



**ENGINEERING STATEMENT**  
**OF**  
**BENJAMIN L. PIDEK, P.E.**  
**IN SUPPORT OF**  
**APPLICATION FOR DIGITAL COMPANION CHANNEL**  
**FOR**  
**K20GU**  
**RUIDOSO, NM**

**Background**

KOAT Hearst-Argyle Television, Inc. (KOAT) is the licensee of television translator station K20GU, Ch. 20 (BLTT-20040723ADO, Facility ID 53900) at Ruidoso, NM. In April 2011, KOAT filed an application for a Construction Permit to "flashcut" K20GU to digital operation on Ch. 20. For over three years, KOAT has been awaiting Mexican coordination of the K20GU flashcut application<sup>1/</sup>.

On July 30, 2014, KOAT received a letter from the Commission indicating that the Mexican Department of Communications would object to the grant of the proposed K20GU digital facility due to the predicted interference it would cause Ch. 20 de Ciudad Juarez, Chih.

---

<sup>1/</sup> KOAT has been operating K20GU as a digital facility under Special Temporary Authority (BSTA20120323AGH) from the Commission since March 2012.

**PROVIDING COMMUNICATION  
SYSTEMS ENGINEERING**

CORPORATE OFFICE  
1475 NORTH 200 WEST  
POST OFFICE BOX 311  
NEPHI, UT 84648

TEL: (435) 623-8601  
FAX: (435) 623-8610

REGIONAL OFFICE  
1172 SOUTH M-13  
LENNON, MI 48449

TEL: (810)-621-5656  
FAX: (810)-621-4146



Given the result of coordination with Mexico, the options for flashcutting K20GU on its existing analog Ch. 20 appear to be limited; therefore, KOAT has explored alternative channels that could be used for digital operation of the K20GU facility and found Ch. 31 to be suitable. With the current Commission "freeze" in place on the filing of LPTV displacement applications (Public Notice DA 14-808), KOAT is seeking a digital companion channel facility for K20GU on Ch. 31 rather than requesting a waiver of the "freeze".

KOAT respectfully requests that the Commission allow it to continue operating K20GU as a digital facility on Ch. 20 under its current Special Temporary Authority until it can reconfigure the existing digital facility for operation on Ch. 31. [Note: KOAT plans to immediately file for an STA for digital operation Ch. 31 after its application for companion channel has been filed; however, it will take some time to acquire the equipment necessary for this operation.]

### **Site and Tower**

The site will remain the same as that of the licensed analog facility as will the height of the antenna radiation center. The overall height of the tower (57.9m AGL) is less than that required for notification to the FAA and, further, the tower passes the TOWAIR program.

### **Antenna and Power**

KOAT is proposing to use a Scala SL-8 omni-directional antenna for the facility with a horizontally polarized ERP of 0.1 kW (no vertical polarization component).

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

CORPORATE OFFICE  
1475 NORTH 200 WEST  
POST OFFICE BOX 311  
NEPHI, UT 84648

TEL: (435) 623-8601  
FAX: (435) 623-8610

REGIONAL OFFICE  
1172 SOUTH M-13  
LENNON, MI 48449

TEL: (810)-621-5656  
FAX: (810)-621-4146

## **Interference**

An interference study was conducted using the proposed parameters with software that emulates that used by the Commission. The results of the OET-69 analysis indicate that there are no domestic full-service DTV or Class A stations predicted to receive more than the allowable 0.5% new interference from the proposed K20GU digital companion channel facility on Ch. 31 and, also, there are no analog or digital LPTV or translator stations predicted to receive more than the allowable 2% interference.

## **Environmental/RFR**

This report addresses only the conditions specified in 47CFR1.1307 that deal with Radio Frequency Radiation (RFR). Any other non-RFR conditions that might require the preparation of an EA are beyond the scope of this report; however, since the structure is existing, such conditions should not be an issue requiring further consideration as there will be no increase in height or change in width of the tower structure.

The location of the proposed facility is a multi-user site on a mountain top. Calculations based on the parameters of the existing facilities located at the site show that it is possible that RFR levels at some ground level areas of the summit (within 100m of the base of the towers) may already exceed MPE limits for the general public without consideration for the additional RFR contributed by the proposed facility; however, the location is considered a “remote” area as access to the site is impeded by the rugged terrain and lack of roads, making it highly improbable that the general public can get near the site. Furthermore, the area within 300m of the towers is enclosed

### **PROVIDING COMMUNICATION SYSTEMS ENGINEERING**

CORPORATE OFFICE  
1475 NORTH 200 WEST  
POST OFFICE BOX 311  
NEPHI, UT 84648

TEL: (435) 623-8601  
FAX: (435) 623-8610

REGIONAL OFFICE  
1172 SOUTH M-13  
LENNON, MI 48449

TEL: (810)-621-5656  
FAX: (810)-621-4146

by a locked fence<sup>2/</sup> and appropriate signage warning of potential RFR hazards is posted. Therefore, it is assumed that the site is currently “in compliance” with FCC guidelines for human exposure to RFR (as defined in OET-65) and there is no significant effect on the environment with regard to exposure of the general public.

The maximum ground level RFR contributed by the proposed facility (assuming an extremely conservative relative field value of 1.0) is calculated to be 0.000262 mW/cm<sup>2</sup> which is less than 5% of the limit (0.38 mW/cm<sup>2</sup>) for maximum permissible exposure (MPE) in public areas<sup>3/</sup> at Ch. 31 (575 MHz). The site will therefore remain “in compliance” with FCC guidelines for human exposure to RFR.

KOAT 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.

### **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

---

<sup>2/</sup> The perimeter of the site not enclosed by the fence is access limited by the existence of a sheer rock cliff face (vertical drop off) making it highly improbable that access to the area will be gained from these directions.

<sup>3/</sup> Since the RFR contributed by proposed facility will be less than 5% of the MPE limit for public exposure, the proposed facility is not considered a significant contributor to the RFR on the site.

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

CORPORATE OFFICE  
1475 NORTH 200 WEST  
POST OFFICE BOX 311  
NEPHI, UT 84648

TEL: (435) 623-8601  
FAX: (435) 623-8610

REGIONAL OFFICE  
1172 SOUTH M-13  
LENNON, MI 48449

TEL: (810)-621-5656  
FAX: (810)-621-4146



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. L. Pidek", is written over a horizontal line.

Benjamin L. Pidek, P.E.  
August 26, 2014

**PROVIDING COMMUNICATION  
SYSTEMS ENGINEERING**

CORPORATE OFFICE  
1475 NORTH 200 WEST  
POST OFFICE BOX 311  
NEPHI, UT 84648

TEL: (435) 623-8601  
FAX: (435) 623-8610

REGIONAL OFFICE  
1172 SOUTH M-13  
LENNON, MI 48449

TEL: (810)-621-5656  
FAX: (810)-621-4146