

CONSTRUCTED FACILITY EXHIBIT

The W29LS-D facility was constructed as authorized in its construction permit (CP), but a different Antenna of very similar characteristics was used. No change in site, antenna RC height, polarization, number of bays or ERP has been affected.

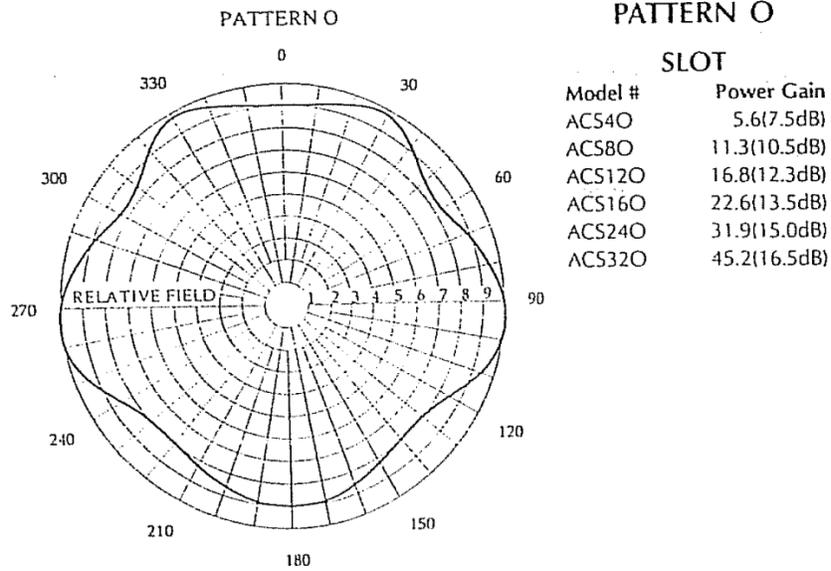
The CP specified an Antenna Concepts (ANT), Model ACS80 antenna, with an omnidirectional pattern. This manufacturer went out of business and necessary parts to repair an existing Antenna Concepts antenna to meet the CP specs became unavailable. A new PSI, Model PSILP8OI antenna, with very similar characteristics was acquired and installed. This antenna has an omnioid pattern below, that is generally considered omnidirectional. Both Antenna patterns and specifications are shown in Figure 1.

Figure 2 shows the comparative coverage provided by the two antenna types; as shown in this figure, the coverage provided by the two antennas is similar and the COL of K29LS-D, Calexico, CA, will be adequately cover by the installed antenna, PSILP8O.

The attached Exhibit 1 is an RF Exposure Compliance analysis using the installed antenna; as shown in this exhibit, the installed antenna, PSILP8OI will fully comply with FCC RF Exposure requirements and guidelines.

FIGURE 1 – CP & INSTALLED ANTENNA PATTERN AND SPECS

CP Antenna ANT ACS80



INSTALLED PSILP80I ANTENNA

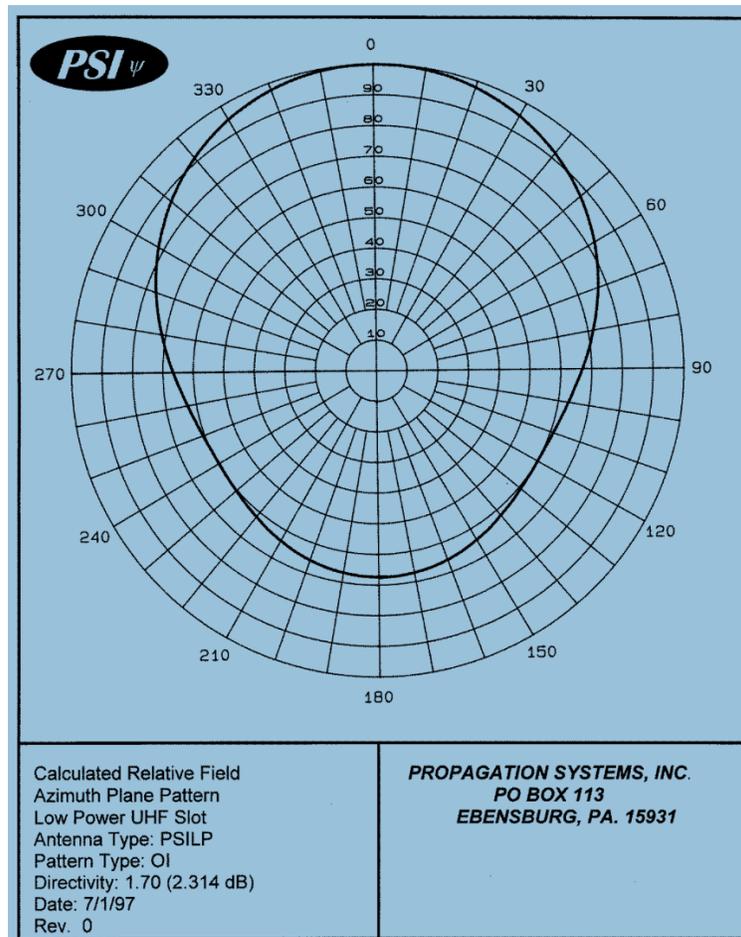
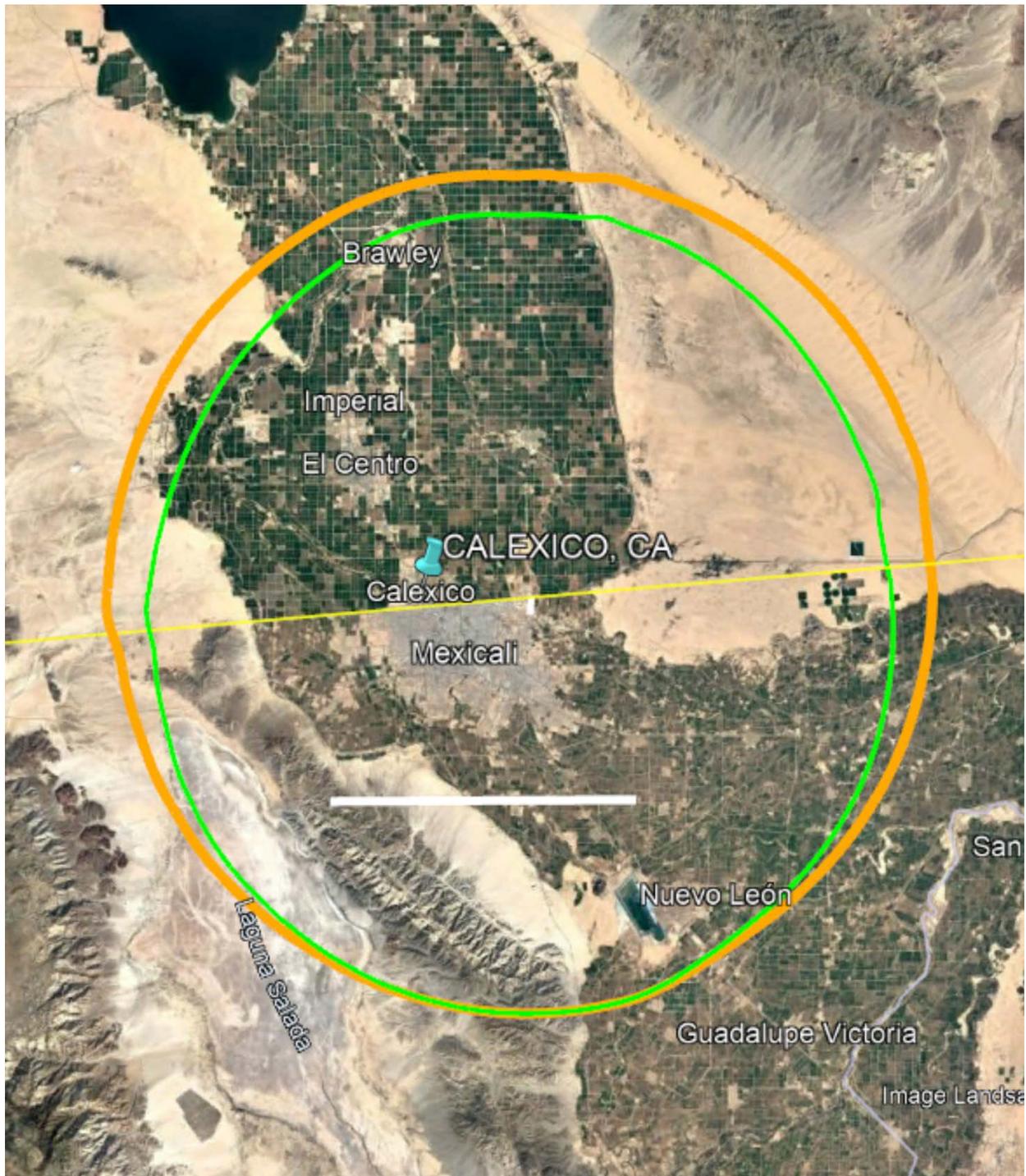


FIGURE 2 – COMPARATIVE SERVICE CONTOURS

ORANGE: CP ANTENNA; GREEN: INSTALLED ANTENNA



WHITE LINE = 30 KILOMETERS

K29LS-D, CALEXICO, CA – CH. 29, 15 KW ERP, RC: 88.1 MTS AMSL

RF COMPLIANCE EXHIBIT

October 28, 2021

The proposed K29LS-D facility will comply with the FCC Rules concerning human exposure to radio frequency (RF) energy with the installed antenna, a PSILP8OI. 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 $\mu\text{W}/\text{cm}^2$, 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 on the existing tower structure, ASR 1275618. 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 0.23 for any depression angle greater than 10 degrees below horizon (see attached PSILP8OI vertical plane radiation pattern), a total ERP of 15 kW (Hpol) and an antenna center of radiation height above ground level of 78 meters, the calculated power density at two meters above ground level at the base of the tower is 4.6 microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$), or 1.2 % of the Commission's recommended limit applicable to uncontrolled exposure areas, $375.3 \mu\text{W}/\text{cm}^2$, for channel 29.

Since the total RF exposure will not exceed the FCC limits for uncontrolled environments, the proposal complies with the FCC limits for human exposure to RF radiation. Since the antenna is mounted on an existing, registered tower, ASR 1275618, the facility will not have any adverse effects relative to environmental compliance.

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 K29LS-D is shut down.



Grafton Olivera, P.E.



Calculated Relative Field
Elevation Pattern
Model: PSILP8
Beam Tilt: 1.0 Degree
Directivity: 9.30 (9.685 dB)
Pattern: 8-Bay

