OHIO EPA SURFACE WATER HUMAN HEALTH CRITERION FACT SHEET

Chemical Name: Nitrate Developed by: Bob Heitzman, John Estenik

CAS # 14797-55-8 IRIS Data Retrieval Date: 2-13-98 Internal Code # Fact Sheet Preparation Date: 2-13-98

CRITERIA SUMMARY

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

EXPOSURE AND TOXICITY DATA

Human health trophic level 3 bioaccumulation factor (BAFHH _{TL3}) = Not available

Human health trophic level 4 bioaccumulation factor (BAFHH_{TL4}) = Not available

Acceptable daily exposure (ADE) = 1.6 mg/kg/day (IRIS RfD, last revised 10/01/91)

Carcinogen assessment: Not available (IRIS)

Cancer slope factor (q_1^*) = Not available (IRIS)

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)

<u>REFERENCES</u>

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.

Page 1 of 2

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CALCULATION OF
HUMAN NONCARCINOGENIC CRITERION (HNC) ^a

 $\label{eq:hnc} \begin{aligned} \text{HNC} \ = \ & \frac{\text{ADE x BW x RSC}}{\text{WC} + [(\text{FC}_{\text{TL3}} \times \text{BAFHH}_{\text{TL3}}) + (\text{FC}_{\text{TL4}} \times \text{BAFHH}_{\text{TL4}})]} \end{aligned}$

Insufficient data (no BAF).

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 q₁* or BAF).

Page 2 of 2

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