# APPENDIX B

# EXAMPLE CALCULATION

IT CORPORATION
A Member of The IT Group

By D. Freer Date 3-9-2000 Subject FTMC Sample Calculation Sheet No. 1 of 1

Chkd. By ____ Date ____ Proj. No. ____

.25 in. X .25 in.

The following shows the cancer and noncancer numeric calculations for the groundskeeper's exposure to arsenic in soil. Based on equations 2-6 and 2-7 in section 2.2.1, using the tox values in Table A-1, the chemical specific values in Table A-2, and the variable values in Table A-3.

$$SSSL_{SL\text{-}GK_C} = \frac{1E\text{-}6 \cdot 70\ kg \cdot 25550\ days \cdot \left(\frac{1}{1}\right) \cdot \left(\frac{1}{250\ days/yr}\right) \cdot \left(\frac{1}{25\ yrs}\right) \cdot 1E+6\ mg/kg}{\left[100\ mg/day \cdot 1.5\ /mg/kg\text{-}day\right] + \left[5250\ cm^2/day \cdot 0.01\ mg/cm^2 \cdot 1E\text{-}3 \cdot 1.58/mg/kg\text{-}day\right] + \left[\frac{20\ m^3/day \cdot 15\ /mg/kg\text{-}day}{10\ m^3/mg}\right]}$$

$$= \frac{286.16\ mg}{150\ kg + 0.083\ kg + 30\ kg}$$

$$= 1.59E+0\ mg/kg$$

$$SSSL_{SL\,GK_n} = \frac{0.1 \cdot 70\ kg \cdot 9125\ days \cdot \left(\frac{1}{1}\right) \cdot \left(\frac{1}{250\ days/yr}\right) \cdot \left(\frac{1}{25\ yrs}\right) \cdot 1E+6\ mg/kg}{\left[\frac{100\ mg/day}{3E\text{-}4\ mg/kg\text{-}day}\right] + \left[\frac{5250\ cm^2/day \cdot 0.01\ mg/cm^2 \cdot 1E\text{-}3}{2.85E\text{-}4\ mg/kg\text{-}day}\right] + \left[\frac{20\ m^3/day}{0\ mg/kg\text{-}day \cdot 10\ m^3/mg}\right]}$$

$$= \frac{1.02E+7\ mg}{3.33E+5\ kg + 1.84E+2\ kg + 0\ kg}$$

$$= 3.06E+1\ mg/kg$$