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Prepared for San Miguel Educational Fund, Inc.

## RADIOFREQUENCY FIELDS

An engineering analysis was performed to determine whether the facilities proposed herein comply with the Maximum Permissible Exposure standards outlined in 47CFR1.1310 as regards human exposure to radiofrequency electromagnetic fields and whether environmental processing would be required.

The applicant proposes to operate at 0.13 kilowatts, diagonally polarized, using two Scala CA2-FM antennas oriented at 110° and 290°, True, and installed to produce equal horizontally and vertically polarized ERP. These antennas are mounted at the 21 meter level of an existing 21 meter tower. They are two element Yagi-Uda style antennas.

The antenna support structure is located near the apex of a local promontory and there are no significant rises in terrain in the near vicinity. The point of closest approach to the antenna is directly beneath it. The base of the tower is accessible to the general public. There are no other significant emitters of radiofrequency energy in the immediate vicinity.

The applicant has chosen to do a worst case analysis in which it is assumed that the power radiated at the nadir is the same as that in the main lobe of the antenna. The power density at a location directly beneath the antenna and 2 meters AGL was calculated using the following formula.

$Pd = 3.34 \times 10^4 * ERP/D^2$  where:

Pd = power density in uW/cm<sup>2</sup>

ERP = combined vertically polarized and horizontally polarized ERP in KW

D = Distance from the antenna

The radiofrequency electromagnetic power density thus calculated is equal to  $24.0 \text{ uW/cm}^2$ . This represents 12% of the general public/uncontrolled MPE standard.

Appropriate signs will be installed at the base of the tower warning workers and others that the maximum permissible exposure standard may be exceeded at locations on the tower.

The applicant believes that the facilities proposed herein conform to the MPE standards outlined in 47CFR1.1310 and that environmental processing is not warranted.