



## **ENGINEERING STATEMENT**

**IN SUPPORT OF**

**APPLICATION FOR MINOR CHANGE TO CONSTRUCTION PERMIT**

**KMCI-TV**

**LAWRENCE, KS**

### **Background**

Scripps Broadcasting Holdings LLC (Scripps) is the licensee of KMCI which has been authorized to operate its post-incentive auction facility on Ch. 25 (0000026812) at Lawrence, KS with an ERP of 685 kW at an HAAT of 306.0m. The tower is located at the following coordinates:

38° 58' 42.0'' N (NAD 83)  
94° 32' 01.8'' W

Scripps now wishes to “maximize” the KMCI post-incentive auction facility ERP from 685 kW to 1000 kW; all other facility parameters will remain the same.

#### **PROVIDING COMMUNICATION SYSTEMS ENGINEERING**

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## **Antenna System and Tower**

KMCI currently shares a top-mounted coaxial slot antenna with KSHB, a co-owned station. Due to the difference between the KMCI and KSHB assigned post-repack channels (Ch. 25 and Ch. 36 respectively) and the type of antenna needed for both stations to continue operating from a shared antenna, Scripps has decided that it will move KMCI to a new side-mounted omni-directional antenna for the Ch. 25 facility (Dielectric TFU-30DSC/VP-R 04)<sup>1/</sup>.

The new Ch. 25 antenna will be elliptically polarized. The vertically polarized radiation will not exceed the horizontally polarized component in any azimuth.

## **Coverage**

The entire principal community of Lawrence, KS is well within the predicted F(50,90) 48 dBu contour based on the proposed omni-directional 1000 kW ERP.

## **Interference**

An interference check study was run using the FCC TVStudy software (Version 2.2.3) for the proposed KMCI post-repack maximized facility parameters. The summary results of the study show that the proposed facility is not predicted to cause more than 0.5% new interference to any other surrounding co-channel or adjacent channel post-repack facilities (see attached study results).

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<sup>1/</sup> The replacement of the top-mounted antenna (for the KSHB channel change) will result in a 0.8m reduction in the overall height of the structure. Scripps plans to notify the FAA of the reduction in structure height and update the ASR (#1234587) after construction of the new KSHB facility is complete.



## **Environmental/RFR**

This report addresses only the conditions specified in 47CFR1.1307 that deal with Radio Frequency Radiation. Any other non-RFR conditions that might require the preparation of an EA are beyond the scope of this report; since the structure is existing and registered, such conditions should not be an issue requiring further consideration.

The location of the proposed post-incentive auction facility is a multi-user site and it is assumed that the site is currently “in compliance” with FCC guidelines for human exposure to RFR (as defined in OET-65). The worst case ground level RFR contributed to the site by this proposal in public areas is calculated to be  $0.007295 \text{ mW/cm}^2$ , which is less than 5% of the MPE for public exposure ( $0.359333 \text{ mW/cm}^2$ ) at Ch. 25 (536-542 MHz). The contribution to the overall RFR from the proposed facility is negligible and, therefore, the site will remain “in compliance” with FCC guidelines.

Scripps agrees to comply with the Commission’s requirements regarding power adjustments or cessation of operation as may be necessary to ensure a compliant environment for worker access. Workers will be trained on RFR issues and encouraged to wear personal RFR monitors when on the structure. The tower base is enclosed by a locked security fence and appropriate signage warning of potential RFR hazards is posted.

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### **Certification**

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.

A handwritten signature in black ink, appearing to read "B. Pidek", is written over a horizontal line.

Benjamin L. Pidek, P.E.  
October 26, 2017

Attached:  
KMCI TVStudy Interference Results

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## KMCI Maximization TVStudy Summary Results

Study created: 2017.10.12 09:10:05

Study build station data: LMS TV 2017-10-11 (8)

Proposal: KMCI-TV D25 DT CP LAWRENCE, KS  
File number: KMCI-CP-1000k  
Facility ID: 42636  
Station data: User record  
Record ID: 379  
Country: U.S.  
Zone: II

Stations affected by proposal:

Call	Chan	Svc	Status	City, State	File Number	Distance
KCTV	D24	DT	LIC	KANSAS CITY, MO	BLCDT20110405ABD	11.1 km
KXNW	D25	DT	CP	EUREKA SPRINGS, AR	BLANK0000025683	289.8
KXNW	D25	DT	BL	EUREKA SPRINGS, AR	DTVBL81593	289.8

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D25  
Latitude: 38 58 42.00 N (NAD83)  
Longitude: 94 32 1.80 W  
Height AMSL: 592.7 m  
HAAT: 306.0 m  
Peak ERP: 1000 kW  
Antenna: Omnidirectional  
Elev Pattn: Generic  
Elec Tilt: 0.75

39.9 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	1000 kW	326.4 m	102.0 km
45.0	1000	298.3	99.0
90.0	1000	310.8	100.4
135.0	1000	299.6	99.2
180.0	1000	290.2	98.1
225.0	1000	310.2	100.3
270.0	1000	290.7	98.1
315.0	1000	318.3	101.2

\*\*Proposal service area extends beyond baseline plus 1.0%  
Proposal service area population is more than 95.0% of baseline

Distance to Canadian border: 1019.5 km

Distance to Mexican border: 1200.8 km

Conditions at FCC monitoring station: Grand Island NE  
Bearing: 304.3 degrees Distance: 396.0 km

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Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
Bearing: 281.3 degrees Distance: 924.5 km

Study cell size: 2.00 km  
Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%  
Maximum new IX to LPTV: 2.00%

No IX check failures found.

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