

Chemical Name: Lead (inorganic) Developed by: Bob Heitzman, John EstenikCAS # 7439-92-1 IRIS Data Retrieval Date: 2-12-98Internal Code # 88 Fact Sheet Preparation Date: 2-13-98

CRITERIA SUMMARY

| Lake Erie Basin | | | |
|--------------------------------|-------------|--------------------------------|-------------|
| Tier I HNC ($\mu\text{g/l}$) | | Tier I HCC ($\mu\text{g/l}$) | |
| Drinking | Nondrinking | Drinking | Nondrinking |
| ID | ID | ID | ID |

EXPOSURE AND TOXICITY DATA

Human health trophic level 3 bioaccumulation factor ($\text{BAFH}_{\text{TL}3}$) = 10.07 l/kg (MDEQ)Human health trophic level 4 bioaccumulation factor ($\text{BAFH}_{\text{TL}4}$) = 10.07 l/kg (MDEQ)

Acceptable daily exposure (ADE) = Not available (IRIS, last revised 02/01/91)

Carcinogen assessment: B2; probable human carcinogen (IRIS, last revised 11/01/93)

Cancer slope factor (q_1^*) = Not available (IRIS, last revised 11/01/93)

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 ($\text{FC}_{\text{TL}3}$) = 0.0036 kg/day (OAC 3745-1-38)Mean consumption of trophic level four fish ($\text{FC}_{\text{TL}4}$) = 0.0114 kg/day (OAC 3745-1-38)

REFERENCES

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

Michigan Department of Environmental Quality, Surface Water Quality Division. 1997. Bioaccumulation Factor Worksheet for Lead. Verification Date: 10/97.

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.

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CALCULATION OF
HUMAN NONCARCINOGENIC CRITERION (HNC) ^a

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

Insufficient data (no RfD).

CALCULATION OF
HUMAN CARCINOGENIC CRITERION (HCC) ^a

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

Insufficient data (no q_1^*).

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