

ENGINEERING STATEMENT  
CONCERNING HUMAN EXPOSURE TO RF ELECTROMAGNETIC ENERGY  
PREPARED FOR  
BROADCAST STATION KOMA(FM)  
OKLAHOMA CITY, OKLAHOMA

This Engineering Statement was prepared on behalf of broadcast station KOMA(FM) concerning an evaluation of compliance with Section 1.1307(b) of the FCC Rules\* regarding human exposure to radio frequency (RF) energy in the vicinity of the its proposed transmitting tower.†

The tower supporting structure will be located at 1501 NE 85<sup>th</sup> Street, Oklahoma City, Oklahoma (FCC Antenna Structure Registration No. 1253490).‡ The proposed antenna supporting structure has an overall height above ground, including all appurtenances, of 490 m above ground level (AGL).

The following table summarizes the technical details and assumptions made as part this analysis:

Call Sign / Mode	Channel / Frequency	Total Effective Radiated Power (kW)	Antenna Radiation Center Height Above Ground (meters)	Transmitting Antenna / Polarization
KOMA(FM) / Analog FM	223 / 92.5 MHz	200 kW (H + V)	475	ERI, 10-bay / circular

\* See Rules of the United States Federal Communications Commission (FCC), generally at Title 47 of the Code of Federal Regulations (Telecommunication).

† See FCC Office of Engineering and Technology Bulletin No. 56 for background information on non-ionizing RF energy of the type discussed here. Internet web reference:

[http://www.fcc.gov/Bureaus/Engineering\\_Technology/Documents/bulletins/oet56/oet56e4.pdf](http://www.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet56/oet56e4.pdf)

‡ Geographic coordinates: 35-33-36.2N / 97-29-08.1W (NAD83).

Based on Section 73.1310 of the FCC Rules, the pertinent maximum permissible exposure (MPE) limits for the subject station is as follows:

Call Sign	Frequency (MHz)	MPE for Uncontrolled Environment / Occupational Exposure (uW/cm <sup>2</sup> )
KOMA(FM)	92.5 MHz	200

The subject facility was evaluated for RF exposure at 2-m AGL using the procedures outlined in OET Bulletin No. 65, *Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields*. The table below summarizes the results of the analysis:

Call Sign	Distance (m)	Assumed Antenna Downward Relative Field Factor <sup>§</sup>	Calculated Power Density (uW/cm <sup>2</sup> )	Percent of General Population / Uncontrolled MPE (%)
KOMA(FM)	473	0.50	7.46	<b>3.7</b>

The calculations indicate that the RF energy at 2-m above ground level at locations in proximity to the KOMA tower will not exceed 3.7% of the FCC general population / uncontrolled MPE based on a conservative calculation. Therefore, it is concluded that the KOMA(FM) facility meets the FCC RF exposure requirements at all ground level locations.<sup>\*\*</sup>

The transmitter site shall be restricted from access to the public. All licensees located at the transmitter site shall cooperate in the reduction of power or

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<sup>§</sup> This is a conservative estimate of downward relative field factor.

<sup>\*\*</sup> Per Section 1.1307 of the FCC Rules, those licensees whose transmitters produce RF energy levels in excess of 5.0% of the applicable exposure limit at an accessible location are considered to be significant contributors and would share in the responsibility to bring the RF exposure levels into compliance in a multiple user environment. The KOMA(FM) facility is below the 5% threshold.

cessation of operations as necessary to protect persons having access to the tower or antennas from RF radiation in excess of the FCC guidelines.

A handwritten signature in black ink, appearing to read "Louis Robert du Treil, Jr.", written in a cursive style.

Louis Robert du Treil, Jr., P.E.

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