



## Fact Sheet

# Sediment Quality Criteria for the Protection of Benthic Organisms: Dieldrin

### AUTHORITY

Sediment quality criteria are published pursuant to Section 304(a) of the Clean Water Act and may form the basis for enforceable standards if adopted by a State into water quality standards. The criteria present the U.S. EPA's best recommendation of the concentration of dieldrin that may be present in sediment while still protecting benthic organisms from its effects. They are developed using an approach described in the "Technical Basis for Deriving Sediment Quality Criteria for Nonionic Organic Contaminants for the Protection of Benthic Organisms by using Equilibrium Partitioning" (EPA-822-R-93-011).

### BACKGROUND

Dieldrin was one of the most widely used chlorinated hydrocarbon pesticides prior to its cancellation in 1974. Aldrin, which quickly transforms to dieldrin, was used in even greater quantity than dieldrin until its cancellation, also in 1974. Both chemicals were primarily used to control insect pests, originally on corn and later on citrus fruits. (CAS No. 60-57-1)

### CRITERIA VALUES

- \* Freshwater benthic organisms should not be affected unacceptably if the concentration of dieldrin in the sediment never exceeds 11 ug/g<sub>oc</sub>.
- \* Saltwater benthic organisms should not be affected unacceptably if the concentration of dieldrin in the sediment never exceeds 20 ug/g<sub>oc</sub>.

### IMPLEMENTATION INTO STATE STANDARDS

Sediment quality criteria may form the basis for enforceable standards if adopted by a State into water quality standards. States may opt to develop site specific

criteria (Guidelines for Deriving Site-Specific Sediment Quality Criteria for the Protection of Benthic Organisms, EPA-822-R-017). Replacement of national criteria with site specific criteria may be necessary if (1) species at the site are more or less sensitive than those included in the national criteria data set or (2) the sediment or chemical quality characteristics at that site alter the bioavailability and consequently the toxicity of the sediment bound chemical predicted by Equilibrium Partitioning (EqP).

### AVAILABILITY OF DOCUMENT

Copies of the criteria document, and other referenced documents, may be obtained

from the address below.

***Sediment Quality Criteria for the  
Protection of Benthic Organisms:  
Dieldrin (EPA-822-R-93-015)***

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