Comprehensive Technical Exhibit

Application for Construction Permit
Request for Digital Flash-Cut
KGPT-CA – Wichita, Kansas
Great Plains Television Network, L.L.C.
October, 2008

Application for Construction Permit

The following engineering statement and attached exhibits have been prepared for **Great Plains Television Network, L.L.C.** ("Great Plains"), licensee of Class A television station KGPT-CA at Wichita, Kansas, and are in support of their application for construction permit to modify that facility.[1] This application seeks authority from the Commission to flash-cut KGPT-CA to digital operations while increasing its coverage area over that currently authorized.

KGPT currently operates on television channel 49+ as a Class A analog facility. The licensed maximum effective radiated power is 4.8 kW utilizing a directional antenna at a center of radiation of 475.9 meters above mean sea level.[2] Although KGPT is currently operating pursuant to the terms of its license, it has an outstanding construction permit to change antenna type and increase the maximum effective radiated power.[3]

Under that authorization, the electrical beamtilt utilized would increase to 3.5 degrees resulting in the maximum effective radiated power increasing to 16.6 kW while maintaining 4.8 kW towards the radio horizon. The current SWR antenna would be replaced with a PSI model in order to accommodate the changes requested under that authorization. While the use of that antenna would result in somewhat enhanced real world coverage, the excessive electrical beamtilt was not desirable. At the time that that application was submitted to the Commission, the freeze on Class A television station modifications was still in effect.

[1] The Facility ID for KGPT-CA at Wichita, Kansas is 35255.
[2] See engineering parameters under FCC File No. BLTTA-20040621AAX.
[3] See BPTTA-20070118AAT.

With the lifting of the freeze on Class A modifications and the rapid approach of the sunset of full power NTSC operations, Great Plains has re-evaluated its options and decided to pursue flash-cutting to digital operations at this time. Instead of changing to the PSI antenna proposed in the outstanding construction permit, Great Plains seeks to continue utilizing the existing SWR antenna. These changes combined with the resulting changes in the service area of KGPT-CA are in the public interest as they not only provide a better engineering solution to its coverage, but by changing to digital operations reduce the level of consumer confusion that potentially may still occur following the sunset of NTSC operations.

KGPT-CA therefore seeks to maintain the center of radiation at the current licensed values as well as continuing use of the SWR SW8 antenna. Great Plains will modify its existing 1 kW NTSC analog transmitter for operation as a 500 W DTV transmitter on channel 49. Since the transmission line loss is 1.6 dB and the antenna has a gain of 11.99 dB as indicated by the manufacturer, the resulting maximum effective radiated power proposed is 5.45 kW.

The changes proposed to KGPT-CA would not have an adverse effect to other proposed, existing, or authorized facilities in the region as KGPT-CA would comply with the applicable sections of the Commission's Rules regarding interference. Exhibits E-1 and E-2 illustrate and tabulate the results of a Longley-Rice based interference study. As these two exhibits demonstrate, the proposed digital facility is not predicted to cause interference to any other existing, proposed or authorized facility in the region.[4]

[4] Full power NTSC facilities were considered in this study as KGPT-CA is expected to commence digital operations ahead of February 17, 2009.

The requirements of Section 73.6029, which refer to Section 73.1030 would also be met by the proposed facility. The proposed facility is not in proximity to any of the radio astronomy or research facilities described in that section. In addition, the proposed facility is not located in proximity to any of the FCC monitoring stations listed in Section 0.121 of the Commission's Rules.

The proposed facility would not result in a significant environmental impact. The modifications to the existing KGPT-CA facility only involve modifications to the transmitter as previously discussed. There will be no additional excavation or construction external to the transmitter building. As a result, the existing environmental impact from the transmitter site will not be increased.

In addition, the increase in the maximum effective radiated power will not constitute an RF exposure hazard to persons. The predicted power density at ground level assuming a worst case scenario is given by the following equation assuming isotropic radiation.

$$S = \frac{33.4(E_{Rel})^2(ERP)}{h^2}$$

Since it is assumed under the worst case scenario that isotropic radiation exists from the antenna, a value of 1.0 will be utilized for the relative field variable. The ERP will be set to 5,450 corresponding to the maximum effective radiated power. The denominator term will be set to 77, which allows for the center of radiation minus average human height. The resulting calculated maximum power density at ground level is 30.7 $\mu W/cm^2$.

Under the uncontrolled environment of the applicable safety standard, the maximum permissible power density is a function of frequency, and is equivalent to 453 mW/cm2. Since the predicted worst case scenario results in a calculated power density considerably lower than this value, it is evident that the proposed facility will not result in harmful exposure to the general public.

The applicant certifies that it will coordinate with all present and future users of the tower to ensure that workers have access to the site are not exposed to levels of non-ionizing radiation that may exceed the applicable safety standards. Such coordination will include a reduction in transmitter power or cessation of operation during maintenance periods.

The structure utilized by KGPT-CA has been registered with the Commission. The ASRN assigned to this tower is 1033573. No change in the height or location of this registered structure is proposed or has been made.

Affidavit

The preceding statement and attached exhibits have been prepared by me, or under my direction, and are true and accurate to the best of my belief and knowledge.

Above signature is digitized copy of actual signature
License Expires November 30, 2009

Jeremy D. Ruck, PE
October 10, 2008

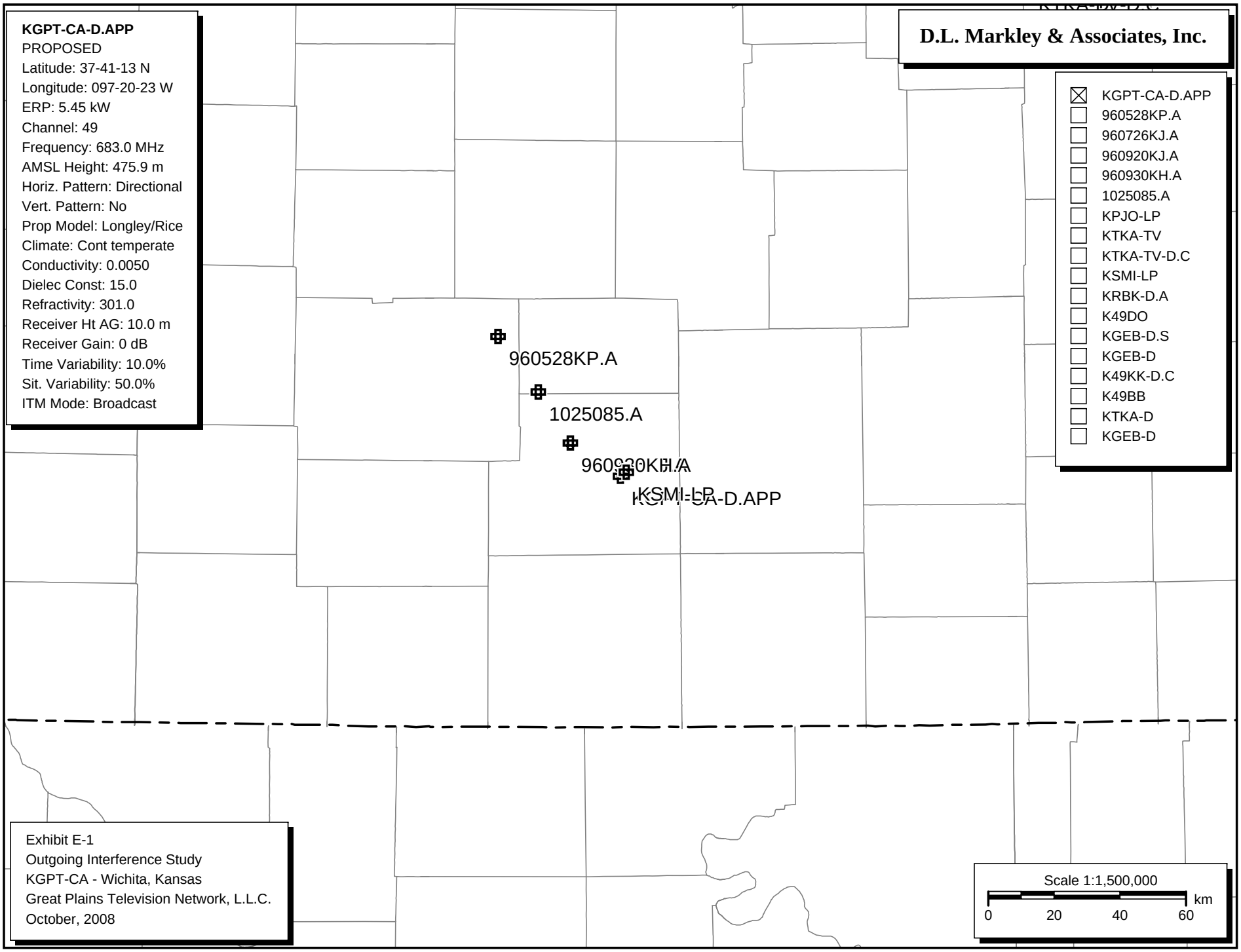
KGPT-CA-D.APP
PROPOSED
Latitude: 37-41-13 N
Longitude: 097-20-23 W
ERP: 5.45 kW
Channel: 49
Frequency: 683.0 MHz
AMSL Height: 475.9 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: Longley/Rice
Climate: Cont temperate
Conductivity: 0.0050
Dielec Const: 15.0
Refractivity: 301.0
Receiver Ht AG: 10.0 m
Receiver Gain: 0 dB
Time Variability: 10.0%
Sit. Variability: 50.0%
ITM Mode: Broadcast
D.L. Markley & Associates, Inc.
KGPT-CA-D.APP
960528KP.A
960726KJ.A
960920KJ.A
960930KH.A
1025085.A
KPJO-LP
KTKA-TV
KTKA-TV-D.C
KSMI-LP
KRBK-D.A
K49DO
KGEB-D.S
KGEB-D
K49KK-D.C
K49BB
KTKA-D
KGEB-D
960528KP.A
1025085.A
960930KH.A
KSMI-LP
KGPT-CA-D.APP
Exhibit E-1
Outgoing Interference Study
KGPT-CA - Wichita, Kansas
Great Plains Television Network, L.L.C.
October, 2008
Scale 1:1,500,000
0
20
40
60
km

Exhibit E-2
Outgoing Interference Population Report
Based on Proposed Digital Facilities

KGPT-CA-D.APP (49) Wichita, KS - PROPOSED
Broadcast Type: Digital Service: F [Simple Emission Mask]
Lat: 37-41-13 N Lng: 097-20-23 W ERP: 5.45 kW AMSL: 475.9 m
TV Outgoing Interference Study
Signal Resolution: 2.0 km
Consider NTSC Taboo: Yes
KWX error points are considered to
     be interference free coverage.
Default # of radials computed for contours: 72
Contours calculated using 8 radial HAAT.
LR Profile Spacing Increment: 1.0 km
Masked interference points are being
     counted as interference.
Pop Centroid DB: 2000 US Census (SF1)

Study Date: 10/10/2008
TV Database Date: 10/10/2008

Primary Terrain: V-Soft 3 Second US Terrain
Secondary Terrain: V-Soft 30 Second US Database

Population Database: 2000 US Census (SF1)

Stations Considered:

Call Letters	City	State	Dist	Bear
960528KP.A (42Z)	Wichita	KS	56.3	318.8
960726KJ.A (42Z)	Wichita	KS	18.2	303.7
960920KJ.A (42Z)	Wichita	KS	18.1	303.9
960930KH.A (42Z)	Wichita	KS	18.2	303.7
1025085.A (46Z)	Derby	KS	35.7	315.8
KPJO-LP (49-)	Pittsburg	KS	241.0	102.4
KTKA-TV (49Z)	Topeka	KS	193.8	39.5
KTKA-TV-D.C (49)	Topeka	KS	193.8	39.5
KSMI-LP (51N)	Wichita	KS	2.2	55.4
KRBK-D.A (49)	Osage Beach	MO	358.3	88.1
K49DO (49N)	Seiling	OK	228.0	219.6
KGEB-D.S (49)	Tulsa	OK	220.4	145.5
KGEB-D (49)	Tulsa	OK	220.4	145.5
K49KK-D.C (49)	Elk City	OK	310.9	214.3
K49BB (49N)	Follett	TX	298.4	241.6
KTKA-D (49)	TOPEKA	KS	193.8	39.5
KGEB-D (49)	TULSA	OK	220.4	145.5

Call	Area	HUnits	Contour	Masked Ix	Unmasked Ix	%
960528KP.A (42Z)	0.0	0	690,488	0	0	0.0
960726KJ.A (42Z)	0.0	0	685,258	0	0	0.0
960920KJ.A (42Z)	0.0	0	670,953	0	0	0.0
960930KH.A (42Z)	0.0	0	676,510	0	0	0.0
1025085.A (46Z)	0.0	0	698,670	0	0	0.0
KPJO-LP (49-)	0.0	0	37,166	0	0	0.0
KTKA-TV (49Z)	0.0	0	493,914	0	0	0.0
KTKA-TV-D.C (49)	0.0	0	521,072	0	0	0.0
KSMI-LP (51N)	0.0	0	376,076	0	0	0.0
KRBK-D.A (49)	0.0	0	571,692	0	0	0.0
K49DO (49N)	0.0	0	1,688	0	0	0.0
KGEB-D.S (49)	0.0	0	839,786	0	0	0.0
KGEB-D (49)	0.0	0	892,176	0	0	0.0
K49KK-D.C (49)	0.0	0	31,810	0	0	0.0
K49BB (49N)	0.0	0	53	0	0	0.0
KTKA-D (49)	0.0	0	517,621	0	0	0.0
KGEB-D (49)	0.0	0	891,945	0	0	0.0

	Housing Units	Population