

TECHNICAL EXHIBIT
APPLICATION FOR LICENSE
RADIO STATION KOAS(FM)(FACILITY ID 25692)
DOLAN SPRINGS, ARIZONA
CH 289C 100 KW 537 M

Technical Statement

This Technical Statement was prepared on behalf of Radio Station KOAS(FM) on Channel 289C assigned to Dolan Springs, Arizona. The station has been constructed, program testing has commenced and therefore, licensure is now being requested. The facility was constructed pursuant to its construction permit with the authorized facilities of 100 kilowatts (horizontal polarization only) non-directional effective radiated power and an antenna height above average terrain of 537 meters on Channel 289C.¹

Radiofrequency Electromagnetic Field Exposure

The KOAS(FM) facility was previously evaluated in the application for construction permit in terms of potential radiofrequency electromagnetic field exposure at ground level resulting from the new antenna in accordance with OST Bulletin No. 65, *Evaluating Compliance with FCC Specified Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields*.² RF measurements indicated that a location on a nearby hill exceeded the “uncontrolled” limit based on the same antenna proposed in the construction permit and thus a new RFR certification is included herein.

The attached letter in the Appendix provides the results of the RFR measurement survey conducted at the site. As the letter states, there is an area nearby the tower where the measured RF power density exceeds the maximum 100 percent of the “uncontrolled” environment limit (or 20 percent of the “controlled” environment).

¹ See KOAS(FM) FCC Construction Permit File Number: BMPH-20040331ARO.

² OET Bulletin 65, Second Edition 97-01, August, 1997.

Therefore, according to the permittee, the area where the measured power density exceeds the 100 percent of the “uncontrolled” limit (20 percent of the “controlled” limit) has been restricted with a fence and appropriately marked with warning signs. It is noted that the peak measured value within this fenced area is 37 percent of the controlled environment and, thus, in compliance with the controlled limits.

In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure.



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Figure 1

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KOAS RF Transmission System Specifications

Description	System
Transmitter Power Output (17.4 kW):	12.4 dBk
Combiner Loss:	0.25 dB
Transmission Line Loss (5" air) 154 feet:	0.13 dB
Shively 6600,10-bay (1/2- λ Spaced) horiz-pol. only (6.28 Power Gain):	8.0 dB
Effective Radiated Power (100 kW):	20.0 dBk

APPENDIX



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These are my official findings of an RFR study in and around the main transmitter site for KOAS-FM, Dolan Springs, Arizona. I used a Narda model EMR-300 serial number AN-0044 with a Narda RF probe Type 25 serial number E-0006 freshly calibrated from the factory for all measurements. The peak reading found in one remote location measured 37% of allowable RF level for a controlled site. This is well within the limits set down by OSHA and the FCC.

Rick Fulkerson

Rick Fulkerson
Com-Serv
Independent contract engineer