342.	.646126	-.210545
38	-104.924	-167.914	94.35	.531621	341.7	.504823	-.166658
39	-104.924	-167.914	99.9	.374961	341.5	.355625	-.118854
40	-104.924	-167.914	105.45	.207136	341.3	.19622	-.0663565
END	-104.924	-167.914	111.	0	0	0	0
GND	-52.462	-83.9568	0	.324989	44.	.233823	.225708
42	-52.462	-83.9568	4.545	.231566	44.	.166688	.160742
43	-52.462	-83.9568	9.09	.174508	43.9	.125668	.121081
44	-52.462	-83.9568	13.635	.126424	43.9	.0910831	.0876748
45	-52.462	-83.9568	18.18	.0846506	43.9	.0610227	.0586682
46	-52.462	-83.9568	22.725	.0480153	43.8	.0346463	.0332431
47	-52.462	-83.9568	27.27	.0159834	43.6	.0115731	.0110242
48	-52.462	-83.9568	31.815	.0117192	224.3	-8.39E-03	-8.18E-03
49	-52.462	-83.9568	36.36	.0352406	224.	-.0253472	-.0244831
50	-52.462	-83.9568	40.905	.0546686	224.	-.0393574	-.0379428
51	-52.462	-83.9568	45.45	.0700595	223.9	-.0504587	-.048603
52	-52.462	-83.9568	49.995	.0814547	223.9	-.0586789	-.0564948
53	-52.462	-83.9568	54.54	.0888906	223.9	-.0640426	-.0616448
54	-52.462	-83.9568	59.085	.0924015	223.9	-.0665742	-.0640774

55	-52.462	-83.9568	63.63	.092019	223.9	-.0662967	-.0638142
56	-52.462	-83.9568	68.175	.0877671	223.9	-.0632283	-.0608708
57	-52.462	-83.9568	72.72	.0796479	223.9	-.0573724	-.0552467
58	-52.462	-83.9568	77.265	.0676102	223.9	-.0486942	-.0469043
59	-52.462	-83.9568	81.81	.0514663	223.9	-.0370609	-.0357109
60	-52.462	-83.9568	86.355	.0307009	223.9	-.0221039	-.0213064
END	-52.462	-83.9568	90.9	0	0	0	0

BASE NETWORK COMPUTATION
PHASETEK INC.
QUAKERTOWN PA

CUSTOMER : KCLE
NETWORK ID : TOWER ONE NIGHT

FREQUENCY : 1460.00 kHz
ATU SHUNT IMPEDANCE (R,X) : 0.00, -8100.00 OHMS
TOWER FEED IMPEDANCE (R,X) : 0.00, 18.00 OHMS
TOWER SHUNT IMPEDANCE (R,X) : 0.00, -2477.50 OHMS
TOWER IMPEDANCE (R,X) : 87.12, 150.82 OHMS

NODE	TO NODE	IMPEDANCE (OHMS) R	X
1	GROUND	0.00	-8100.00
2	GROUND	98.64	156.90
1	2	0.00	18.00

NODE	VOLTAGE MAGNITUDE	PHASE
1	489.31	71.73
2	451.62	69.00

	REAL	IMAGINARY	MAGNITUDE	PHASE
INPUT IMPEDANCE (OHMS) :	103.02	177.48	205.22	59.87
INPUT CURRENT (AMPS) :	2.33	0.49	2.38	11.87
OUTPUT CURRENT (AMPS) :	2.56	0.41	2.59	9.01

INPUT/OUTPUT CURRENT RATIO = 0.9196
INPUT/OUTPUT PHASE = 2.86 DEGREES

BASE NETWORK COMPUTATION
PHASETEK INC.
QUAKERTOWN PA

CUSTOMER : KCLE
NETWORK ID : TOWER TWO NIGHT

FREQUENCY : 1460.00 kHz
ATU SHUNT IMPEDANCE (R,X) : 0.00, -8100.00 OHMS
TOWER FEED IMPEDANCE (R,X) : 0.00, 39.00 OHMS
TOWER SHUNT IMPEDANCE (R,X) : 0.00, -5450.00 OHMS
TOWER IMPEDANCE (R,X) : 50.88, 88.81 OHMS

NODE	TO	NODE	IMPEDANCE (OHMS) R	X
1		GROUND	0.00	-8100.00
2		GROUND	52.57	89.78
1		2	0.00	39.00

NODE	VOLTAGE MAGNITUDE	PHASE
1	205.07	59.05
2	153.39	50.90

	REAL	IMAGINARY	MAGNITUDE	PHASE
INPUT IMPEDANCE (OHMS) :	54.29	130.50	141.34	67.41
INPUT CURRENT (AMPS) :	1.44	-0.21	1.45	-8.37
OUTPUT CURRENT (AMPS) :	1.48	-0.24	1.50	-9.29

INPUT/OUTPUT CURRENT RATIO = 0.9681
INPUT/OUTPUT PHASE = 0.92 DEGREES

BASE NETWORK COMPUTATION
PHASETEK INC.
QUAKERTOWN PA

CUSTOMER : KCLE
NETWORK ID : TOWER 3 NIGHT DET

FREQUENCY : 1460.00 kHz
ATU SHUNT IMPEDANCE (R,X) : 0.00, -8100.00 OHMS
TOWER FEED IMPEDANCE (R,X) : 0.00, 35.00 OHMS
TOWER SHUNT IMPEDANCE (R,X) : 0.00, -5450.00 OHMS
TOWER IMPEDANCE (R,X) : 0.62, -484.30 OHMS

NODE	TO	NODE	IMPEDANCE (OHMS) R	X
1		GROUND	0.00	-8100.00
2		GROUND	0.52	-444.78
1		2	0.00	35.00

NODE	VOLTAGE MAGNITUDE	PHASE
1	351.29	63.40
2	381.29	63.39

	REAL	IMAGINARY	MAGNITUDE	PHASE
INPUT IMPEDANCE (OHMS) :	0.47	-390.04	390.04	-89.93
INPUT CURRENT (AMPS) :	-0.80	0.40	0.90	153.33
OUTPUT CURRENT (AMPS) :	-0.70	0.35	0.79	153.32

INPUT/OUTPUT CURRENT RATIO = 1.1439
INPUT/OUTPUT PHASE = 0.01 DEGREES

INTELLI, LLC
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas
EXHIBIT FIVE
NORMALIZATION EXHIBIT

INTELLI, LLC
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas

NORMALIZATION

After modeling and corrections for base effects to be equivalent to the location of the toroidial current transformer, the currents and phases calculated at the "Input Current (Amps) "Magnitude" and "Phase" from Basenet listed in the "KCLE Day Model Exhibit" and "KCLE Night Model Exhibit", were normalized to specify the antenna monitor parameters with the reference tower 3 for day operation and reference tower 1 for night operation.

DAY NORMALIZATION

T1 MOM CURRENT	T1 MOM PHASE	T2 MOM CURRENT	T2 MOM PHASE	T3 MOM CURRENT	T3 MOM PHASE
5.46	74.85	1.83	81.12	12.92	7.00

Normalized Antenna Monitor Parameters

Ratio	Phase	Ratio	Phase	Ratio	Phase
0.423	67.85	0.142	74.12	1.000	0

NIGHT NORMALIZATION

T1 MOM CURRENT	T1 MOM PHASE	T2 MOM CURRENT	T2 MOM PHASE
2.38	11.87	1.45	-8.37

Normalized Antenna Monitor Parameters

1	0	0.609	-20.24

INTELLI, LLC
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas
EXHIBIT SIX
SAMPLE SYSTEM AND ANTENNA MONITOR VERIFICATION

INTELLI, LLC
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas
KCLE Sample And Antenna Monitoring System

The KCLE sampling system consists of three electrically equal length LDF 4-50 Heliax coaxial cables. The lines are connected to Phasetek P-600-202 .5v/Amp sampling transformers. The transformers are installed in the ATU at the jumper plug at the output to the antenna feed. At the time of the adjustment of the system, the transformers were disconnected and measured with a common signal from an Array Solutions VNA 2180 Network Analyzer (SN. 5319). The signal was a CW signal from test port A (RF Out) at 1.46 MHz. The output port of each transformer was fed to port B (RF In) of the analyzer and compared against the reference transformer for phase and magnitude.

Tower	Magnitude	Phase (Deg)
1	.999	-.22
2	.999	-.34
3	1.000	0

The antenna monitor utilized is a Potomac Instruments AM-1900-3, serial number 506. The monitor was operated and calibrated according to the manufacturer's specifications. The accuracy of the device was verified by driving two ports with a common signal from a Potomac SD31 generator with a splitter and equal length jumpers. The antenna monitor was found to be well within manufacturer's specifications.

TOWER	RATIO	PHASE (deg.)
1	1.001	0
2	1.000	0
3	1.000	0

Sample lines were measured using an Array Solutions VNA 2180 Network Analyzer. The line lengths were determined using the technique described in the methodology section of this exhibit. The results of the measurements and calculations are listed below.

	Resonance Below 1460 kHz (kHz)	Resonance Above 1460kHz (kHz)	Calculated Electrical Length	Measured Impedance Into TCT
Tower 1	803.15	2425.80	163.6	49.79 +j .24
Tower 2	805.6	2430.91	163.1	49.84 + j.59
Tower 3	803.15	2423.5	163.6	49.63 + j.18

	+45 Degree Offset Frequency (kHz)	+45 Degree Measured Impedance (Ohms)	-45 Degree Offset Frequency (kHz)	-45 Degree Measured Impedance (Ohms)	Calculated Characteristic Impedance (Ohms)[1]
Tower 1	1204.73	2.69 +j50.83	401.58	.52-j50.81	50.86
Tower 2	1208.4	2.69+j50.99	402.8	.5-j50.5	50.78
Tower 3	1204.73	2.63+j50.52	401.58	.49-j50.9	50.75

MAX Impedance	50.86
MIN Impedance	50.75
MAXIMUM IMPEDANCE DELTA	**0.11**

[1] $Z_0 = ((R_1^2+X_1^2)^{1/2} \times (R_2^2+X_2^2))^{1/2})^{1/2}$

INTELLI, LLC
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas
EXHIBIT SEVEN
REFERENCE READINGS

KCLE 1460 kHz Reference Readings
Measured by: Mitch Rice and C.Staples using FIM-41S.N. 1354*

Day Reference Readings All Coordinates NAD83 All Time CDT

58 Deg.	Distance	Reading	Time	Date	Location Description
	3.71	93	1103	3/28/2015	32 35 47.4 97 14 50.46 Mitchell Saxon Rd
	7	52	1114	"	32 36 43.6 97 13 02.7 4809 Nancy Ln.
	13.2	13.5	1143	"	32 38 29.7 97 09 41.3 3307 Redstone Dr.
207 Deg	4.38	110	1238	3/28/2015	32 32 39.6 97 18 07 S Hurst Rd
	7.6	102	1249	"	32 31 05 97 19 02.6 CR 803 & &15
	14.22	23.5	1249	"	32 27 52.1 97 20 58.4 6408 CR803
238 Deg	3.79	270	1430	3/28/2015	32 33 38.8 97 18 54.6 Boone Rd
	7.05	158	1446	"	32 32 42.8 97 20 40.6 Bryan Dr.
	13.73	74	1511	"	32 30 48.3 97 24 18 1517 CR 914
269 Deg	6.43	136	1549	3/28/2015	32 34 40.3 97 20 57.6 Driskell Dr
	9.29	98	1539	"	32 34 38.1 97 22 47.1 Eagle Dr
	12.13	70	1529	"	32 34 36.78 97 24 36.24 West Cleburne Rd

Night Reference Readings All Coordinates NAD83 All Time CDT

24.5 Deg	3.29	20.8	1013	3/29/2015	32 36 20.9 97 15 58.9 Rendon Rd past Village Creek
	10.23	6.2	1058	"	32 39 45.6 97 14 28 08.2 Gilman Rd
	13.3	4.7	1108	"	32 41 17.1 97 13 18.6 7107 Lake Powell
91.5 Deg	3.7	18.5	1001	3/29/2015	32 34 40.2 97 14 29.4 12260 Rendon
	7.1	5.5	1026	"	32 34 37.3 97 12 19.3 118 Willow Creek
	13.8	3.8	1041	"	32 34 31.1 97 08 03.3 Pleasant Ridge Dr
152 Deg	3.41	104	1347	3/29/2015	32 33 05.7 97 15 49.8 202 Hillside Dr E
	6.84	33.5	1403	"	32 31 27.9 97 14 47.9 CR529 past Pecan
	9.93	18.5	1416	"	32 29 59.2 97 13 51.5 CR523
228 Deg	4.2	23	1134	3/29/2015	32 33 12.5 97 18 51.4 across from Spinks on Stone
	6.77	15	1205	"	32 32 17.2 97 20 04.6 Market St
	11.7	8.5	1220	"	32 30 29.9 97 22 26 CR 1021
248 Deg	3.78	31	1141	3/29/2015	32 33 57.9 97 19 05.5 Outback parking lot
	7.77	16	1157	"	32 33 09.6 97 21 27.7 Catherine Ln.
	13.2	7.5	1229	"	32 32 03.6 97 24 40.8 2100 CR919
324 Deg	3.49	78	1442	3/29/2015	32 36 14.7 97 18 10.2 McPherson Rd
	7.84	41	1453	"	32 38 09.1 97 19 48.3 Trimble Dr.
	14.26	13	1508	"	32 40 57.4 97 22 13.6 Gambrell St.

***SN 1354 was compared to a meter of known accuracy and recent calibration, FIM-41 S.N. 1436 which was calibrated10/8/2013**

POTOMAC INSTRUMENTS, inc.
Frederick, Maryland

CERTIFICATE OF CALIBRATION

Field Intensity Meter Type FIM-41 Serial Number 1436

This instrument was calibrated in an induction field of 220.0 millivolts per meter. At each measurement frequency the measured field was recorded and a correction factor K was computed; the indicated field must be multiplied by K to obtain the true field.

kHz	K	kHz	K	MHz	K	MHz	K
540	1.009	1100	1.000	1.6	1.009	3.5	1.000
600	1.005	1200	1.000	1.9	1.005	3.8	1.000
700	1.005	1300	1.000	2.2	1.000	4.1	0.995
800	1.000	1400	1.000	2.5	1.000	4.4	0.995
900	1.000	1500	1.000	2.8	1.000	4.7	0.991
1000	1.000	1600	1.000	3.2	1.000	5.0	0.991

The calibrating field is maintained equal to the National Institute of Standards and Technology (NIST) standard field within an accuracy of 1.0 percent. NIST states that the absolute accuracy of its field is "believed to be within 3.0 percent."

The error at points on the meter scale other than the calibration point is less than 3.0 percent. The attenuator ratios are correct within 2.0 percent. These accuracies apply for battery voltages that are indicated by the instrument's battery check circuit to be usable.

NEXT RECOMMENDED CALIBRATION DATE: October 8, 2015

Calibrated by _____ Date: Oct. 8, 2013

STATE OF MARYLAND

Technician Zachary Babendreier, personally appeared before me on Oct. 8, 2013, and testified under oath that the above calibration was made either by himself or under his direction and that the statements in the above certificate are true to the best of his knowledge and belief.

MARCELLA R. LALIBERTE NOTARY PUBLIC MY COMMISSION EXPIRES 12/17/2016 FREDERICK COUNTY, MD

Marcella R. Laliberte
Notary Public

INTELLI, LLC
KCLE (AM) 1460 kHz
Facility ID 59263
Burleson, Texas
EXHIBIT EIGHT
DESCRIPTION OF ANTENNA SYSTEM

DESCRIPTION OF ANTENNA SYSTEM

a) Number of elements:		Day: 3 Night: 2
b) Type of Elements:		Vertical, uniform cross-section, series-fed, guyed steel radiators, base insulated; no top-loading, 2 59.89 meters or 196.5 feet; 105 electrical degrees at 1460 kHz, one tower 48.77 or 160 feet; 85.5 degrees at 1460 kHz
c) Height of each element above ground level		60.9 meters or 199.8 feet; existing towers 1 & 2 49.8 meters or 164.4 feet; tower 3
d) Height of each element above sea level		254.4 meters or 835 feet, existing towers 243.2 meters or 798 feet, tower 3
e) Antenna Registrations		Towers: (1) 1230673 & (2) 1230675 (3) No ASR
f) Orientation of elements in array		1: 0° (Sp) 0° (Orient) 2: 198° 238° 3: 99° 238°
g) Power (nominal)		Day: 11 kW Night: .7 kW
h) Site coordinates		N 32° 34' 43" W 97° 16' 50" center of array NAD27
i) Theoretical antenna system Parameters	DAY Night	Ratio Phase T#1 .578 /67° T#2 .14 /122° T#3 1.0 /0° T#1 1.0 /0° T#2 .5 /-15°
j) Ground system		120 equally spaced about the base of each tower, #10 copper radials 51.3 meters or 168.4 feet or 90° at 1460 KHz, except where shortened and bonded to transverse copper strap where radials intersect. In addition copper strap runs from transmitter down the line of towers and is bonded at the base of each tower. 15 Meter ground screen at the base of each tower.
k) Pattern RMS Theoretical	DAY NIGHT	1014.87 mV/m @1 km @ 11 kW 250.31 mV/m@ 1 km @ .7 kW
l) Pattern RMS Standard	DAY NIGHT	1066.18 mV/m @1 km 263.04 mV/m @ 1 km
m) Pattern Erss	DAY NIGHT	985.76 mV/m @1 km 296.8 mV/m @ 1km