Grafton Olivera, P.E.
Consulting Engineer

RF COMPLIANCE EXHIBIT

December 21, 2020

The proposed W17DL-D facility will comply with the FCC Rules concerning human exposure to radio frequency (RF) energy. The calculation of RF energy at 2-m above ground was made under the procedures of OET Bulletin No. 65. The formula employed is as follows:

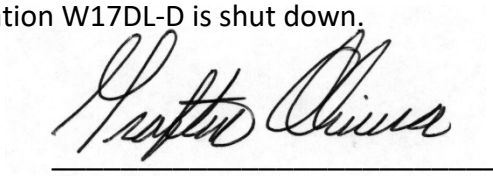
$$S = \frac{(33.4)F^2P}{R^2}$$

where, *S* = power density in uW/cm2, *F* = relative field factor at the angle to the calculation point, *P* = the total effective radiated power relative to a dipole in watts, and *R* = distance from the antenna radiation center to the calculation point in meters.

The proposed antenna will be mounted with radiation center at a height of 26 meters on an existing tower structure. The power density at 2 meters above ground level at the base of the tower, based on a "worst-case" vertical relative field value of 0.2 for any depression angle greater than 30° below horizon, a total ERP of 3 kW (Hpol) and an antenna center of radiation height above ground level of 26 meters, the calculated power density at two meters above ground level at the base of the tower is 7.0 microwatts per square centimeter (uW/cm2), or 2.1 % of the Commission's recommended limit applicable to uncontrolled exposure areas, 327.3 uW/cm2, for channel 17.

Since the total RF exposure will not exceed 5% of the FCC limits for uncontrolled environments, the proposal complies with the FCC limits for human exposure to RF radiation. Since the antenna will be mounted on an existing tower with 61 meters of overall height that does not require registration (see attached Towair study results), the proposal will comply with the FCC environmental rules.

The applicant will verify that access to the tower site is restricted and the site will be appropriately marked with RFR warning signs. In addition, in the event that workers or other authorized personnel need to enter the restricted area or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such procedures include reducing the average exposure by spreading out the work over a longer period of time, wearing RFR exposure monitors or scheduling work when station W17DL-D is shut down.



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TOWAIR Determination Results

*** NOTICE ***

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results

Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided.

Your Specifications

NAD83 Coordinates

Latitude	18-16-22.8 north
Longitude	066-05-34.2 west

Measurements (Meters)

Overall Structure Height (AGL)	61
Support Structure Height (AGL)	2
Site Elevation (AMSL)	455

Structure Type

GTOWER - Guyed Structure Used for Communication Purposes

Tower Construction Notifications
Notify Tribes and Historic Preservation Officers of your plans to build a tower.

CLOSE WINDOW