AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

(b) Draw a circle of 16 km (10 statute mile) radius using the antenna site as the center. Divide each radial into 320 meter (0.2 statute mile) increments inside the circumference to the 3.2 km (2 statute mile) point.

(c) Calculate the height above sea level of each 320 meter (0.2 statute mile) division by interpolating the contour intervals of the map, and record the value.

(d) Average the values by adding them and dividing by the number of readings along each radial.

(e) Calculate the height above average terrain by averaging the values calculated for each radial.

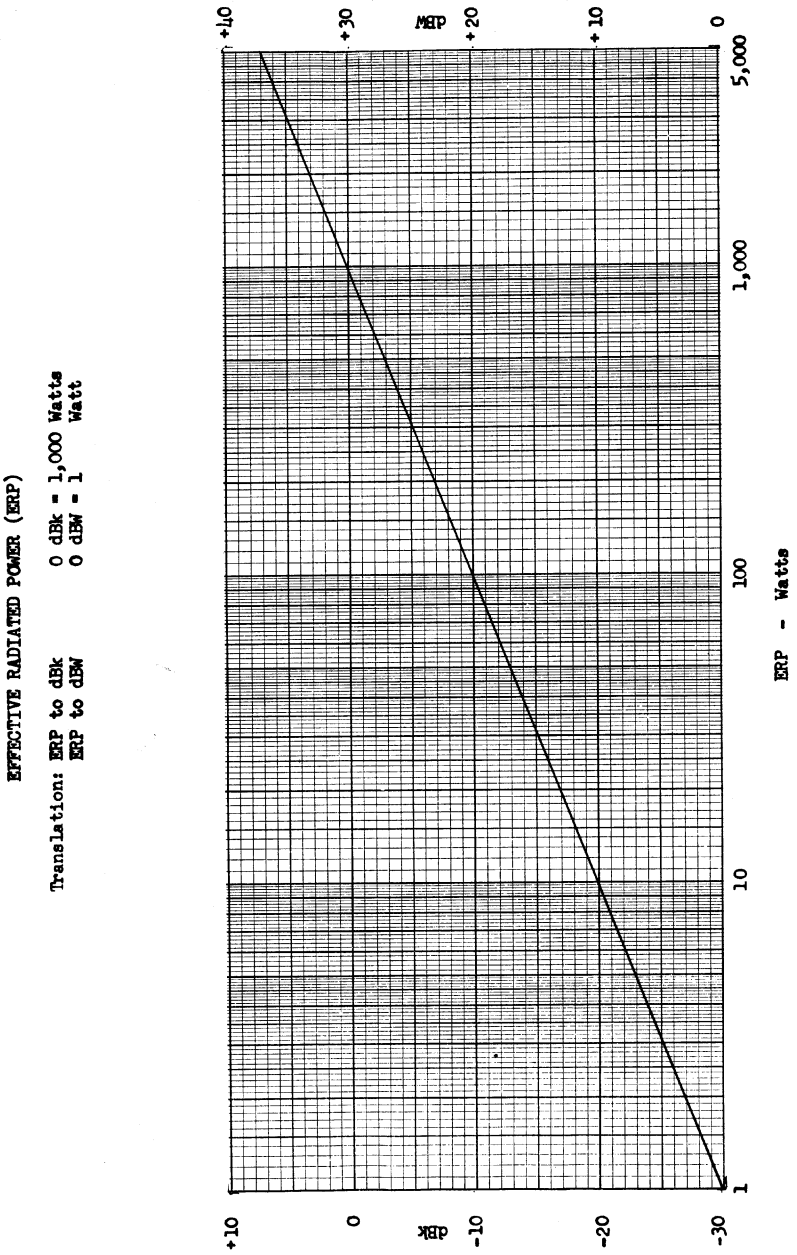
[51 FR 31213, Sept. 2, 1986, as amended at 58 FR 44953, Aug. 25, 1993]

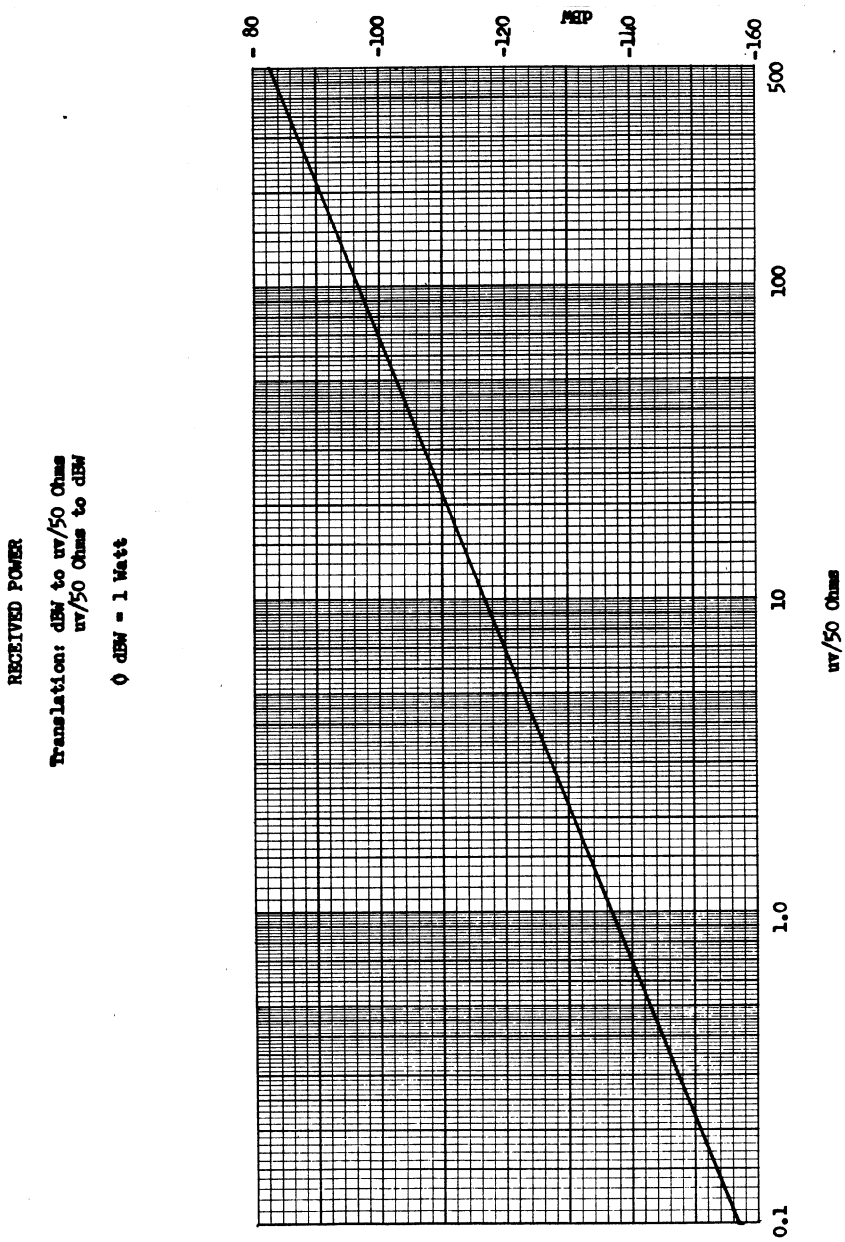
§ 80.761 Conversion graphs.

The following graphs must be employed where conversion from one to the other of the indicated types of units is required.

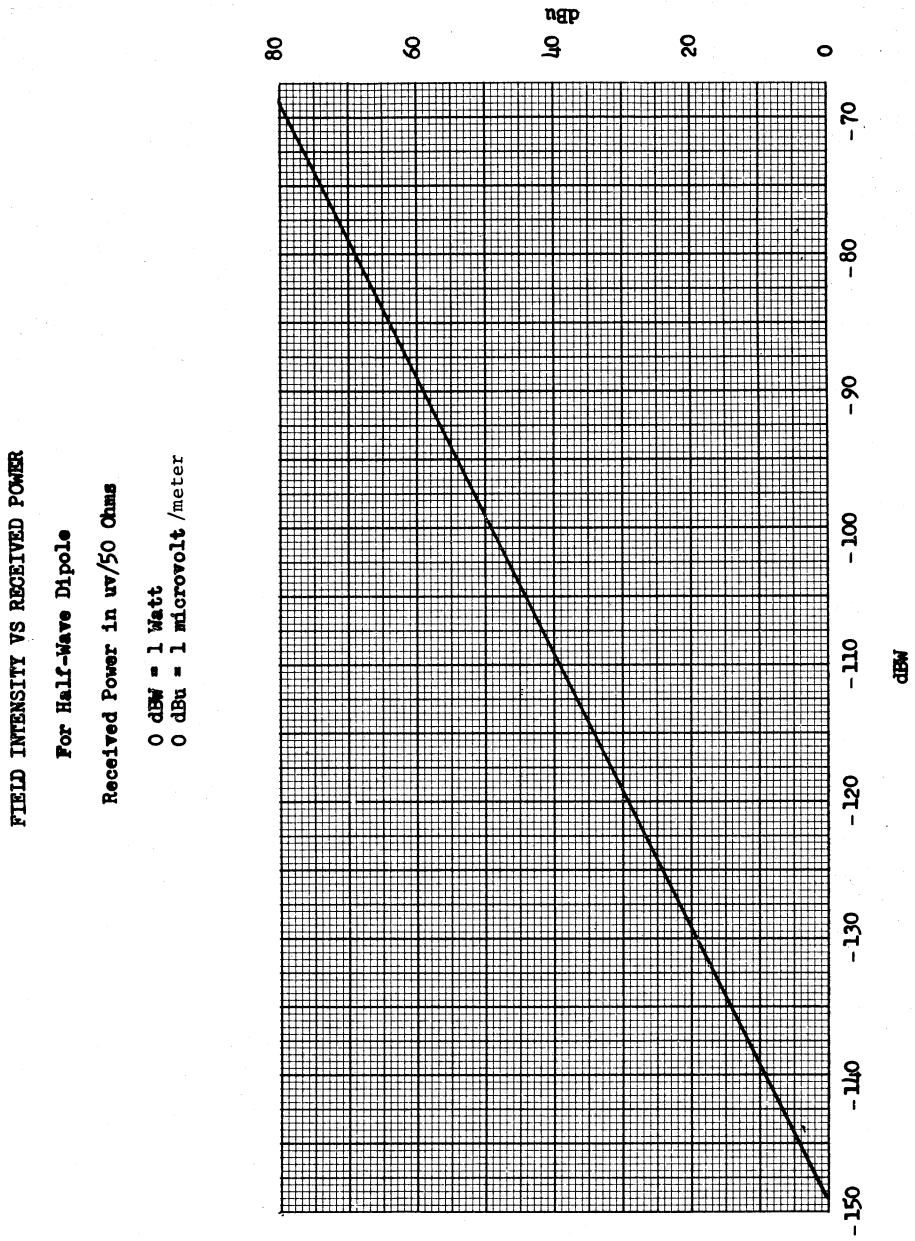
(a) *Graph 1.* To convert effective radiated power in watts to dBk or to dBW, find the power in watts on the horizontal axis. Move vertically along the line representing the power to the diagonal line. Move horizontally from the diagonal to the right side to read dBW and to the left to read dBk.

(b) *Graph 2.* To convert microvolts across 50 ohms to received power in dBW, find the signal in microvolts on the horizontal axis. Move vertically to the diagonal line, then move right horizontally to read dBW.


EFFECTIVE RADIATED POWER (ERP)
Translation: ERP to dBk 0 dBk = 1,000 Watts
ERP to dBW 0 dBW = 1 Watt
+40
+30
dBW
+20
+10
0
+10
0
dBk
-10
-20
-30
1
10
100
1,000
5,000
ERP - Watts



(c) *Graph 3.* To convert received power in dBW to field intensity in dBu find the received power in dBW on the horizontal axis. Move vertically to the diagonal line, then move right horizontally to read dBu.



§ 80.763 Effective antenna height.

The effective height of the antenna is the vertical distance between the center of the radiating system above the mean sea level and the average terrain elevation.