

ENGINEERING STATEMENT RE  
AUXILIARY ANTENNA LICENSE APPLICATION FOR  
KOTV-DT, TULSA, OKLAHOMA  
CHANNEL 45 869.6 KW ERP 504.8 METERS HAAT  
FACILITY ID NO. 35434

OCTOBER 2009

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:

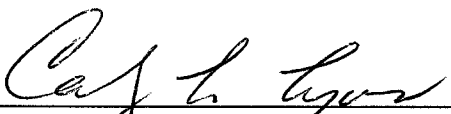
He is a graduate of the Massachusetts Institute of Technology in Operations Research and Management Science, a Registered Professional Engineer in the District of Columbia, and employed by Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1300 L Street, N.W., Suite 1100, 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 1<sup>st</sup> day of October, 2009.

  
\_\_\_\_\_  
Notary Public

My Commission Expires: 2/28/2013



Introduction

This engineering statement has been prepared on behalf of Griffin Tulsa I Licensing, L.L.C. ("KOTV-DT") permittee of station KOTV-DT, Tulsa, Oklahoma, to request a license for auxiliary DTV antenna operation. Station KOTV-DT has been allotted Channel 45 (656-662 MHz) for its permanent, post-transition digital TV operation. KOTV-DT has been authorized to construct and has filed an application to license its main facility (FCC File No. BLCDDT-20090625ACJ) with 840 kW non-directional effective radiated power ("ERP") and 556.2 meters height above average terrain ("HAAT"). KOTV-TV has received a construction permit for auxiliary operation (FCC File No. BXPCDDT-20090710ART) for DTV Channel 45 with 869.6 kW non-directional ERP at 504.8 meters HAAT. The auxiliary antenna has been installed according to CP parameters and is ready to initiate operation under the program test authority sought herein.

Antenna Site  
(Unchanged)

There is no change in the proposed antenna site. The installed DTV Channel 45 auxiliary antenna is side-mounted on the tower with its center of radiation ("C/R") at 481.4 meters above ground level. The KOTV-DT antenna site is located at 101<sup>st</sup> Street and 273<sup>rd</sup> Avenue in Oneta, Oklahoma. The antenna structure registration number is 1011355.

The geographic coordinates of the existing tower are as follows:

North Latitude: 36° 01' 15"

West Longitude: 95° 40' 32"

NAD-27

The following data shows the pertinent information concerning the proposed auxiliary operation.

Antenna Data

Antenna Type	Dielectric, Type TFU-28DSC-R O4 (or equivalent) with a 0.75° electrical beam tilt
Transmission Line	Dielectric, DigitLine, 7-3/16", 75 ohm
Line Length	506 meters (1660 feet) Line Loss for Ch.45 (0.109 dB/100 feet)

Power Data

Transmitter Output Power	54.9 kW	17.39 dBk
Transmission Line Efficiency/Loss	66.0%	-1.80 dB
Antenna Input Power	36.23 kW	15.59 dBk
Antenna Gain (Max)	24.0	13.80 dB
Effective Radiated Power	869.6 kW	29.39 dBk

Elevation Data

Vertical dimension of Channel 45 auxiliary side-mounted antenna	14.3 meters 46.8 feet
Overall height above ground of the existing antenna structure (including beacon and lightning protection)	560.5 meters 1839 feet
Center of radiation of Channel 45 auxiliary antenna above ground	481.4 meters 1579.4 feet
Elevation of site above mean sea level	216.4 meters 710 feet
Center of radiation of Channel 45 auxiliary antenna above mean sea level	697.8 meters 2289.4 feet
Overall height above mean sea level of existing tower (including beacon)	776.9 meters 2549 feet
Antenna height above average terrain	504.8 meters 1656.2 feet

### Section III - 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. Channel _____			
2. Operating Constants			
Transmitter power output (average power at input to transmission line, after any filter attached to the transmitter, if used)		Transmission line power loss	
kW		dBk	
dB		dB	
Antenna Input power	Maximum antenna power gain	Effective radiated power (average power)	
dBk	dB	kW	dBk
3. Antenna Data			
Manufacturer		Model	

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

#### CERTIFICATION

4. <b>Main Studio Location.</b> The main studio location complies with 47 C.F.R. Section 73.1125.	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Explanation in Exhibit No.
5. <b>Constructed Facility.</b> The facility was constructed as authorized in the underlying construction permit or complies with 47 C.F.R. Section 73.1690.	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Explanation in Exhibit No.
6. <b>Special Operating Conditions.</b> The facility was constructed in compliance with all special operating conditions, terms, and obligations described in the construction permit.	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Explanation in Exhibit No.
<b>An exhibit may be required.</b> Review the underlying construction permit.		Exhibit No.
7. <b>Transmitter.</b> The transmitter complies with 47 C.F.R. Section 73.1660.	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Explanation in Exhibit No.

**PREPARER'S CERTIFICATION ON PAGE 6 MUST BE COMPLETED AND SIGNED.**

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**APPLICATION FILED PURSUANT TO 47 C.F.R. SECTIONS 73.1675(c) or 73.1690(c).**

Only applicants filing this application pursuant to 47 C.F.R. Sections 73.1675(c) or 73.1690(c) must complete the following

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8. **Changing transmitter power output.** Is this application being filed to authorize a change in transmitter power output caused by the replacement of an omnidirectional antenna with another omnidirectional antenna or an alteration of the transmission line system? See 47 C.F.R. Sections 73.1690(c)(1) and (c)(10). ☐ Yes ☐ No

9. **Replacing a directional antenna.** Is this application being filed pursuant to 47 C.F.R. Section 73.1690(c)(3) to replace a directional antenna with another directional antenna? ☐ Yes ☐ No

If "Yes" to the above, the applicant certifies the following:

- a. **Pattern of Directional Antenna.** The proposed theoretical antenna pattern complies with 47 C.F.R. Section 73.1690(c)(3). **Exhibit is required.** ☐ Yes ☐ No 

See Explanation in Exhibit No.

Exhibit No.

10. **Use a formerly licensed main facility as an auxiliary facility.** Is this application being filed pursuant to 47 C.F.R. Section 73.1675(c)(1) to request authorization to use a formerly licensed main facility as an auxiliary facility and/or change the ERP of the proposed auxiliary facility? ☐ Yes ☐ No

If "Yes" to the above, the applicant certifies the following:

- a. **Auxiliary antenna service area.** The proposed auxiliary facility complies with 47 C.F.R. Section 73.1675(a). **Exhibit is required.** ☐ Yes ☐ No 

See Explanation in Exhibit No.

- b. **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). ☐ 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.

11. **Change the license status.** Is this application being filed pursuant to 47 C.F.R. Section 73.1690(c)(9) to change the license status from commercial to noncommercial or from noncommercial to commercial? ☐ Yes ☐ No

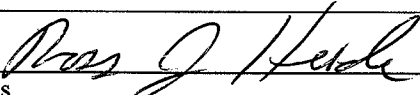
Exhibit No.

If "Yes" to the above, submit an exhibit providing full particulars. For applications changing license status from commercial to noncommercial, include Section II of FCC Form 340 as an exhibit to this application.

**PREPARER'S CERTIFICATION ON PAGE 6 MUST BE COMPLETED AND SIGNED.**

**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 		Date October 1, 2009	
Mailing Address Cohen, Dippell and Everist, P.C., 1300 L Street, NW, Suite 1100			
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).