

**ENGINEERING STATEMENT**  
**of**  
**John F.X. Browne, P.E.**  
**in support of**  
**MINOR MODIFICATION OF CONSTRUCTION PERMIT**  
**KSWK-DT**  
**LAKIN, KS**

**Background**

Smoky Hill Public TV (SHPTV) is the licensee of KSWK-TV CH 3 in Lakin, KS (facility id #60683). It was granted a construction permit (BPEDT-20000427ACQ) for operation on DTV CH 23, the allotment for Lakin, KS. SHPTV petitioned the Commission to substitute CH 8 for CH 23 which the Commission did in RM-10349. This application proposes modification of the construction permit to specify operation on Channel 8.

**SITE**

The proposed site is the same as authorized for KSWK-TV and authorized in the outstanding construction permit.

**Antenna & Tower**

The tower is the same as the one being used by KSWK-TV. The proposed antenna will be side mounted and will not increase the overall height of the structure. Therefore neither

notice to the FAA nor change in the Antenna Structure Registration is needed. The tower is registered (ASR# 1032647).

The proposed antenna is a Dielectric THA-C3-5/15-1. This directional antenna has a cardioid pattern and the main lobes of that antenna pattern will be oriented toward the Southwest. The Principal City of Lakin, KS will be entirely encompassed by the 43 dBu contour produced by that pattern at 100 kW ERP.

The proposed antenna azimuth and elevation patterns and tabulations are included as Engineering Exhibit 1a-d. A relative field/ dBk table is included as table 1.

### **Interference**

An interference study was performed with software that emulates that used by the Commission. The results of the study show that no station would receive 2% or more interference or an aggregate of more than 10% interference, thus meeting the Commission's de minimis standards with the proposed parameters. In addition, the study considered impermissible interference to any Class "A" station and none was identified.

### **Environmental/ RFR Issues**

The proposed construction will not trigger any of the conditions that require preparation of an Environmental Assessment.

The ground level RFR from the proposed facility is calculated to be  $0.00157 \text{ mW/cm}^2$  or less than 1% of the MPE for public access ( $0.2 \text{ mW/cm}^2$ ). There is the possibility of exposure to levels of RFR higher than the MPE for occupational (controlled) areas for workers on the tower. Therefore, KSWK agrees to lower the power of the transmitter as needed to provide a compliant environment for workers. Workers will also be encouraged to wear personal RFR monitors when on the tower. Signs warning of the RFR hazards are posted at the tower base and the tower base is enclosed by a locked fence to prevent access by unauthorized persons.

**Certification**

This statement was prepared by me or under my direction. All assertions contained in the statement are true of my own personal knowledge except where otherwise indicated and these latter assertions are based on information from sources known to be reliable and are believed to be true.

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John F.X. Browne, P.E.  
February 28, 1999