

5. Calculation of RF Levels Based on Current County-Approved Transmission Facilities

Figure 6 illustrates the calculated RF levels based on transmission facilities that Jefferson County has approved as of April 10, 2003, including those at the Mt Morrison facility. **Figure 6** does not include measured RF values because the transmitting facilities currently approved by the county are not all built or operational yet. Calculated RF values for selected areas are listed in Table 1 under the "Existing" column. The differences in the assumed transmitting facilities between Figures 5 and 6 are the following: KRMA-TV (ch 6) along with KUVO-FM (89.3MHz) and KVOD-FM (90.1MHz) are relocated to Mt Morrison. KRMA-DT did not exist in Figure 5 but is assumed to be operational at Mt Morrison for Figure 6. KWGN-DT (ch 34) is assumed to be operational at half power in Figure 6. KRFX-FM (103.5MHz) is currently operating on the existing KCNC-TV (ch 4) tower, but is assumed to be operating near the existing KWGN-TV tower for Figure 6. KFMD-FM (95.7MHz), KALC-FM (105.9MHz), and KBPI (106.7MHz) are not relocating; however their most current transmitter and antenna data was used for Figure 6.

6. Prediction of RF Levels Assuming LCG Facilities as Proposed

With confidence that calculations conservatively predict RF levels, these calculation procedures were used to predict new RF levels assuming the LCG proposed transmission facilities as described in the member stations' applications filed with the FCC and the zoning application. The details of the LCG transmitters are summarized in **Appendix E**. Selected calculations are listed in Table 1 under the "Proposed" column. **Figure 7** illustrates these predicted RF levels as percents of MPE limits. A comparison between **Figures 6** and **7** indicates improvements to the RF environment. This comparison shows that virtually all areas would experience a decreased RF level, except directly south of the Lookout Mountain summit. Since **Figures 4** and **5** as well as Table 1 indicated that the calculations tend to overestimate actual measured levels, the actual value to the south would most likely be much less than that indicated in **Figure 7**.

In the calculation of predicted RF levels, all FM stations have been assumed to operate at full licensed power, including those FM stations that previously had operated at reduced power. This was not the case for the November 2001 and the October 2002 calculations, as several of the FM stations had been transmitting at reduced power. This is primarily why both **Figures 6** and **7** seem to have increased power when compared to **Figures 4** and **5**. A comparison only of **Figures 6** and **7** indicate changes due solely by the LCG proposal.

The highest RF level on the LCG property is predicted to be 9.0% of the FCC limit for public exposure or 1.8% for occupational exposure. This level is predicted to occur directly below the proposed tower. The highest RF level off of LCG property is predicted to be at the location indicated in yellow in **Figure 7** at 80.0%. This represents a decrease from the 86.1% for what Jefferson County has currently approved (**Figure 6**). Of this total percent of MPE, only 0.16% is due to LCG transmitting facilities. The majority is due to KDVR-TV (ch 31), KDVR-DT (ch 32), KCEC-TV (ch 50), and the FM stations around the KWGN site.

Ten specific locations were independently selected for further analysis, nine of these were selected by Jefferson County's RF Engineering expert, Mr. Jim Hart, P.E.; one