

VALUE(S) ADDED 7-24-85

FACT SHEET REVISED -----

VALUE(S) REMOVED -----

Date: August 6, 1984

Surface Water Quality  
Standard Documentation

Chemical: Hexachlorocyclopentadiene

C.A.S. No.(s): 77-47-4

Basis (Human/Aquatic): Aquatic

Standard by Water Classification:

|                           | <u>ug/l</u> | <u>Notes</u> |
|---------------------------|-------------|--------------|
| Classes AA,AA-s;A;A-s;B;C | 0.45        | J            |
| Class D                   | 4.5         | K            |
| Classes SA;SB;SC;I        | 0.07        | J            |
| Class SD                  | 0.7         | K            |

Remarks:

Summary of Information

1. EPA. 1980. Ambient water quality criteria for hexachlorocyclopentadiene. EPA 440/5-80-055. USEPA, Wash., D.C.

"Criteria

Aquatic Life

"The available data for hexachlorocyclopentadiene indicate that acute and chronic toxicity to freshwater aquatic life occur at concentrations as low as 7.0 and 5.2 ug/l, respectively, and would occur at lower concentrations among species that are more sensitive than those tested.

"The available data for hexachlorocyclopentadiene indicate that acute toxicity to saltwater aquatic life occurs at concentrations as low as 7.0 ug/l and would occur at lower concentrations among species that are more sensitive than those tested. No data are available concerning the chronic toxicity of hexachlorocyclopentadiene to sensitive saltwater aquatic life."

-the freshwater acute test resulting in an LC<sub>50</sub> of 7.0 ug/l was conducted with larval fish; the mean LC<sub>50</sub> for Daphnia magna was 45 ug/l.

-while degradable in water this compound has the potential to persist in sediments and biota.

2. Log of octanol/water partition coefficient = 4.24. ---

#### Standard Derivation

The potential for persistence and the high degree of toxicity of this compound justifies use of an application factor (AF) of 0.01. Multiplying the Daphnia LC<sub>50</sub> of 45 ug/l by 0.1 results in a value of 4.5 ug/l; multiplying by an AF=0.01 results in a value of 0.45 ug/l. These concentrations should be the standards in Class D and in all freshwater classes except D, respectively. Multiplying the saltwater acute toxicity concentration of 7 ug/l by 0.1 results in a value of 0.7 ug/l; multiplying by an AF=0.01 results in a value of 0.07 ug/l. These concentrations should be the standards in Class SD and in all saltwater classes except SD, respectively.