AL -CRIT-00101
-00102

HH CRIT-00161
-00162

BAF = CRIT-00792

TIER II ACUTE AND CHRONIC AQUATIC LIFE VALUES FOR FLUORANTHENE

Standard:

The procedures described in the Tier II methodology indicate that, except possibly where a locally important species is very sensitive, aquatic organisms should not be affected unacceptably if the four (4) day average concentration of fluoranthene does not exceed 33 µg/L more than once every three (3) years on the average and if the one (1) hour average concentration does not exceed 154 µg/L more than once every three (3) years on the average.

Calculations:

Acute Aquatic Life:

SAV = lowest GMAV/SAF

Lowest GMAV = 4,000 µg/L
SAF = 13.0

SAV =4,000/13.0 = 307.7 µg/L

SMC = SAV/2 = 307.7/2 = **154 µg/L**

Chronic Aquatic Life:

SCV = SAV/SACR

SACR = 9.32 (Geometric mean of 18, 18, 2.5)

SCV = 307.7/9.32 = **33 µg/L**

Notes:

NONE

Table 1. GMAVs and SMAVs for fluoranthene

Genus Mean Acute Value (µg/L)	Species	Species Mean Acute Value (µg/L)	Acute-Chronic Ratio	Reference Number
4,000	Bluegill *Lepomis macrochirus*	4,000		1
320,000	Cladoceran *Daphnia magna*	320,000		2
	Mysid Shrimp *Mysidopsis bahia*		2.5	3

References:

1. Buccafusco, R.J., S.J. Ells, G.A. LeBlanc 1981. Acute toxicity of priority pollutants to bluegill (*Lepomis macrochirus*). Bull. Environ. Contam. Toxicol. 26(4): 446-452.

2. LeBlanc, G.A. 1980. Acute toxicity of priority pollutants to water flea (*Daphnia magna*). Bull. Environ. Contam. Toxicol. 24: 684-691.

3. USEPA 1980. Ambient water quality criteria for fluoranthene. EPA 440/5-80-049.

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