

### **Environmental Protection**

EMF's proposed facility will be constructed on an existing tower and will cause no adverse effects to the surrounding environment at the site.

Exhibit 24-A is a tabulation of the RF Density using the vertical elevation data for the Shively 6025 single bay log periodic antenna. Note the calculation shows the RF Density is over the limit for an uncontrolled environment at distances up to 20 meters from the tower. The RF Density is under the limit for a controlled environment.

Exhibit 24-B demonstrates the location of the proposed site represented by the yellow pin marker. The red line marker is the 20 meter distance at 230 degrees, the azimuth of the main lobe. Limited access is provided with a locked gate located over 500 feet away in the opposite direction of the directional array main lobe and is represented by the blue pin marker.

Accordingly, EMF respectfully requests that the Commission grant the instant Construction Permit with the condition that EMF make RF measurements before constructing the facility and after construction of the proposed facility and submit the results of those measurements prior to Commission grant of Program Test Authority.

If the results of the measurements and subsequent calculations reveal that there are areas that would exceed the requirements of OET 65 for controlled or uncontrolled access, EMF will work with the site owners and other broadcasters to erect fencing and/or signage to fully comply with OET 65.

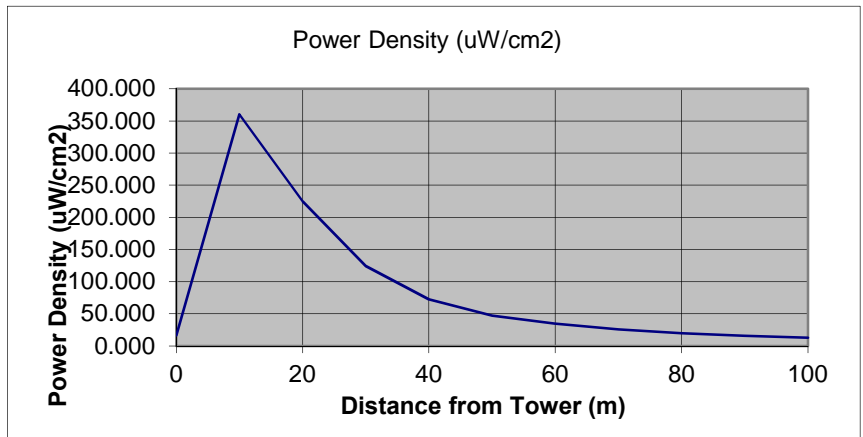
Further, after construction of the instant facility, EMF will continue to cooperate with other site users to reduce power or cease broadcasting as necessary to protect workers and others having access to the site from excessive levels of RF Radiation.

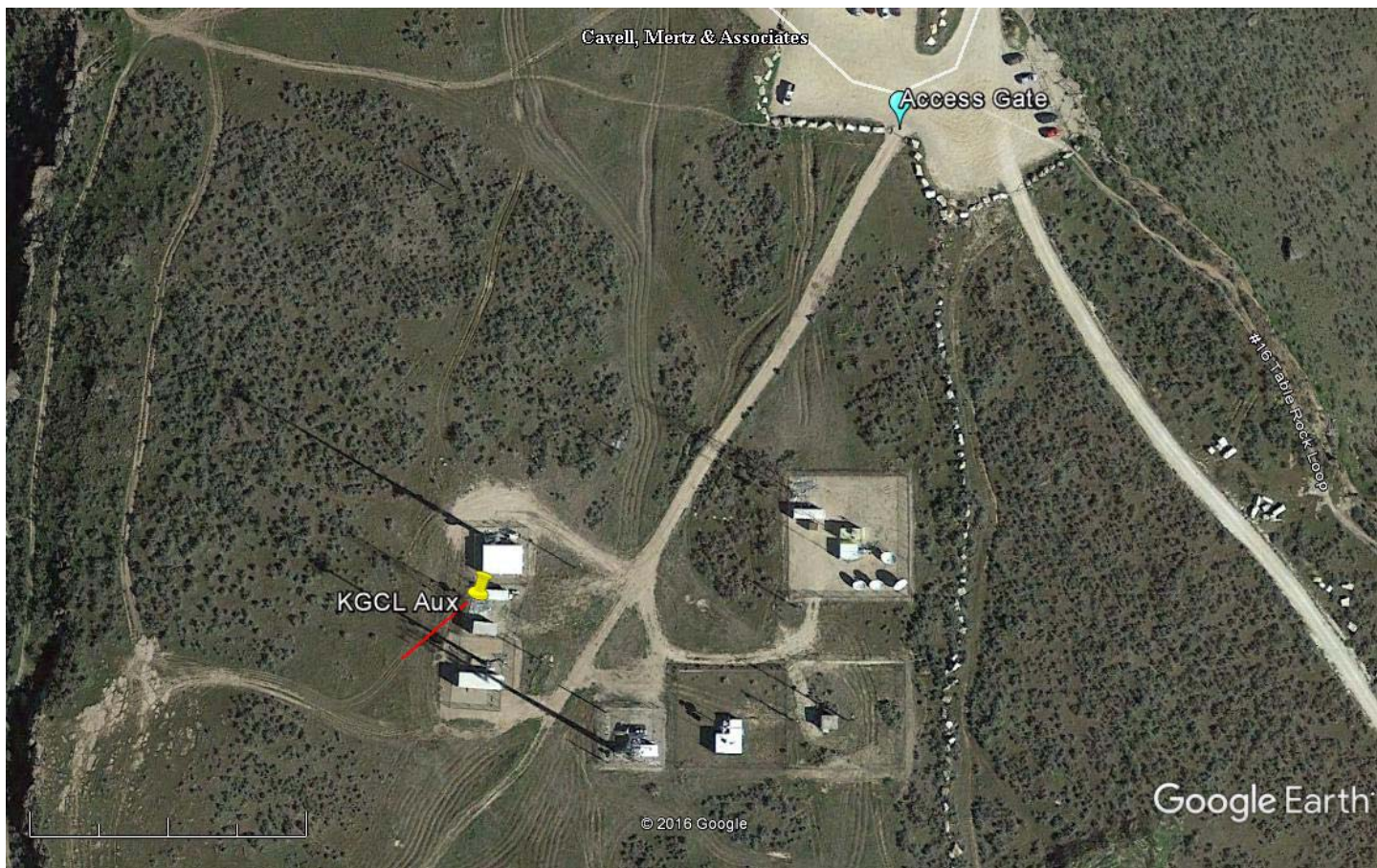
## Specific Antenna RF Power Density Calculator

Based on Equation 10 of OET-65  
Exhibit 24-A / Detailed Report

**ERP** 3.8 kW % of OET-65  
**Height above ground** 11.0 meters 180.2% Uncontrolled  
**Height above head** 9.0 meters 36.0% Controlled  
**Antenna Brand** Shively  
**Antenna Model** 6025 slant

Horizontal distance from tower (meters)	Angle (°)	Distance (m)	Field	Power (W)	Power Density (uW/cm <sup>2</sup> )
0	90	9.0	0.102	387.6	16.302
10	42	13.5	0.717	2724.6	360.487
20	24	21.9	0.923	3507.4	224.796
30	17	31.3	0.98	3724	124.255
40	13	41.0	0.98	3724	72.513
50	10	50.8	0.98	3724	47.227
60	9	60.7	1	3800	34.480
70	7	70.6	1	3800	25.481
80	6	80.5	1	3800	19.583
90	6	90.4	1	3800	15.514
100	5	100.4	1	3800	12.590





Google Earth

feet  
meters

100 600



Yellow Pin Marker - KGCL Proposed Aux Location

43 35' 44.2" N 116 08' 40.3" W (NAD27)

Red Line Marker: 20 meters at 230 degrees

Blue Pin Marker: Limited Access Gate