

CALCULATION OF HUMAN NONCARCINOGENIC CRITERION (HNC)^a

$$\text{HNC} = \frac{\text{ADE} \times \text{BW} \times \text{RSC}}{\text{WC} + [(\text{FC}_{\text{TL3}} \times \text{BAFH}_{\text{TL3}}) + (\text{FC}_{\text{TL4}} \times \text{BAFH}_{\text{TL4}})]}$$

$$\begin{aligned} \text{Drinking Water HNC} &= \frac{2.6\text{E-}4 \text{ mg/kg/day} \times 70 \text{ kg} \times 0.8}{2.0 \text{ l/day} + [(0.0036 \text{ kg/day} \times 1.0 \text{ l/kg}) + (0.0114 \text{ kg/day} \times 1.0 \text{ l/kg})]} \\ &= 7.2\text{E-}3 \text{ mg/l} = 7.2 \text{ }\mu\text{g/l} \end{aligned}$$

$$\begin{aligned} \text{Nondrinking Water HNC} &= \frac{2.6\text{E-}4 \text{ mg/kg/day} \times 70 \text{ kg} \times 0.8}{0.01 \text{ l/day} + [(0.0036 \text{ kg/day} \times 1.0 \text{ l/kg}) + (0.0114 \text{ kg/day} \times 1.0 \text{ l/kg})]} \\ &= 0.58 \text{ mg/l} = 580 \text{ }\mu\text{g/l} \end{aligned}$$

CALCULATION OF HUMAN CARCINOGENIC CRITERION (HCC)^a

$$\text{HCC} = \frac{\text{RAD} \times \text{BW}}{\text{WC} + [(\text{FC}_{\text{TL3}} \times \text{BAFH}_{\text{TL3}}) + (\text{FC}_{\text{TL4}} \times \text{BAFH}_{\text{TL4}})]}$$

$$\begin{aligned} \text{Drinking Water HCC} &= \frac{6.667\text{E-}6 \text{ mg/kg/day} \times 70 \text{ kg}}{2.0 \text{ l/day} + [(0.0036 \text{ kg/day} \times 1.0 \text{ l/kg}) + (0.0114 \text{ kg/day} \times 1.0 \text{ l/kg})]} \\ &= 2.3\text{E-}4 \text{ mg/l} = 0.23 \text{ }\mu\text{g/l} \end{aligned}$$

$$\begin{aligned} \text{Nondrinking Water HCC} &= \frac{6.667\text{E-}6 \text{ mg/kg/day} \times 70 \text{ kg}}{0.01 \text{ l/day} + [(0.0036 \text{ kg/day} \times 1.0 \text{ l/kg}) + (0.0114 \text{ kg/day} \times 1.0 \text{ l/kg})]} \\ &= 1.9\text{E-}2 \text{ mg/l} = 19 \text{ }\mu\text{g/l} \end{aligned}$$

^aSee Ohio Administrative Code 3745-1-38 effective October 31, 1997.