

K17II-D Application for CP for Minor Modification January 25, 2022

Purpose of Application

This application is being filed to request a construction permit for minor modification of Cache County's license K17II-D, Facility 168494, Logan UT. This application is being filed to relocate the facility from its currently licensed site to Mount Pisgah, where most of the translators serving Logan, UT are located. The antenna is also being changed to a Kathrein 75010210, the effective radiated power (ERP) increased to 951 watts, and the radiation center height above sea level increased to 2179.6 meters.

Environmental Statement

The antenna is located at an established communications site with other translators. Other than the antenna installation on an existing structure, no new construction is required.

At depression angles greater than or equal to 30 degrees, the ERP from the requested facility is less than 40 watts. At depression angles equal to or greater than 30 degrees from the antenna the power density, as calculated using the formulas in FCC Office of Engineering and Technology Bulletin 65, is below the occupational (controlled) environment limit of 1.637 mW/cm^2 at distances greater than 3.0 meters (9.83 feet) from the antenna itself and below the public (uncontrolled) environment limit of 0.327 mW/cm^2 at distances greater than 6.7 meters (22 feet) from the antenna.

In the main beam of the antenna the power density is below the occupational (controlled) environment limit of 1.637 mW/cm^2 at distances greater than 5.25 meters (17.23 feet) from the antenna and below the public (uncontrolled) environment limit of 0.327 mW/cm^2 at distances greater than 11.74 meters (38.52 feet) from the antenna.

The power density calculations above assume a worst case relative field of 1.0 at all azimuths. The actual antenna is directional, with maximum ERP dropping below 40 watts at azimuths plus or minus 68 degrees from the peak at 35 degrees from true north. The facility is not accessible to the public and is located on a private road accessible only after passing through two locked gates with appropriate signs warning of potential RF exposure.

The site is shared with other broadcasters and Cache County agrees to cooperate with other tenants to reduce or shut off power from K17II-D as necessary to protect workers at the site.

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Broadcast Facility

Compliance with Section 74.709

The K17II-D Channel 17 is not allocated for land-mobile operation in this market. A TVStudy analysis found no land mobile station failures.

Compliance with Sections 74.793(e), 74.793(f), 74.793(g), and 74.793(h)

A TVStudy 2.2.5 analysis using 0.5 km cell size and 0.5 km terrain profile point spacing for LPTV interference evaluation and the facility proposed in this application showed the maximum amount of new interference created to any authorized or applied for facility in the LMS database dated January 24, 2022 was under 0.5% for any DTV broadcast or digital Class A facility and under 2.0% for any digital low power TV or TV translator facility. A copy of the TVStudy tvixstudy.txt file is included in this application as a separate attachment.

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Cache County
January 25, 2022

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