AL ~~CRIT-00482~~ 00482 CRIT-00091 00092 HH CRIT-00157 158 BAF= CRIT-00787

TIER II ACUTE AND CHRONIC AQUATIC LIFE VALUES FOR
BIS(2-ETHYHEXYL) PHTHALATE

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 bis(2-ethylhexyl) phthalate (DEHP) does not exceed 88 µg/L more than once every three (3) years on the average and if the one (1) hour average concentration does not exceed 384 µg/L more than once every three (3) years on the average.

Calculations:

Acute Aquatic Life:

SAV = lowest GMAV/SAF

Lowest GMAV = 4,690 µg/L
SAF = 6.1

SAV = 4,690/6.1 = 768.9 µg/L

SMC = SAV/2 = 768.9/2 = **384 µg/L**

Chronic Aquatic Life:

SCV = SAV/SACR

SACR = 8.7 (geometric mean of 18, 18, and 2)

SCV = 768.9/8.7 = **88 µg/L**

Calculation of ACR's

Fathead Minnows

MATC = 1.0 mg/L (geometric mean of LOEC and NOEC)

ACR = LC_{50}/MATC = 2/1 = 2.0

Notes:

NONE

Table 1. GMAVs and SMAVs for DEHP

Genus Mean Acute Value (µg/L)	Species	Species Mean Acute Value (µg/L)	Reference Number
4,690	Cladoceran *Daphnia magna*	4,690	1,4
>91,657	Bluegill *Lepomis macrochirus*	>91,657	2,5,6
>10,000	Fathead Minnow *Pimephales promelas*	>10,000	5
44,159	Rainbow Trout *Onchorhynchus mykiss*	44,159	4
	Coho Salmon *Oncorhynchus kisutch*	>100,000	6
>31,622	Channel Catfish *Ictalurus punctatus*	>31,622	5
>21,715	Scud *Gammarus pseudolimnaeus*	>21,715	5,6,7
>10,000	Crayfish *Orconectes nais*	>10,000	5

References:

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