

# **KNTV Application for Modification of Post-Repack Construction Permit**

## **October 26, 2017**

### Engineering Exhibit

The purpose of this application is to request modification of the post-repack facility construction permit (LMS file number 0000026912) for operation on channel 13 for KNTV, San Jose, CA, Facility ID 35280, licensed to NBC Telemundo License LLC.

This application specifies the same top stack antenna location at the same radiation center height of 459.7 meters AMSL, the same height above average terrain (HAAT) of 419 meters and the same effective radiated power (ERP) of 95.0 kW as specified in LMS file number 0000026912 but proposes a non-directional antenna instead of the directional antenna authorized in the construction permit. A TVStudy 2.2.3 analysis with the non-directional antenna at 459.7 meters radiation center AMSL and ERP of 95.0 kW showed the maximum amount of new interference created to any post-auction baseline facility, any application filed in the repack and first priority window, and any granted post-auction construction permits in the LMS database dated October 24, 2017 was under 0.5%.

### Antenna System

The proposed facility will use a non-directional antenna with elliptical polarization. The proposed vertically polarized ERP is 71.7 kW. The vertically polarized ERP will not exceed the horizontally polarized ERP (95.0 kW) in any direction.

### Environmental Statement

The requested facility will be installed on top an existing tower, ASR #1010567 located in an antenna farm. The proposed top stack mount antenna will be located in the spot previously used for the KNTV channel 11 analog antenna and will not increase the height of the tower.

RF power density from the facility using combined horizontal and vertically polarized ERP was calculated using the procedures described in FCC Office of Engineering and Technology Bulletin 65. The maximum power density from this facility on the ground, after allowing 10m for terrain height variation and 2m for a person's height, is calculated to be 0.0076 mW/cm<sup>2</sup> or 3.8% of the FCC maximum permissible exposure level of 0.200 mW/cm<sup>2</sup> for an uncontrolled environment. The area immediately around the tower is secured with a fence and locked gate. At full power, RF power density on towers more than 75m from this facility is calculated to be below occupational exposure levels. The only other tower within this distance is a short stub tower on the KNTV site. KNTV will coordinate with other users at the site and reduce power or shut off as required to protect workers on this and nearby towers from RF exposure above the limits specified in FCC rule §1.1310. RF power density measurements will be conducted at the site after construction.

### Broadcast Facility

#### *Compliance with 73.616:*

A study using TVStudy 2.2.3 and the FCC LMS database dated 10/24/2017 showed the proposed facility complies with the interference requirements of Section 73.616 when run with the default parameters of 2 km cell size and 1 km terrain profile point spacing.

#### *Compliance with 73.622(i):*

The proposed facility will operate on the channel assigned to KNTV for operation post-repack. The requested maximum ERP of 95.0 kW at 419 meters HAAT does not exceed the ERP currently authorized at this HAAT.

#### *Compliance with 73.623(e):*

Not applicable. This VHF channel is not assigned to land mobile in any market.

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### *Compliance with 73.625:*

The contour from the proposed facility is not less than the contour previously approved by the Commission in any direction. The proposed facility will place a 48 dB $\mu$ V/m principle community contour over San Jose, California, the community of license. See attached coverage map created using output from TVStudy 2.2.3.

### *Compliance with 73.1030:*

A TVStudy 2.2.3 analysis of the proposed facility showed it is within coordination distance of the FCC monitoring station at Livermore, California and will place a field strength of 69.5 dB $\mu$ V/m (3.8 mV/m) over the facility. Signal levels this strong are not unusual in the TV broadcast bands and as shown by the TVStudy results the predicted signal level from the proposed facility will be substantially less than the threshold value of 10 mV/m specified in Section 73.1030(c).

### *Compliance with 73.1125:*

The proposed facility extends the contour previously approved by the Commission and will place a 48 dB $\mu$ V/m principle community contour over the main studio located at 2450 North First Avenue, San Jose, California. See attached coverage map.

### *Compliance with 73.1650 :*

The proposed facility is 1174.9 km from the Canadian border and 724.2 km from the Mexican border. Coordination with Canada or Mexico is not required.

Doug Lung  
October 26, 2017

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