Meintel, Sgrignoli, & Wallace

Amended Engineering Statement

Displacement of K47KI-D
Proposed Channel 20 at Duncan, Oklahoma
September 5, 2017

This Amended Engineering Statement has been prepared on behalf of the Oklahoma Educational Television Authority (OETA), licensee of Digital TV Translator Station K47KI-D at Duncan, Oklahoma. The statement was prepared in support of a Displacement Channel Window Filing as well as a Legal STA seeking interim operations as herein proposed.

The translator currently operates on channel 47, which is outside of the new post-incentive auction core television spectrum. The licensee has received a 120-day Commencement of Operation letter from T-Mobile, a winning bidder in the FCC incentive auction. T-Mobile has advised the licensee that it must cease its operations on channel 47 in order to clear the spectrum in the area to enable the commencement of wireless operations in the band prior to the opening of the FCC TV Translator Displacement Channel Filing Window.

Following the FCC prescribed procedures, OETA respectfully requests a waiver of the Displacement Filing Freeze in accordance with the procedures released by the FCC in a Public Notice dated June 14, 2017 regarding filing procedures for such situations.

Granting the waiver and the STA would enable the station to continue its operations providing vital Public Television service as well as other information to the viewers in the area, while minimizing any disruption in service.

Therefore, OETA is filing both a displacement application and a request for Special Temporary Authority (STA) seeking authorization to move its operations to channel 20 from the existing tower site.

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The parameters of the proposed facility are as follows:

Proposed Parameters:

Transmitter Location:	34-26-01.0 N 097-41-07.0 W (NAD 83)
Channel:	20
ERP:	10.0 KW
Emission Mask:	Stringent
Antenna Pattern:	Omnidirectional
Antenna Manufacturer:	Kathrein
Antenna Model:	UTV-11/P/W/L
Antenna RCAGL:	111.6 Meters
Overall Structure AGL:	114.6 Meters
RCAMSL	509.4 Meters

Interference Study:

An interference study was undertaken utilizing the FCC's TVStudy program to analyze the co-channel and adjacent channel interference scenarios for the new proposed channel of operation. A copy of the results from the TVStudy analysis is attached hereto.

The results of the study indicated that no impermissible interference would result from the proposed operations.

Based upon the forgoing interference study, it is believed that the proposed facility can operate without any impermissible interference to other stations.

RF Exposure Study:

Furthermore, a study was conducted to determine compliance with the RF Radiation Maximum Permissible Exposure (MPE) limits of the proposed operation. The study was conducted using the methodology outlined in the FCC's OET Bulletin 65 regarding RF Radiation Compliance.

The study utilized the proposed antenna height of 111.6 meters AGL and a reference height of 2 meters AGL for the reference location. This yields a distance from the antenna of 109.6 meters.

The proposed antenna elevation pattern indicates that the downward radiation from the antenna from 45° to 90° below horizontal has a maximum relative field value of 0.19 (at approximately 30° below horizontal). This value was used in conjunction with the

distance from the antenna and the prescribed formula from OET Bulletin 65 to determine a maximum predicted power density of 5.28μW/cm² at 2 meters above ground level near the base of the tower. The Maximum Permissible Exposure Level (MPE) for the Uncontrolled/General Population environment for Channel 20 is approximately 339.3μW/cm². Thus, the proposal is approximately 1.56% of the General Population MPE level and well within the allowable limit.

Based upon the forgoing it is believed that the proposed facility is in compliance with the required RF Exposure limits.

The licensee and all station personnel and contractors are required to follow appropriate safety procedures before the commencement of any work on the tower or in close proximity to the antenna. These procedures including reducing power or turning off the transmitter before any work is undertaken at the site. The licensee in coordination with any other users of the site must reduce power or cease operations as necessary to ensure workers having access to the site, tower, and antenna locations are not exposed to RF Radiation levels in excess of those prescribed by FCC Guidelines.

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