

Second-Adjacent Channel Protection

The proposed facility (FCC ID 153975) is located within the 60 dBu contour of second-adjacent channel stations KEZK-FM (273C0, FCC ID 13507) and KLOU (277C1, FCC ID 9626), St. Louis, Missouri which are protected in accordance with §74.1204(d) at a +40 dB level. The proposed antenna will be mounted 145 meters above ground on an existing tower.

KEZK-FM is located 32.5 kilometers distant with a calculated field of 78.99 dBu at the proposed site based on an ERP of 100 KW and height above average terrain along a 307.5° radial from KEZK-FM to the proposed site of 291 meters. The translator would require a field intensity of 118.99 dBu to cause interference to the KEZK-FM signal. Using the free-space formula to calculate distance to the proposed 118.99 dBu using an ERP of 250 watts we arrive at a worst-case potential interference area radius around the antenna of 125 meters. Even assuming the full 250 watts is radiated straight down from the antenna, this is 20 meters above ground and does not penetrate any occupied spaces.

KLOU is located 32.5 kilometers distant with a calculated field of 78.53 dBu at the proposed site based on an ERP of 90 KW and height above average terrain along a 307.5° radial from KLOU to the proposed site of 291 meters. The translator would require a field intensity of 118.53 dBu to cause interference to the KLOU signal. Using the free-space formula to calculate distance to the proposed 118.53 dBu using an ERP of 250 watts we arrive at a worst-case potential interference area radius around the antenna of 131 meters. Even assuming the full 250 watts is radiated straight down from the antenna, this is 14 meters above ground and does not penetrate any occupied spaces.

Therefore, there is zero population inside the predicted interference contours and the proposed operation is in compliance with §74.1204(d).