VALUE(S) ADDED 7-24-85

FACT SHEET REVISED _____

VALUE(S) REMOVED _____

Date: August 6, 1984

Surface Water Quality
Standard Documentation

Chemical: Hexachlorobutadiene

C.A.S, No.(s): 87-68-3

Basis (Human/Aquatic): Aquatic

Standard by Water Classification:

	ug/l	Notes
Classes AA,AA-s;A;A-s;B;C	1	J
Class D	10	K
Classes SA;SB;SC;I	0.3	J
Class SD	3	K

Remarks:

Summary of Information

EPA. 1980. Ambient water quality criteria for hexachlorobutadiene. EPA 440/5-80-053.

"Criteria

Aquatic Life

"The available date for hexachlorobutadiene indicate that acute and chronic toxicity to freshwater aquatic life occur at concentrations as low as 90 and 9.3 ug/l, respectively, and would occur at lower concentrations among species that are more sensitive than those tested.

"The available data for hexachlorobutadiene indicate that acute toxicity to saltwater aquatic life occurs at concentrations as low as 32 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 hexachlorobutadiene to sensitive saltwater aquatic life."

-P.A-1.: presence in drinking waters led the authors to write: "These concentrations indicate that HCBD may be quite persistent in natural waters."

-bioconcentration factors in gold fish ranged from 920-2300.

Standard Derivation

Because of the persistence and extreme toxicity of HCBD an application factor (AF) of 0.01 should be used. Using the freshwater acute value of 90 ug/l and the AF=0.01 results in a value of about 1 ug/l. The standard of 1 ug/l should be adopted for all freshwater classes except D. Multiplication of the acute value of 90 ug/l by an AF=0.1 results in a value of 9 ug/l; therefore the standard of 10 ug/l should be adopted for Class D. The only chronic value available of 9.3 ug/l is close to acutely toxic concentrations of both fresh and saltwater life. In order to assure adequate protection for sensitive species it is justified to derive the standard using acute data and an application factor.

Using the saltwater acute value of 32 ug/l and multiplying by AF=0.1 and 0.01 results in values of 3 and 0.3 ug/l. These values should be adopted as standards for Class D and freshwater classes except D, respectively.