

MINOR CHANGE APPLICATION
KWPT, INC.
K274AM FM TRANSLATOR STATION
CH 275D - 102.9 MHZ - 0.099 KW (DA)
EUREKA, CALIFORNIA
March 2011

EXHIBIT C

Radio Frequency Assessment

A study has been made to determine whether this proposal is in compliance with 47 C.F.R. This study considers all nearby facilities, specifically FM stations KMDR and KNDZ, FM translators K240DX and K229AF and TV translator K29IR, and utilizes the appropriate formulas contained in the Bulletin.¹

The proposed K274AM antenna system is mounted with its center of radiation 30.2 meters (99.0 feet) above the ground at the existing tower location and will operate with an effective radiated power of 0.099 kilowatt (99 watts) in the horizontal and vertical planes (circularly polarized). At 2.0 meters above the ground at the base of the tower, the height of an average person, the K274AM antenna system will contribute 0.0051 mw/cm².² Based on exposure limitations for a controlled environment, 0.5% of the allowable ANSI limit is reached at 2.0 meters above the ground at the base of the tower. For uncontrolled environments, 2.6% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

The KMDR antenna system is mounted with its center of radiation 38.7 meters (127.0 feet) above the ground at the existing tower location and operates with an effective radiated

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- 1) The FM Model program was used to calculate the FM stations' contributions. The EPA single bay dipole was used unless otherwise stated.
 - 2) This level of field occurs at 8.0 meters out from the base of the tower and is considered worst case.

power of 2.3 kilowatts in the horizontal and vertical planes (circularly polarized). The KMDR antenna is an Electronics Research, Inc. two bay 0.75 wavelength rototiller style antenna system (FCC/EPA Type #3). At 2.0 meters above the ground at the base of the tower, the height of an average person, the KMDR antenna system contributes 0.0055 mw/cm^2 .³ Based on exposure limitations for a controlled environment, 0.6% of the allowable ANSI limit is reached at 2.0 meters above the ground at the base of the tower. For uncontrolled environments, 2.8% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

The KNDZ antenna system is mounted with its center of radiation 24.0 meters (78.7 feet) above the ground at the existing tower location and operates with an effective radiated power of 0.750 kilowatt in the vertical plane. At 2.0 meters above the ground at the base of the tower, the height of an average person, the KNDZ antenna system contributes 0.0493 mw/cm^2 .⁴ Based on exposure limitations for a controlled environment, 4.9% of the allowable ANSI limit is reached at 2.0 meters above the ground at the base of the tower. For uncontrolled environments, 24.7% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

The K240DX antenna system is mounted with its center of radiation 23.0 meters (75.5 feet) above the ground at the existing tower location and operates with an effective radiated power of 0.20 kilowatt (200 watts) in the vertical plane. At 2.0 meters above the ground at the base of the tower, the height of an average person, the K240DX antenna system contributes 0.0144 mw/cm^2 .⁵ Based on exposure limitations for a controlled environment, 1.4% of the

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- 3) This level of field occurs at 102.0 meters out from the base of the tower and is considered worst case.
 - 4) This level of field occurs at 5.0 meters out from the base of the tower and is considered worst case.
 - 5) This level of field occurs at 5.0 meters out from the base of the tower and is considered worst case.

allowable ANSI limit is reached at 2.0 meters above the ground at the base of the tower. For uncontrolled environments, 7.2% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

The authorized K229AF antenna system will be mounted with its center of radiation 20.0 meters (65.6 feet) above the ground at the existing tower location and will operate with an effective radiated power of 0.011 kilowatt in the horizontal and vertical planes (circularly polarized). At 2.0 meters above the ground at the base of the tower, the height of an average person, the K229AF antenna system will contribute 0.0014 mw/cm^2 .⁶ Based on exposure limitations for a controlled environment, 0.1% of the allowable ANSI limit is reached at 2.0 meters above the ground at the base of the tower. For uncontrolled environments, 0.7% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

The K29IR, Channel 29Z, antenna system is mounted with its center of radiation 48.0 meters (157.0 feet) above the ground at the tower location and operates with an effective radiated power of 63.2 kilowatts in the horizontal plane. As denoted in OET Bulletin #65, Supplement A, Page 31, the typical UHF antenna system has a downward radiation field of 0.1. Therefore, the contribution of K29IR is based on a power level of 0.632 kilowatts. At 2.0 meters above the ground at the base of the tower, the height of an average person, the K29IR antenna system contributes 0.0062 mw/cm^2 . Based on exposure limitations for a controlled environment, 0.3% of the allowable ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

6) This level of field occurs at 5.0 meters out from the base of the tower and is considered worst case.

For uncontrolled environments, 1.7% of the ANSI limit is reached at 2.0 meters above the ground at the base of the tower.

Combining the contributions of the K274AM, KMDR, KNDZ, K240DX, K229AF and K29IR, a total of 48.0% of the limit for the uncontrolled environment is reached at 2.0 meters above the ground at the base of the tower. Since the contribution level for the tower site is below the 100% limit defined by the Commission, the K274AM antenna system is believed to be in compliance with the radio frequency radiation exposure limits, as required by the Federal Communications Commission. Further, KI will post warning signs in the vicinity of the tower warning of potential radio frequency radiation hazards at the site. In addition, KI will reduce the power of the K274AM facility or cease operation, in cooperation and coordination with other tower users, as necessary, to protect persons having access to the site, tower or antenna from radio frequency radiation in excess of FCC guidelines.