Chemical Name: Pentachlorobenzene Developed by: Bob Heitzman, John Estenik
CAS # 608-93-5 IRIS Data Retrieval Date: 2-12-98
Internal Code # ___ Fact Sheet Preparation Date: 2-12-98

CRITERIA SUMMARY

Lake Erie Basin			
Tier I HNC (μg/l)		Tier I HCC (μg/l)	
Drinking	Nondrinking	Drinking	Nondrinking
0.18	0.19	ID	ID

EXPOSURE AND TOXICITY DATA

Human health trophic level 3 bioaccumulation factor ($BAFHH_{TL3}$) = 8,248 l/kg (USEPA 1995)
Human health trophic level 4 bioaccumulation factor ($BAFHH_{TL4}$) = 19,420 l/kg (USEPA 1995)
Acceptable daily exposure (ADE) = 8.3E-4 mg/kg/day (IRIS RfD, last revised 03/01/88)
Carcinogen assessment: Class D; not classifiable (IRIS, last revised 02/01/95)
Cancer slope factor (q_1*) = Not available (IRIS, last revised 02/01/95)
Body weight of average human (BW) = 70 kg (OAC 3745-1-38)
Relative source contribution factor (RSC) = 0.8 (OAC 3745-1-38)
Per capita water consumption (WC) = 2.0 l/day for drinking water criteria (OAC 3745-1-38)
= 0.01 l/day for nondrinking water criteria (OAC 3745-1-38)
Mean consumption of trophic level three fish (FC_{TL3}) = 0.0036 kg/day (OAC 3745-1-38)
Mean consumption of trophic level four fish (FC_{TL4}) = 0.0114 kg/day (OAC 3745-1-38)

REFERENCES

Integrated Risk Information System. USEPA Office of Research and Development, National Center for Environmental Assessment.

Ohio Administrative Code rule 3745-1-38: Methodologies for Development of Human Health Criteria and Values for the Lake Erie Drainage Basin. Effective 10/31/97.

USEPA. 1995. Great Lakes Water Quality Initiative Technical Support Document for the Procedure to Determine Bioaccumulation Factors. EPA-820-B-95-005. March 1995. p. H-3.

CALCULATION OF HUMAN NONCARCINOGENIC CRITERION (HNC) [a]

$$HNC = \frac{ADE \times BW \times RSC}{WC + [(FC_{TL3} \times BAFHH_{TL3}) + (FC_{TL4} \times BAFHH_{TL4})]}$$

$$\text{Drinking Water HNC} = \frac{8.3E\text{-}4 \text{ mg/kg/day} \times 70 \text{ kg} \times 0.8}{2.0 \text{ l/day} + [(0.0036 \text{ kg/day} \times 8{,}248 \text{ l/kg}) + (0.0114 \text{ kg/day} \times 19{,}420 \text{ l/kg})]}$$

$$= 1.8E\text{-}4 \text{ mg/l} = 0.18 \text{ } \mu\text{g/l}$$

$$\text{Nondrinking Water HNC} = \frac{8.3E\text{-}4 \text{ mg/kg/day} \times 70 \text{ kg} \times 0.8}{0.01 \text{ l/day} + [(0.0036 \text{ kg/day} \times 8{,}248 \text{ l/kg}) + (0.0114 \text{ kg/day} \times 19{,}420 \text{ l/kg})]}$$

$$= 1.9E\text{-}4 \text{ mg/l} = 0.19 \text{ } \mu\text{g/l}$$

CALCULATION OF HUMAN CARCINOGENIC CRITERION (HCC) [a]

$$HCC = \frac{RAD \times BW}{WC + [(FC_{TL3} \times BAFHH_{TL3}) + (FC_{TL4} \times BAFHH_{TL4})]}$$

Insufficient data (no q_1*).

[a] See Ohio Administrative Code 3745-1-38 effective October 31, 1997.