

TECHNICAL STATEMENT
KCMT CH. 221C2 GREEN VALLEY, AZ, FACILITY ID 2746
FCC LICENSE NO. BMLH-20000705ACM

The licensee of FM broadcast station KCMT is requesting a new station license to cover the replacement of the station's nondirectional antenna and supporting tower. The previous tower suffered catastrophic damage as the result of a guyed anchor that failed. Damage to the station's antenna and tower was beyond repair and as a result the station was unable to continue normal over-the-air transmission service to the public using its licensed facilities. However, KCMT was able to restore service at reduced power from a temporary antenna location under an Engineering STA while a new FAA approved replacement tower could be constructed.

Although the new tower was registered as a replacement structure, it was assigned a unique antenna structure registration (ASR) number. The geographic site coordinates for the new tower are not different from the old by more than 1 second in latitude or longitude and the ground elevation is exactly the same. However, the new antenna was installed at a radiation center height that is 2 meters below the current licensed height. Since the new and old antenna coordinates are not different by more than 3 seconds in latitude or 3 seconds in longitude and the new antenna height is not more than 4 meters lower than the authorized height, this application is believed to be eligible for processing under 73.1690(c).

Listed below are the site coordinates, ASR number and overall height for the replacement tower. Also listed are the new antenna height values.

Antenna Location Coordinates: (NAD 27)

North Latitude:	32 deg 00 min 11.5 sec
West Longitude:	110 deg 47 min 48.8 sec

Antenna Structure Registration Number:	1299492
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Overall Tower Height Above Ground Level:	192.6 meters
Height of Radiation Center Above Mean Sea Level:	1118 meters (H); 1118 meters (V)
Height of Radiation Center Above Ground:	185 meters (H); 185 meters (V)
Height of Radiation Center Above Average Terrain:	148 meters (H); 148 meters (V)

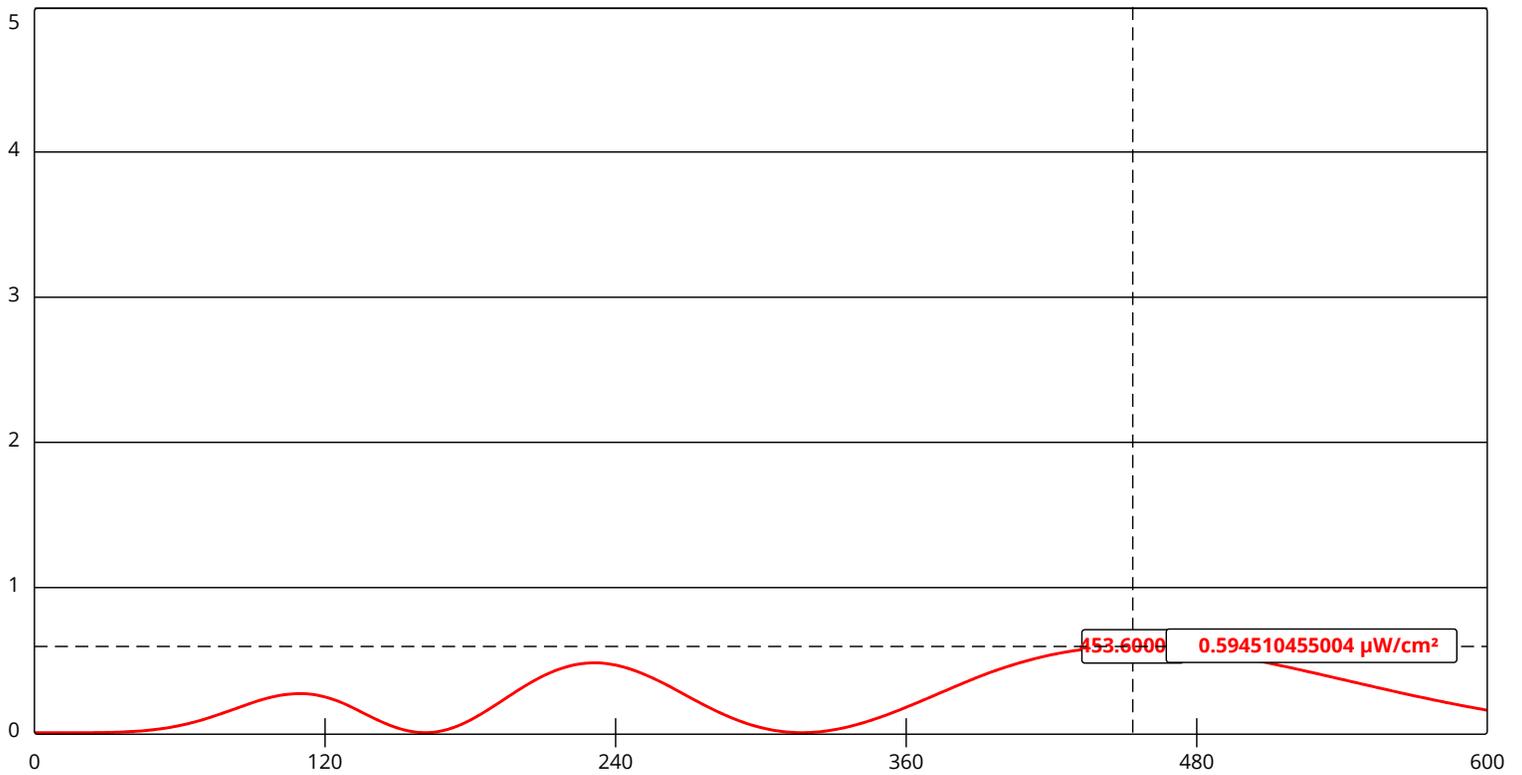
As indicated in the Form 302-FM Tech Box, the new nondirectional antenna is an ERI 8-bay MPX Rototiller Series, which is an EPA Type 3 radiator. The attached FM Model power density vs distance graph demonstrates that the calculated ground level exposure is less than 5% of the guidelines set forth in Section 1.1310.

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FM Model

The FM Model calculator determines the potential exposure from radiofrequency (RF) electromagnetic fields produced by FM broadcast station antennas at ground level. The FM Model software was originally developed by the FCC in 1997 as a standalone executable program and this improved version provides more precise predictions and runs via a JavaScript enabled web browser. The FM Model is originally based on measured data [published in 1985 by the EPA](#)



[View Tabular Results +](#)

Channel Selection	Channel 221 (92.1 MHz) ▾		
Antenna Type +	EPA Type 3: Opposed U Dipole ▾		
Height (m)	<input type="text" value="185"/>	Distance (m)	<input type="text" value="600"/>
ERP-H (W)	<input type="text" value="50000"/>	ERP-V (W)	<input type="text" value="50000"/>
Num of Elements	<input type="text" value="8"/>	Element Spacing (λ)	<input type="text" value="0.5"/>
Num of Points	<input type="text" value="500"/>	<input type="button" value="Apply"/>	