TECHNICAL STATEMENT
MODIFICATION OF CONSTRUCTION PERMIT
KSNT-DT 16 KW-ND 320 M HAAT CH. 28
TOPEKA, KANSAS

DTV FACILITY MODIFICATION

The permittee, Emmis Television License Corporation of Topeka, requests minor modification of construction permit BPCDT- 19991021AAM for digital television broadcast station KSNT-DT, Channel 28 in Topeka, KS. Specifically, the permittee proposes to reduce effective radiated power and specify a different antenna type for a resultant increase in radiation center height of 1 meter. There are no other changes to the underlying authorization specified.

The new DTV facility as modified will not have a significant effect on the quality of the human environment and does not require an environmental assessment. It is categorically excluded from environmental processing by Section 1.1306 since the antenna will be installed on an existing tower (ASRN 1032989) and the safety standards for human exposure to radio-frequency (RF) energy in Section 1.1307(b) will not be exceeded as described below.

GROUND LEVEL EXPOSURE

It is not expected that the requested facility changes will result in RF contributions exceeding the *RF Radiation Exposure Limits* specified in Section 1.1310 of the Commission's rules. The type of antenna to be employed is a nondirectional Dielectric Model TFU-26GTH-R O4 DC and the radiation center height of the antenna will be positioned at an elevation of 342 meters above ground level (AGL). Antenna polarization will be horizontal and effective radiated power (ERP) will be 16 kW, average power. The maximum permissible exposure (MPE) limits for Channel 28, at the bottom frequency of 554 MHz, are 369 μW/cm² for general (uncontrolled) exposure and 1,847 μW/cm² for occupational (controlled) exposure. Compliance with these limits was established based

on a “worst case” estimation of ground level power density using the EPA prediction method adopted by the Commission.

The “worst case” power density level accessible at two meters above ground as a result of the specified operation is estimated to be less than 5 $\mu W/cm^2$. A conservative antenna relative field value of 1.0 was assumed in establishing the above worst case scenario. Since it has been demonstrated that the maximum ground level exposure contribution from the specified antenna is expected to be less than 5% of both the uncontrolled and controlled MPE guidelines, the proposal need not consider the effects of other RF contributors.

OCCUPATIONAL EXPOSURE

It has been demonstrated that the specified facility changes will not result in exposure exceeding the occupational limit at any ground-level location. At higher elevations on the antenna structure, however, workers will be protected from excessive exposure to RF fields in accordance with the methods recommended in *OET Bulletin No. 65, Version 97-01.* In regard to other site users, all tower maintenance and other related work involving exposure at elevations above ground level will be jointly coordinated to effectively control RF fields from exceeding the occupational limit. Preventive steps to protect workers during such scheduled events shall include reducing power or shutting down facilities.

Respectfully submitted,

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