



## **ENGINEERING STATEMENT**

OF

**JOHN F.X. BROWNE, P.E.**

IN SUPPORT OF

**APPLICATION FOR CONSTRUCTION PERMIT**

**POST-TRANSITION DTV FACILITY**

**KCCI-DT**

**DES MOINES, IA**

### **Background**

Hearst-Argyle Television, Inc (Hearst) is the licensee of KCCI, located at Des Moines, IA, which is presently authorized to operate its digital facility on Channel 31 with the following parameters:

#### **Pre-transition Facility (Ch. 31)**

Coordinates: 41° 48' 35" N (NAD27)  
93° 37' 16" W  
ERP: 1000 kW (omni)  
HAAT: 566m

KCCI elected Channel 8 (its analog channel) and has been allotted the post-transition DTV operation Appendix B facility parameters listed below:

#### **Post-transition Facility (Ch. 8)**

Coordinates: 41° 48' 35" N (NAD27)  
93° 37' 16" W  
ERP: 29.4 kW (DA)  
HAAT: 566m



### **Antenna System and Tower**

The existing KCCI analog antenna, a RCA TW-15A8P-SP, will be re-used for the KCCI post-transition DTV operation on Channel 8 and no modification of the tower will be required. The antenna is installed on a tower (ASR#1016799) approximately 23 km north of Des Moines, IA. The tower has an overall height of 905.3m AMSL (with appurtenances) and the antenna has a center of radiation of 887.7m AMSL (with a calculated HAAT of 597m) which is approximately 32m higher than the radiation center of the Appendix B facility; therefore, the ERP will be reduced from 29.4 kW (as specified in Appendix B) to 23 kW so that the contour of the proposed post-transition facility does not exceed the contour of its Appendix B facility in any direction. Also, KCCI has been assigned a slightly directional pattern (CDBS antenna ID#74490 which has a lowest relative field value of 0.983) in the DTV transition process due to the translation of its originally allotted Channel 31 digital parameters to its elected final DTV Channel 8. As noted above, KCCI plans to use its existing analog omni-directional antenna for post-transition DTV operation and the proposed lower power will also prevent the KCCI facility from exceeding the Appendix B facility noise-limited contour due to the difference in antenna patterns.

### **Coverage**

The entire principal community of Des Moines, IA is well within the predicted F(50,90) 43 dBu contour based on the proposed omni-directional 23 kW ERP.

### **Interference**

KCCI is not seeking to expand its service contour beyond the contour of its Appendix B facility in any direction; therefore, no interference analysis is required to be submitted with this application. Table 1, attached hereto, compares the distances to the noise limited contour for the KCCI Appendix B facility vs. the proposed facility.



### **Environmental/RFR**

The proposed construction does not require preparation of an Environmental Assessment as it does not involve any of the factors listed in Section 1.1306.

The additional ground level RFR contributed to the site by this proposal in public areas is calculated to be 0.00009 mW/cm<sup>2</sup> which is less than 5% of the MPE for public exposure (0.20 mW/cm<sup>2</sup>) at the proposed frequency and, therefore, the proposal is excluded from further consideration.

Hearst 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 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 RFR hazards is posted.

### **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 'John F.X. Browne', written over a horizontal line.

John F.X. Browne, P.E.  
March 11, 2008

**Table 1**  
**KCCI-DT**

**Appendix B Facility vs. Proposed Facility Contour Distance Table**

<u>Degrees</u>	<u>8th R &amp; O Appendix B Facility Distance (miles)</u>	<u>Proposed Facility Distance (miles)</u>	<u>Difference (miles)</u>
0	73.88	73.70	-0.19
10	74.13	74.01	-0.12
20	74.44	74.32	-0.12
30	74.69	74.63	-0.06
40	74.63	74.57	-0.06
50	74.75	74.69	-0.06
60	74.82	74.75	-0.06
70	75.00	74.94	-0.06
80	75.07	75.00	-0.06
90	75.07	75.00	-0.06
100	74.94	74.88	-0.06
110	74.44	74.38	-0.06
120	74.20	74.13	-0.06
130	74.32	74.26	-0.06
140	74.38	74.32	-0.06
150	74.88	74.75	-0.12
160	75.07	74.88	-0.19
170	74.38	74.32	-0.06
180	74.69	74.63	-0.06
190	74.94	74.82	-0.12
200	74.94	74.88	-0.06
210	74.94	74.88	-0.06
220	75.07	75.00	-0.06
230	75.13	75.07	-0.06
240	75.07	75.00	-0.06
250	74.75	74.69	-0.06
260	74.82	74.75	-0.06
270	74.69	74.57	-0.12
280	74.44	74.38	-0.06
290	74.13	74.01	-0.12
300	74.01	73.88	-0.12
310	73.82	73.70	-0.12
320	73.70	73.51	-0.19
330	73.70	73.51	-0.19
340	73.70	73.51	-0.19
350	73.76	73.64	-0.12