COCHANNEL INTERFERENCE STUDIES

COMPUTATIONAL METHODS

MOBILE RADIO

RADIO ENGINEERING

1. GENERAL

1.001 This addendum supplements Section 940-230-110, Issue 1.

1.002 This addendum is issued to change and simplify the formula for finding the effective radiated power (ERP) of an antenna.

2. CHANGES TO SECTION

2.001 On Page 8, change paragraph 8.11 as follows:

8.11 The design data of Fig. 11 shows that the proposed No. M-28358A antenna manufactured by Phelps Dodge Company produces a radiation pattern with 4.7 dB of gain (with respect to a 1/2-wave dipole antenna) in the direction of station KEJ901 and a transmission line loss of 1.2 dB. The proposed transmitter output power is shown as 100 watts or +20 dBW (dBW = 10 log power in watts). To find the effective radiated power (ERP), use the following formula:

$$\text{ERP (watts)} = \log^{-1}(x) = 10^{(x)}$$

where x equals the TX output power (dBW) plus the antenna gain (dB) minus the line loss (dB), all divided by 10.

$$x = \frac{20 + 4.7 - 1.2}{10} = 2.35$$

$$\text{ERP (watts)} = 10^{2.35} = 224 \text{ watts}$$

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