

ENGINEERING STATEMENT
RE DIGITAL FLASHCUT APPLICATION
FOR CLASS A TELEVISION STATION
KUTU-CA, TULSA, OKLAHOMA
CH.25 7.9 KW ERP (MAX DA) 355.9 METERS RCAMSL

JANUARY 2011

COHEN, DIPPELL AND EVERIST, P.C.
CONSULTING ENGINEERS
RADIO AND TELEVISION
WASHINGTON, D.C.

COHEN, DIPPELL AND EVERIST, P. C.

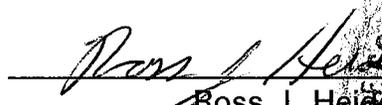
City of Washington)
) ss
District of Columbia)

Ross J. Heide, being duly sworn upon his oath, deposes and states that:

He is a graduate of the Massachusetts Institute of Technology in Operations Research and Management Science, a Registered Professional Engineer in the District of Columbia, and employed by Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1420 N Street, N.W., Suite One, Washington, D.C. 20005;

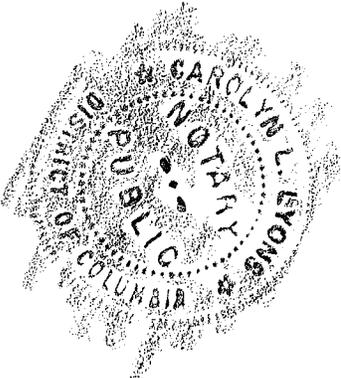
That the attached engineering report was prepared by him or under his supervision and direction and

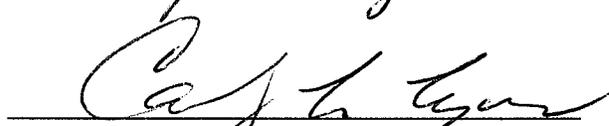
That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true.



Ross J. Heide
District of Columbia
Professional Engineer
Registration No. PE900748


Subscribed and sworn to before me this 25th day of January, 2011.





Notary Public
My Commission Expires: 2/28/2013

Introduction

This engineering statement has been prepared on behalf of Oklahoma Land Company, LLC in support of its proposed digital flashcut of licensed Class A television station KUTU-CA, Channel 25, Tulsa, Oklahoma [BLTTL-20001120AAE]. The proposed facilities have a center of radiation above mean sea level ("RCAMSL") of 355.9 meters and with an ERP of 7.9 kW (max DA).

Exhibits requested by FCC Form 301-CA are included with this report.

Antenna Site

The proposed Channel 25 antenna is side-mounted on an existing tower on the roof of a building with a center of radiation of 132.7 meters (435.4 feet) above ground level. The antenna site is located at 15 W 6th Street, Tulsa, Oklahoma. The geographic coordinates (NAD-27) of the existing tower site are as follows:

North Latitude: 36° 09' 0.7"

West Longitude: 95° 59' 25.1"

The tower registration number for their antenna structure is 1277286.

Transmitting Equipment

The following data provides the pertinent information concerning the proposed Class A digital television station operation.

Transmitter: Type-approved

Antenna: SWR, Type SWLP8WC/25 horizontally polarized, directional antenna with a power gain of 8.3 (9.19 dB) and 1.0° electrical beam tilt oriented at N 70° E (true)

Transmission Line: 18.3 meters (60 feet) of 1-5/8", 50 ohm, air dielectric, coaxial line,
20.571 dB loss/100 ft

Power Data

Transmitter output	0.631 kW	-2.00 dBk
Transmission line efficiency/loss	92.4%	-0.34 dB
Power input to antenna	0.583 kW	-2.34 dBk
Antenna power gain (Peak Lobe -1.0°)	13.55	11.32
Effective Radiated Power	7.9 kW	8.98 dBk

Elevation Data

Vertical dimension of Ch. 25 antenna (side-mounted w/o beacon or lightning rod)	4.8 meters 15.76 feet
Overall height of tower above ground	135.7 meters 445.2 feet
Elevation of radiation center of Ch. 25 antenna above ground	132.7 meters 435.4 feet
Elevation of site above mean sea level	223.2 meters 732.3 feet
Elevation of center of Ch. 25 antenna above mean sea level	355.9 meters 1167.7 feet
Overall tower height above mean sea level	358.9 meters 1177.5 feet
Antenna Height Above Average Terrain	138.7 meters

Allocation

The attached Table II shows the stations potentially affected by the proposed KUTU-CA operation. The Longley-Rice (OET Bulletin 69) method predicts no impermissible interference.

Topographic Data

The average elevation data of each radial from 3.1-16.1 km was obtained from the 3-second database. The distances along each radial to the limits of the normally protected 51 dBu F(50,90) and noise-limited 41 dBu F(50,90) contours were determined from reference to the propagation data for Channels 14-69, as published by the FCC in Figure 10b, Section 73.699 of the FCC Rules without the use of the roughness correction.

Utilizing the formula in Section 73.684(c)(1) for the effective heights shown on the attached tabulation, it is found that the depression angle A_h , varies between 0.26 to 0.36 degrees. The relative field in the vertical radiation pattern at these angles is greater than 90% of the maximum. Therefore, maximum power at the vertical angle was used in determining the distance to the respective contours.

Contour Data

The distances to the contours, average elevations, and effective antenna heights are included on the attached tabulation (Table I). The contours determined from these distances are shown on the attached map, Exhibit E-3.

Existing and Proposed Service Areas

The map in Exhibit E-4 compares the service contour (74 dBu) for the currently licensed analog KUTU-CA to the digital normally protected contour of the facilities proposed herein.

Environmental Statement

According to the applicant, the proposed facilities are not located near any known wilderness area, wildlife preserve, historic place, or Indian religious site. The proposed facilities are not located in a flood plain area. The proposed facilities will not affect or jeopardize the threatened or endangered species or their critical habitats. The installation of a DTV antenna on the existing tower does not involve any significant changes in the surface features.

The proposed facilities will not affect any districts, sites, buildings, structures, or objects significant in American history, architecture, archaeology, engineering, or culture.

The FCC guideline for human exposure to RF radiation level for Channel 25 (536-542 MHz) is 1787 and 357 microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$) for controlled and uncontrolled environment, respectively. Computations made according to OET Bulletin 65 (Edition 97-01) show that based on the maximum ERP of 7.9 kW with 0.21 maximum antenna relative field factor towards the area at the base and 16.8 meters antenna radiation center above the main section building roof, the RF radiation level would be less than $54 \mu\text{W}/\text{cm}^2$ at 2 meters above the building roof. This value is less than 15% of the FCC guideline for an uncontrolled environment and less than 3% of the guideline for a controlled environment.

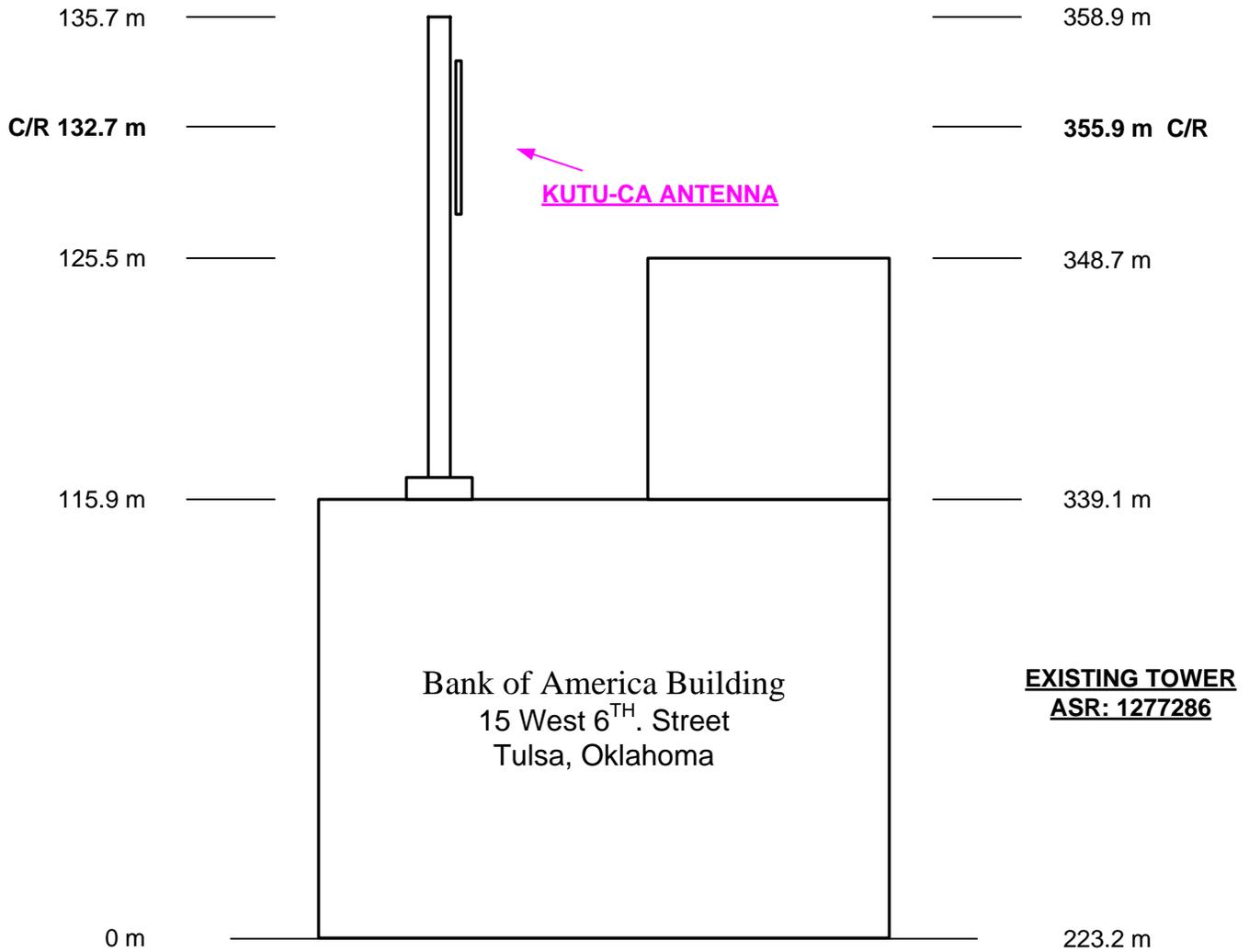
There is a raised section of building roof that is 7.3 meters away from the antenna structure at its closest point measured horizontally. At this closest location 2 meters above the raised roof,

the RF radiation level would be less than $49 \mu\text{W}/\text{cm}^2$ or 14% of the FCC guideline for an uncontrolled environment and less than 3% of the guideline for a controlled environment. With respect to work performed near the radiating elements, the applicant will establish procedures in coordination with other stations on the site and building management to reduce or turn off the power to ensure that workers are not exposed to RF radiation levels exceeding FCC guidelines. According to the CDBS database as of 1/11/11 and confirmed by the building management, there is one other broadcast station transmitting from another mast on the building roof. This station is TV translator K39CW [FCC File No. BLTTL-19920507IB]. According to the manufacturer data for the Dielectric, Model TLP16-M specified in the K39CW license, the maximum relative field in the direction of the roof area at the base of the K39CW mast is 0.18. With a K39CW center of radiation 15.9 meters above the main section of the roof, calculation according to OET Bulletin 65 as above predicts a maximum RF level of less than $83 \mu\text{W}/\text{cm}^2$ which is less than 20.0% of the guideline for an uncontrolled environment and less than 4.0% of the guideline for a controlled environment.

Therefore, the combined RF contributions of both the K39CW and the proposed KUTU facilities are not predicted to exceed 35% of the guideline for an uncontrolled environment. Moreover, access to the roof via a locked hatch is controlled by the building management. For the reasons stated above, the proposed digital Class A TV operation does not involve any action specified in Section 1.1307 of the Commission's Rules; therefore, under Section 1.1306, it is categorically excluded from environmental processing.

ABOVE GROUND

ABOVE MEAN SEA LEVEL



NOT TO SCALE

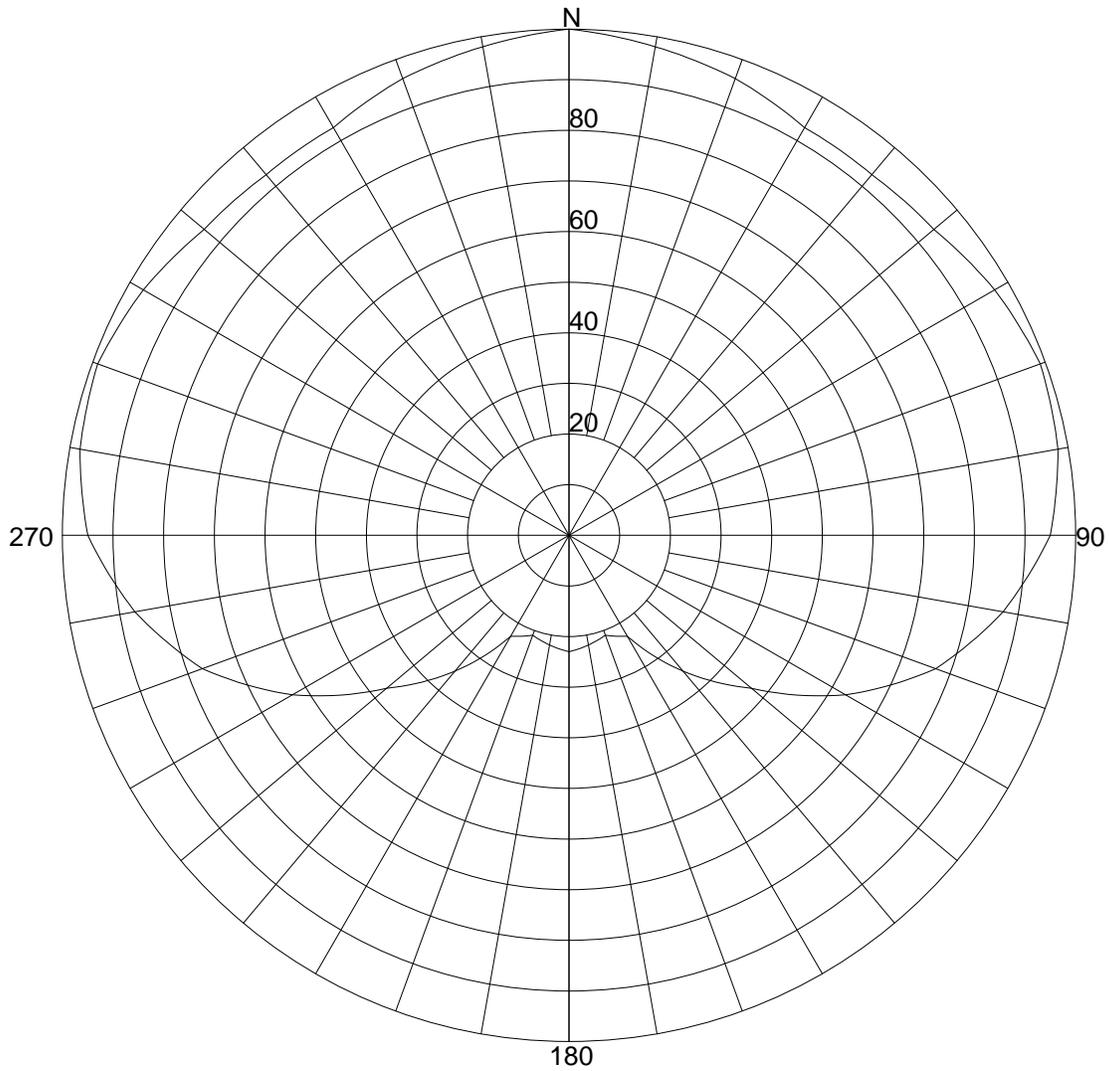
EXHIBIT E - 1
VERTICAL SKETCH
FOR THE TV OPERATION OF
KUTU-CA, TULSA, OKLAHOMA
JANUARY 2011

COHEN, DIPPELL AND EVERIST, P.C.

EXHIBIT E-2

ANTENNA MANUFACTURER DATA

KUTU-CA, TULSA, OKLAHOMA



Azimuth Pattern

Scale: Linear

Unit: Relative Field

Systems With Reliability (SWR) LLP

CLIENT: *KUTU-CA*

Date: 7/2/2009

ANTENNA TYPE: SWLP8WC/25

Pattern Rotation: 70

FREQUENCY: 539 MHz

PATTERN POL.: Horizontal

CIRCULARITY(+/-dB):

AZ. DIRECTIVITY: 1.63257 / 2.129dB

PATTERN RMS: 0.783

Relative Field Tabulation(Azimuth)

Azimuth Heading	Normalized Field(dB)	Azimuth Heading	Normalized Field(dB)
0	1.0000 (0)	180	.2300 (-12.765)
5	.9900 (-0.087)	185	.2250 (-12.956)
10	.9800 (-0.175)	190	.2200 (-13.152)
15	.9700 (-0.265)	195	.2150 (-13.351)
20	.9600 (-0.355)	200	.2100 (-13.556)
25	.9450 (-0.491)	205	.2200 (-13.152)
30	.9300 (-0.63)	210	.2300 (-12.765)
35	.9300 (-0.63)	215	.2900 (-10.752)
40	.9300 (-0.63)	220	.3500 (-9.119)
45	.9350 (-0.584)	225	.4100 (-7.744)
50	.9400 (-0.537)	230	.4700 (-6.558)
55	.9550 (-0.4)	235	.5500 (-5.193)
60	.9700 (-0.265)	240	.6300 (-4.013)
65	.9800 (-0.175)	245	.7000 (-3.098)
70	.9900 (-0.087)	250	.7700 (-2.27)
75	.9850 (-0.131)	255	.8200 (-1.724)
80	.9800 (-0.175)	260	.8700 (-1.21)
85	.9650 (-0.309)	265	.9100 (-0.819)
90	.9500 (-0.446)	270	.9500 (-0.446)
95	.9100 (-0.819)	275	.9650 (-0.309)
100	.8700 (-1.21)	280	.9800 (-0.175)
105	.8200 (-1.724)	285	.9850 (-0.131)
110	.7700 (-2.27)	290	.9900 (-0.087)
115	.7000 (-3.098)	295	.9800 (-0.175)
120	.6300 (-4.013)	300	.9700 (-0.265)
125	.5500 (-5.193)	305	.9550 (-0.4)
130	.4700 (-6.558)	310	.9400 (-0.537)
135	.4100 (-7.744)	315	.9350 (-0.584)
140	.3500 (-9.119)	320	.9300 (-0.63)
145	.2900 (-10.752)	325	.9300 (-0.63)
150	.2300 (-12.765)	330	.9300 (-0.63)
155	.2200 (-13.152)	335	.9450 (-0.491)
160	.2100 (-13.556)	340	.9600 (-0.355)
165	.2150 (-13.351)	345	.9700 (-0.265)
170	.2200 (-13.152)	350	.9800 (-0.175)
175	.2250 (-12.956)	355	.9900 (-0.087)

Systems With Reliability (SWR) LLP

CLIENT: *KUTU-CA*

Date: 7/2/2009

ANTENNA TYPE: SWLP8WC/25

Pattern Rotation: 70

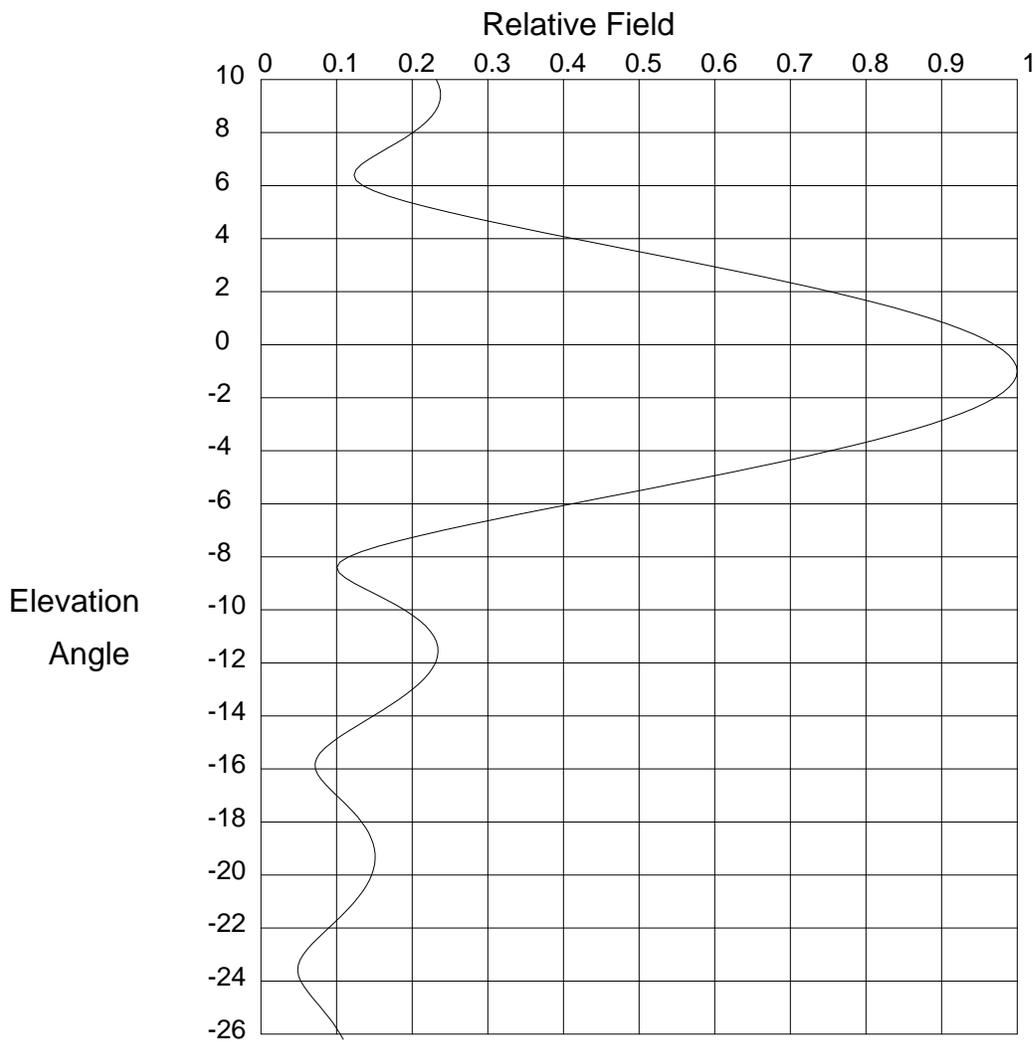
FREQUENCY: 539 MHz

PATTERN POL.: Horizontal

CIRCULARITY(+/-dB):

AZ. DIRECTIVITY: 1.63257 / 2.129dB

PATTERN RMS: 0.783



Elevation Pattern

Scale: Linear

Units: Field, Relative

Systems With Reliability Inc.

CLIENT: *KUTU-CA, Equity Broadcast*
 ANTENNA TYPE: SWLP8WC / 25
 FREQUENCY: 539
 PATTERN POL.: Horizontal
 DIRECTIVITY(Peak): 8.298/9.19 dBd
 DIRECTIVITY(Horiz): 7.813/8.928 dBd

Date: 10/19/2007

Beam Tilt (Deg.) : -1
 Null Fill(s)(%) : 10, 7, 5

Relative Field Tabulation

Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)
3.2	.555 (-5.116)	-4.4	.691 (-3.214)	-12.0	.231 (-12.738)
3.0	.59 (-4.587)	-4.6	.658 (-3.638)	-12.2	.227 (-12.881)
2.8	.624 (-4.095)	-4.8	.624 (-4.097)	-12.4	.222 (-13.076)
2.6	.658 (-3.639)	-5.0	.589 (-4.592)	-12.6	.216 (-13.321)
2.4	.691 (-3.216)	-5.2	.554 (-5.125)	-12.8	.208 (-13.618)
2.2	.722 (-2.825)	-5.4	.519 (-5.701)	-13.0	.20 (-13.967)
2.0	.753 (-2.463)	-5.6	.483 (-6.321)	-13.2	.191 (-14.371)
1.8	.782 (-2.131)	-5.8	.447 (-6.992)	-13.4	.181 (-14.83)
1.6	.81 (-1.825)	-6.0	.411 (-7.716)	-13.6	.171 (-15.347)
1.4	.837 (-1.546)	-6.2	.376 (-8.5)	-13.8	.16 (-15.924)
1.2	.862 (-1.292)	-6.4	.341 (-9.349)	-14.0	.149 (-16.561)
1.0	.885 (-1.063)	-6.6	.306 (-10.272)	-14.2	.137 (-17.261)
.8	.906 (-0.857)	-6.8	.273 (-11.274)	-14.4	.126 (-18.021)
.6	.925 (-0.675)	-7.0	.241 (-12.365)	-14.6	.114 (-18.835)
.4	.942 (-0.515)	-7.2	.21 (-13.547)	-14.8	.104 (-19.69)
.2	.957 (-0.378)	-7.4	.182 (-14.818)	-15.0	.094 (-20.557)
.0	.97 (-0.262)	-7.6	.156 (-16.157)	-15.2	.085 (-21.39)
-.2	.981 (-0.167)	-7.8	.133 (-17.504)	-15.4	.078 (-22.116)
-.4	.989 (-0.094)	-8.0	.116 (-18.727)	-15.6	.074 (-22.643)
-.6	.995 (-0.042)	-8.2	.105 (-19.615)	-15.8	.072 (-22.889)
-.8	.999 (-0.011)	-8.4	.101 (-19.951)	-16.0	.072 (-22.823)
-1.0	1.00 (0)	-8.6	.104 (-19.695)	-16.2	.075 (-22.48)
-1.2	.999 (-0.01)	-8.8	.112 (-19.017)	-16.4	.08 (-21.945)
-1.4	.995 (-0.041)	-9.0	.124 (-18.148)	-16.6	.086 (-21.308)
-1.6	.989 (-0.093)	-9.2	.137 (-17.252)	-16.8	.093 (-20.64)
-1.8	.981 (-0.165)	-9.4	.151 (-16.41)	-17.0	.10 (-19.988)
-2.0	.971 (-0.259)	-9.6	.165 (-15.656)	-17.2	.107 (-19.376)
-2.2	.958 (-0.375)	-9.8	.178 (-14.998)	-17.4	.115 (-18.819)
-2.4	.943 (-0.512)	-10.0	.19 (-14.434)	-17.6	.121 (-18.322)
-2.6	.926 (-0.671)	-10.2	.20 (-13.958)	-17.8	.128 (-17.886)
-2.8	.906 (-0.853)	-10.4	.21 (-13.564)	-18.0	.133 (-17.51)
-3.0	.885 (-1.059)	-10.6	.218 (-13.245)	-18.2	.138 (-17.193)
-3.2	.862 (-1.288)	-10.8	.224 (-12.995)	-18.4	.142 (-16.933)
-3.4	.837 (-1.541)	-11.0	.229 (-12.809)	-18.6	.146 (-16.727)
-3.6	.811 (-1.821)	-11.2	.232 (-12.684)	-18.8	.148 (-16.574)
-3.8	.783 (-2.126)	-11.4	.234 (-12.617)	-19.0	.15 (-16.471)
-4.0	.753 (-2.459)	-11.6	.234 (-12.605)	-19.2	.151 (-16.418)
-4.2	.723 (-2.822)	-11.8	.233 (-12.645)	-19.4	.151 (-16.413)

Systems With Reliability Inc.

Page 1 of 2

CLIENT: *KUTU-CA, Equity Broadcast*

Date: 10/19/2007

ANTENNA TYPE: SWLP8WC / 25

FREQUENCY: 539

PATTERN POL.: Horizontal

DIRECTIVITY(Peak): 8.298/9.19 dBd

Beam Tilt (Deg.) : -1

DIRECTIVITY(Horiz): 7.813/8.928 dBd

Null Fill(s)(%) : 10, 7, 5

Relative Field Tabulation

Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)
-19.6	.15 (-16.456)	-27.2	.12 (-18.416)	-54.0	.089 (-21.003)
-19.8	.149 (-16.547)	-27.4	.12 (-18.385)	-55.0	.109 (-19.242)
-20.0	.146 (-16.686)	-27.6	.12 (-18.398)	-56.0	.125 (-18.084)
-20.2	.143 (-16.873)	-27.8	.119 (-18.454)	-57.0	.135 (-17.417)
-20.4	.14 (-17.108)	-28.0	.118 (-18.553)	-58.0	.138 (-17.172)
-20.6	.135 (-17.394)	-28.2	.116 (-18.695)	-59.0	.136 (-17.307)
-20.8	.13 (-17.732)	-28.4	.114 (-18.88)	-60.0	.129 (-17.805)
-21.0	.124 (-18.123)	-28.6	.111 (-19.111)	-61.0	.117 (-18.663)
-21.2	.118 (-18.571)	-28.8	.107 (-19.387)	-62.0	.101 (-19.873)
-21.4	.111 (-19.076)	-29.0	.103 (-19.71)	-63.0	.085 (-21.375)
-21.6	.104 (-19.642)	-29.2	.099 (-20.082)	-64.0	.072 (-22.903)
-21.8	.097 (-20.271)	-29.4	.094 (-20.504)	-65.0	.065 (-23.76)
-22.0	.09 (-20.963)	-29.6	.089 (-20.979)	-66.0	.069 (-23.25)
-22.2	.082 (-21.717)	-29.8	.084 (-21.508)	-67.0	.082 (-21.741)
-22.4	.075 (-22.527)	-30.0	.079 (-22.092)	-68.0	.10 (-20.028)
-22.6	.068 (-23.375)	-31.0	.052 (-25.689)	-69.0	.119 (-18.493)
-22.8	.061 (-24.231)	-32.0	.043 (-27.378)	-70.0	.138 (-17.22)
-23.0	.056 (-25.036)	-33.0	.061 (-24.263)	-71.0	.155 (-16.198)
-23.2	.052 (-25.708)	-34.0	.085 (-21.37)	-72.0	.17 (-15.396)
-23.4	.049 (-26.144)	-35.0	.103 (-19.727)	-73.0	.182 (-14.782)
-23.6	.049 (-26.262)	-36.0	.111 (-19.125)	-74.0	.192 (-14.329)
-23.8	.05 (-26.048)	-37.0	.107 (-19.438)	-75.0	.199 (-14.016)
-24.0	.053 (-25.561)	-38.0	.093 (-20.67)	-76.0	.204 (-13.826)
-24.2	.057 (-24.902)	-39.0	.071 (-22.931)	-77.0	.205 (-13.747)
-24.4	.062 (-24.164)	-40.0	.049 (-26.114)	-78.0	.205 (-13.767)
-24.6	.067 (-23.415)	-41.0	.041 (-27.66)	-79.0	.202 (-13.879)
-24.8	.073 (-22.694)	-42.0	.056 (-25.016)	-80.0	.198 (-14.077)
-25.0	.079 (-22.022)	-43.0	.079 (-22.101)	-81.0	.191 (-14.357)
-25.2	.085 (-21.409)	-44.0	.098 (-20.176)	-82.0	.184 (-14.718)
-25.4	.091 (-20.859)	-45.0	.111 (-19.128)	-83.0	.175 (-15.159)
-25.6	.096 (-20.37)	-46.0	.115 (-18.814)	-84.0	.164 (-15.683)
-25.8	.101 (-19.942)	-47.0	.11 (-19.172)	-85.0	.153 (-16.293)
-26.0	.105 (-19.571)	-48.0	.098 (-20.211)	-86.0	.141 (-16.997)
-26.2	.109 (-19.255)	-49.0	.079 (-21.999)	-87.0	.129 (-17.806)
-26.4	.112 (-18.99)	-50.0	.059 (-24.538)	-88.0	.116 (-18.737)
-26.6	.115 (-18.776)	-51.0	.045 (-26.895)	-89.0	.102 (-19.814)
-26.8	.117 (-18.61)	-52.0	.049 (-26.236)	-90.0	.088 (-21.071)
-27.0	.119 (-18.491)	-53.0	.067 (-23.464)	90.0	.00 (-50)

Systems With Reliability Inc.

Page 2 of 2

CLIENT: *KUTU-CA, Equity Broadcast*

Date: 10/19/2007

ANTENNA TYPE: SWLP8WC / 25

FREQUENCY: 539

PATTERN POL.: Horizontal

DIRECTIVITY(Peak): 8.298/9.19 dBd

Beam Tilt (Deg.) : -1

DIRECTIVITY(Horiz): 7.813/8.928 dBd

Null Fill(s)(%) : 10, 7, 5

TABLE I
COMPUTED COVERAGE DATA
FOR PROPOSED DTV OPERATION OF
KUTU-CA, TULSA, OKLAHOMA
CHANNEL 25 7.9 KW ERP 355.9 METERS RCAMSL
JANUARY 2011

<u>Radial</u> <u>Bearing</u> N ° E, T	<u>Average*</u> <u>Elevation</u> <u>3 to 16.1 km</u>	<u>Effective</u> <u>Height</u> meters	<u>Depression</u> <u>Angle</u> degrees	<u>ERP At</u> <u>Radio</u> <u>Horizon</u> kW	<u>Distance to Contour F(50,90)</u>	
	meters				<u>51 dBu</u> <u>Protected</u> km	<u>41 dBu</u> <u>Noise-Limited</u> km
0	209.8	146.1	0.335	7.7	43.2	54.5
10	192.2	163.7	0.354	7.4	44.1	55.6
20	190.5	165.4	0.356	7.0	43.9	55.4
30	192.2	163.7	0.354	6.8	43.7	55.2
40	190.9	165.0	0.356	6.8	43.8	55.3
50	193.9	162.0	0.353	7.3	43.9	55.4
60	199.5	156.4	0.346	7.6	43.7	55.2
70	204.1	151.8	0.341	7.9	43.6	55.0
80	207.4	148.5	0.338	7.6	43.2	54.6
90	210.9	145.0	0.334	7.3	42.8	54.1
100	217.0	138.9	0.326	6.8	42.1	53.4
110	219.8	136.1	0.323	6.8	41.9	53.2
120	218.9	137.0	0.324	7.0	42.0	53.4
130	220.1	135.8	0.323	7.4	42.3	53.6
140	224.0	131.9	0.318	7.7	42.2	53.5
150	221.6	134.3	0.321	7.6	42.3	53.6
160	204.8	151.1	0.341	7.1	43.1	54.5
170	189.2	166.7	0.358	6.0	43.2	54.7
180	199.4	156.5	0.347	4.7	41.3	52.8
190	214.2	141.7	0.330	3.1	38.3	49.8
200	211.5	144.4	0.333	1.7	35.5	47.1
210	217.8	138.1	0.326	1.0	31.9	43.7
220	227.0	128.9	0.314	0.4	26.8	38.9
230	244.3	111.6	0.293	0.3	24.5	36.8
240	233.7	122.2	0.306	0.4	25.8	38.1
250	222.5	133.5	0.320	0.4	27.1	39.2
260	204.6	151.3	0.341	0.4	27.8	40.0
270	217.4	138.5	0.326	0.3	26.5	38.6
280	243.1	112.8	0.294	0.4	25.6	37.8

TABLE I
COMPUTED COVERAGE DATA
FOR PROPOSED DTV OPERATION OF
KUTU-CA, TULSA, OKLAHOMA
CHANNEL 25 7.9 KW ERP 355.9 METERS RCAMSL
JANUARY 2011

<u>Radial</u> <u>Bearing</u> N ° E, T	<u>Average*</u> <u>Elevation</u> <u>3 to 16.1 km</u> meters	<u>Effective</u> <u>Height</u> meters	<u>Depression</u> <u>Angle</u> degrees	<u>ERP At</u> <u>Radio</u> <u>Horizon</u> kW	<u>Distance to Contour F(50,90)</u>	
					<u>51 dBu</u> <u>Protected</u> km	<u>41 dBu</u> <u>Noise-Limited</u> km
290	250.5	105.4	0.284	1.0	29.3	41.4
300	264.4	91.5	0.265	1.7	30.9	42.7
310	249.8	106.1	0.285	3.1	35.7	47.2
320	243.4	112.5	0.294	4.7	38.4	49.7
330	232.8	123.1	0.307	6.0	40.4	51.6
340	218.3	137.6	0.325	7.1	42.2	53.5
350	217.9	138.0	0.325	7.6	42.5	53.8

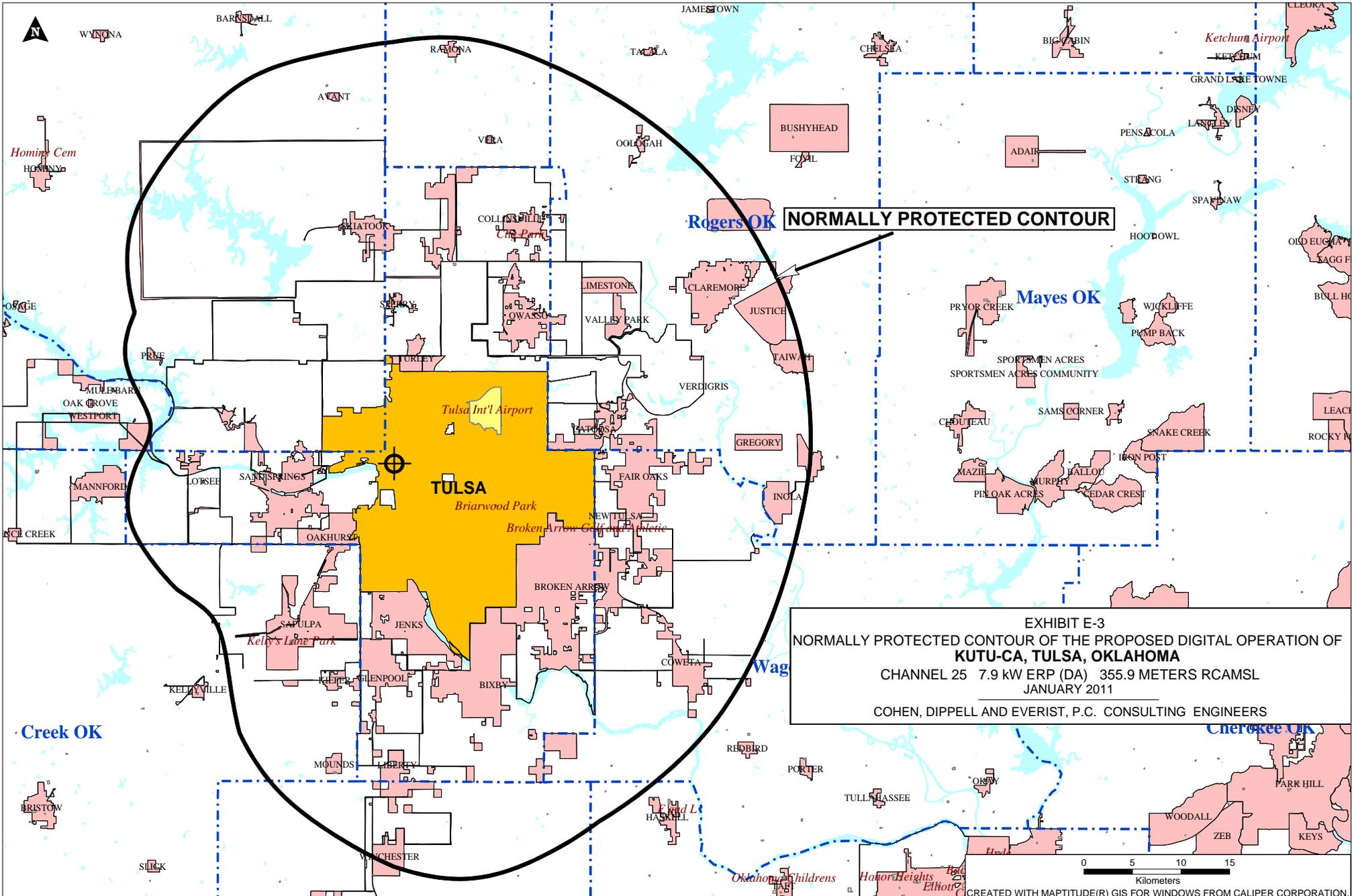
*Based on data from FCC 3-second data base.

DTV Channel 25 (536-542 MHz)
 Average Elevation 3.2 to 16.1 km 217.2 meters AMSL
 Center of Radiation 355.9 meters AMSL
 Antenna Height Above Average Terrain 138.7 meters
 Effective Radiated Power 7.9 kW (8.98 dBk) Max

North Latitude: 36° 09' 00.7"

West Longitude: 95° 59' 25.1"

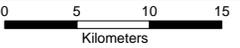
(NAD-27)



NORMALLY PROTECTED CONTOUR

Mays OK

EXHIBIT E-3
 NORMALLY PROTECTED CONTOUR OF THE PROPOSED DIGITAL OPERATION OF
KUTU-CA, TULSA, OKLAHOMA
 CHANNEL 25 7.9 kW ERP (DA) 355.9 METERS RCAMS
 JANUARY 2011
 COHEN, DIPPELL AND EVERIST, P.C. CONSULTING ENGINEERS



CREATED WITH MAPTITUDE(R) GIS FOR WINDOWS FROM CALIPER CORPORATION.

COHEN, DIPPELL AND EVERIST, P.C.

TABLE II
LONGLEY-RICE INTERFERENCE
FOR THE OPERATION FOR
KUTU-CA, TULSA, OKLAHOMA
CHANNEL 25 7.9 KW ERP 355.9 METERS RCAMSL
JANUARY 2011

<u>Channel</u>	<u>Call</u>	<u>City/State</u>	<u>Dist(km)</u>	<u>Status</u>	<u>FCC File No.</u>	<u>Result</u>
21	K21DF	STILLWATER OK	108.4	LIC	BLTT-19940616IH	0.00%
24	K24JC-D	SPRINGDALE AR	161.8	CP	BNPDTL-20090825BUF	0.00%
24	KFSM-TV	VAN BUREN AR	165.5	CP	BDRTCDT-20100726AIS	0.00%
24	KJOM-LP	ASBURY MO	188	LIC	BLTTL-20060109ABS	0.00%
24	KOKH-DT	OKLAHOMA CITY OK	150.6	PLN	DTVPLN-DTVP0547	No interference
24	KOKH-TV	OKLAHOMA CITY OK	150.6	LIC	BLCDDT-20041207ACV	No interference
25	NEW	FAYETTEVILLE AR	173.8	APP	BNPDTL-20100205AAL	0.00%
25	K25DS	JUNCTION CITY KS	327.7	LIC	BLTT-19970814JB	No interference
25	NEW	SALINA KS	339.8	APP	BNPDTL-20100930ARK	No interference
25	K25KG-D	TOPEKA KS	313.5	CP	BDCCDTL-20070510ACJ	No interference
25	NEW	TOPEKA KS	345.7	APP	BNPDTL-20100813BHE	0.00%
25	K25BD	BRANSON MO	251.8	LIC	BLTTL-19880204IQ	No interference
25	K25BD	BRANSON MO	251.9	CP	BPTTL-20091019AAQ	No interference
25	K25BD	BRANSON MO	251.8	CP	BDFCDTL-20091026AAD	No interference
25	KOZJ	JOPLIN MO	165.6	LIC	BLEDT-20060620ABP	0.10%
25	KOZJ-DT	JOPLIN MO	165.6	PLN	DTVPLN-DTVP0571	No interference
25	KCDN-LD	KANSAS CITY MO	344.7	CP	BDCCDTL-20070514AQA	No interference
25	K25JO-D	ALTUS OK	348.1	LIC	BLDTT-20100709AKD	No interference
25	K25LQ-D	ELK CITY OK	308.6	LIC	BLDTT-20101008ABZ	No interference
25	K25IC	LAWTON OK	285.6	CP	BPTTL-20070410ADR	No interference
25	K25IC	LAWTON OK	279.8	LIC	BLTTL-20070212ACG	No interference
25	K25IC	LAWTON OK	285.6	CP	BDFCDTL-20100202ABP	No interference
25	K25JQ-D	MAY, ETC. OK	340.5	LIC	BLDTT-20101008ABM	0.00%
25	K25GJ	MUSKOGEE OK	79.5	LIC	BLTT-20051206ADA	0.08%
25	KGCT-CD	NOWATA OK	68.9	LIC	BLDTA-20091222AAA	No interference
25	NEW	PONCA CITY OK	150.4	APP	BNPDTL-20100216AAZ	No interference
25	NEW	VIAN OK	124.7	APP	BNPDTL-20100504ALY	No interference
25	K25FW	CORSICANA TX	405.9	LIC	BLTTL-20000320AAR	0.00%
25	K25FW	DALLAS TX	405.9	CP MO	BMPDTL-20100421ACC	0.00%
25	NEW	MOUNT VERNON TX	348.5	APP	BMJADTL-20100521ACE	No interference

COHEN, DIPPELL AND EVERIST, P.C.

TABLE II
LONGLEY-RICE INTERFERENCE
FOR THE OPERATION FOR
KUTU-CA, TULSA, OKLAHOMA
CHANNEL 25 7.9 KW ERP 355.9 METERS RCAMSL
JANUARY 2011

<u>Channel</u>	<u>Call</u>	<u>City/State</u>	<u>Dist(km)</u>	<u>Status</u>	<u>FCC File No.</u>	<u>Result</u>
26	DK55HU	FORT SMITH AR	166.9	APP	BPTTL-20020819ABR	0.00%
26	NEW	JOPLIN MO	152.5	APP	BNPDTL-20100506ACY	No interference
26	KTEN	ADA OK	205.6	CP	BPCDT-19991007AAW	No interference
26	KTEN-DT	ADA OK	205.6	PLN	DTVPLN-DTVP0611	No interference
26	960621KE	TULSA OK	12.4	APP	BPET-19960621KE	0.15%
33	KKAF-CA	SILOAM SPRINGS AR	132.4	LIC	BLTTL-20000707AEK	0.00%
33	K33HW	PARSONS KS	137	LIC	BLTTL-20070618ACA	0.00%

Section III - Engineering (Digital)

TECHNICAL SPECIFICATIONS

Ensure that the specifications below are accurate. All items must be completed. The response "on file" is not acceptable.

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.

TECH BOX

1. Channel: _____

2. Antenna Location Coordinates: (NAD 27)

_____ ° _____ ' _____ " N S Latitude
 _____ ° _____ ' _____ " E W Longitude

3. Antenna Structure Registration Number: _____

Not applicable See Explanation in Exhibit No. FAA Notification Filed with FAA

4. Antenna Location Site Elevation Above Mean Sea Level: _____ meters

5. Overall Tower Height Above Ground Level: _____ meters

6. Height of Radiation Center Above Ground Level: _____ meters

7. Maximum Effective Radiated Power (ERP): _____ kW

8. Transmitter Output Power: _____ kW

9. a. Transmitting Antenna: Nondirectional Directional "Off-the-shelf" Directional composite

Manufacturer	Model
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b. Electrical Beam Tilt: _____ degrees Not applicable

c. Directional Antenna Relative Field Values:

Rotation: _____ ° No rotation N/A (Nondirectional)

Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value
0		60		120		180		240		300	
10		70		130		190		250		310	
20		80		140		200		260		320	
30		90		150		210		270		330	
40		100		160		220		280		340	
50		110		170		230		290		350	
Additional Azimuths											

10. Out-of-channel Emission Mask: Simple Stringent

CERTIFICATION

11. **Interference.** The proposed facility complies with all of the following applicable rule sections. 47 C.F.R. Sections 73.6016, 73.6017, 73.6018, 73.6019, 73.6020, 73.6027 and 74.794(b).

Yes No See Explanation in Exhibit No.

12. **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 RF compliance. An **Exhibit is required.**

Yes No See Explanation in Exhibit No.

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.

Exhibit No.
E

13. **Channels 52-59.** If the proposed channel is within channels 52-59, the applicant certifies compliance with the following requirements, as applicable:

Yes No See Explanation in Exhibit No.

- The applicant is applying for a digital companion channel for which no suitable channel from channel 2-51 is available.
- Pursuant to Section 74.786(d), the applicant has notified, within 30 days of filing this application, all commercial wireless licensees of the spectrum comprising the proposed TV channel and the first adjacent channels thereto, for which the proposed digital LPTV or TV translator antenna site lies inside the licensed geographic boundaries of the wireless licensees or within 75 miles and 50 miles, respectively, of the geographic boundaries of co-channel and adjacent-channel wireless licensees.

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 Ross J. Heide		Relationship to Applicant (e.g., Consulting Engineer) Consulting Engineer	
Signature <i>Ross J. Heide</i>		Date January 25, 2011	
Mailing Address Cohen, Dippell and Everist, P.C., 1420 N Street, NW, Suite One			
City Washington		State or Country (if foreign address) DC	ZIP Code 20005
Telephone Number (include area code) (202) 898-0111		E-Mail Address (if available) cde@attglobal.net	

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).