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KUEU, Logan Utah

VARIANCE FROM CONSTRUCTION PERMIT AND  
RADIOFREQUENCY FIELDS

The underlying Construction Permit, LMS 000158177 calls for the antenna to be mounted at 26 meters AGL. The antenna, as-built, was mounted at 23.5 m AGL. In all other regards the facilities, as-built, are identical to the facilities, as-authorized.

Below is an analysis elucidating the effect on the ambient radiofrequency field that this change produces,

An engineering analysis was performed to determine whether the facilities, as constructed, comply with the Maximum Permissible Exposure standards outlined in 47CFR1.1310 as regards human exposure to radiofrequency electromagnetic fields and whether environmental processing would be required.

The constructed facilities operate at 1.4 kilowatts, horizontally polarized, using a Kathrein K52 34 17 antenna mounted at the 23.5-meter level of a 30-meter tower. This is a horizontally polarized, panel-style antenna comprised of a single radiating level.

The antenna support structure is mounted at the apex of a local promontory. Though located in a fenced and locked compound, areas outside of the fence are accessible to the

general public. There are no other significant emitters of radiofrequency energy in the immediate vicinity.

The Commission's FMModel computer software was used to calculate the radiofrequency electromagnetic power density in a plane 2 meters AGL as a function of the distance from the antenna support structure. The "Ring and Stub or Other" elevation pattern data was selected. A copy of the graphical output of this program is attached.

The highest power density occurs at a point 12.5 meters from the base of the tower and is equal to  $23.0 \mu\text{W}/\text{cm}^2$ . This represents 11.5% of the general public/uncontrolled MPE standard.

Appropriate signs have been installed at the base of the tower warning workers and others that the maximum permissible exposure standard may be exceeded at locations on the tower.

The applicant believes that the facilities, as constructed, conform to the MPE standards outlined in 47CFR1.1310 and that environmental processing is not warranted.

