

Test Sample Type	Sample Salinity	Test Species	Test Type	Test Method
Soil		Earthworm, <i>Eisenia fetida</i> Earthworm, <i>Eisenia fetida</i> White Worm, <i>Enchytraeus</i> sp. Springtail, <i>Folsomia candida</i> Nematode, <i>Caenorhabditis elegans</i> Lettuce seed, <i>Lactuca sativa</i> Lettuce root, <i>Lactuca sativa</i> Corn root, <i>Zea mays</i>	Acute, survival Chronic, reproduction Chronic, reproduction Chronic, reproduction Acute, survival Acute, germination Chronic, elongation Chronic, elongation	EPA/600/3-88/029; A.8.5, ASTM E1676-12 ISO 11268-2:2012 ISO/CD 16387:2014 ISO 11267:2014 ASTM E2172-01:2014 EPA/600/3-88/029; A.8.6 EPA/600/3-88/029; A.8.7 Sunderland et al. 1991
Whole Sediment w/overlying water	Freshwater	Amphipod, <i>Hyalella azteca</i> <b>Amphipod, <i>Hyalella azteca</i></b> Midge, <i>Chironomus tentens</i> <b>Midge, <i>Chironomus tentens</i></b>	Acute, survival <b>Chronic, survival, growth,</b> Acute, survival <b>Life-Cycle</b>	EPA/600/R-99/064; 100.1 <b>EPA/600/R-99/064 (42-day); 100.4</b> EPA/600/R-99/064; 100.2 <b>EPA/600/R-99/064: 100.5</b>
	Salt water	Amphipod, <i>Ampelisca abdita</i> Amphipod, <i>Leptochirus plumulosus</i> <b>Amphipod, <i>Leptochirus plumulosus</i></b> Amphipod, <i>Euhaustorius estuarius</i> Amphipod, <i>Rhepoxynius abronius</i> Amphipod, <i>Hyalella azteca</i> (1-15 ppt) <b>Amphipod, <i>Hyalella azteca</i> (1-15 ppt)</b> Coot Clam, <i>Mulinia lateralis</i>	Acute, survival Acute, survival <b>Chronic, growth, reproduction</b> Acute, survival Acute, survival Acute, survival <b>Chronic, survival, growth,</b> Chronic, development	EPA/600/R-94/025; 100.4 EPA/600/R-94/025; 100.4 <b>EPA-600-R-01-020</b> EPA/600/R-94/025; 100.4 EPA/600/R-94/025; 100.4 EPA/600/R-94/025; 100.4 EPA/600/R-99/064; 100.1 <b>EPA/600/R-99/064 (42-day); 100.4</b> EPA ERLN
Elutriate and Pore Water	Freshwater	Bannerfin Shiner, <i>Cyprinella leedsii</i> Fathead Minnow, <i>Pimephales promelas</i> <b>Fathead Minnow, <i>Pimephales promelas</i></b> Water Flea, <i>Daphnia pulex</i> Water Flea, <i>Daphnia magna</i> Water Flea, <i>Ceriodaphnia dubia</i> <b>Water Flea, <i>Ceriodaphnia dubia</i>**</b> <b>Green Alga, <i>Selenastrum capricornutum</i></b>	Acute, survival Acute, survival <b>Chronic, growth</b> Acute, survival Acute, survival Acute, survival <b>Chronic, reproduction</b> <b>Chronic, growth</b>	EPA-821-R-02-012*; 2000.0 EPA-821-R-02-012*; 2000.0 <b>EPA-821-R-02-013*; 1000.0</b> EPA-821-R-02-012*; 2021.0 EPA-821-R-02-012*; 2021.0 EPA-821-R-02-012*; 2002.0 <b>EPA-821-R-02-013*; 1002.0</b> <b>EPA-821-R-02-Q13*; 1003.0</b>
	Salt water	Inland Silverside, <i>Menidia beryllina</i> <b>Inland Silverside, <i>Menidia beryllina</i></b> Opossum Shrimp, <i>Americamysis bahia</i> <b>Opossum Shrimp, <i>Americamysis bahia</i></b> Coot Clam, <i>Mulinia lateralis</i> <b>Sea Urchin, <i>Arbacia punctulata</i></b>	Acute survival <b>Chronic, growth</b> Acute, survival <b>Chronic, growth</b> Chronic, reproduction <b>Chronic, fertilization</b>	EPA-821-R-02-012*; 2006.0 <b>EPA-821-R-02-014*; 1006.0</b> EPA-821-R-02-012*; 2007.0 <b>EPA-821-R-02-014*; 1007.0</b> EPA ERLN <b>EPA-821-R-02-014*; 1008.0</b>
Water	Freshwater	Bannerfin Shiner, <i>Cyprinella leedsii</i> Fathead Minnow, <i>Pimephales promelas</i> <b>Fathead Minnow, <i>Pimephales promelas</i></b> Water Flea, <i>Daphnia pulex</i> Water Flea, <i>Daphnia magna</i> Water Flea, <i>Ceriodaphnia dubia</i> <b>Water Flea, <i>Ceriodaphnia dubia</i>**</b> <b>Green Alga, <i>Selenastrum capricornutum</i></b>	Acute, survival Acute, survival <b>Chronic, growth</b> Acute, survival Acute, survival Acute, survival <b>Chronic, reproduction</b> <b>Chronic, growth</b>	EPA-821-R-02-012 2000.0 EPA-821-R-02-012 2000.0 <b>EPA-821-R-02-013 1000.0</b> EPA-821-R-02-012 2021.0 EPA-821-R-02-012 2021.0 EPA-821-R-02-012 2002.0 <b>EPA-821-R-02-13; 1002.0</b> <b>EPA-821-R-02-13: 1003.0</b>

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	<b>Salt water</b>	Inland Silverside, <i>Menidia beryllina</i> <b>Inland Silverside, <i>Menidia beryllina</i></b> Opossum Shrimp, <i>Americamysis bahia</i> <b>Opossum Shrimp, <i>Americamysis bahia</i></b> Coot Clam, <i>Mulinia lateralis</i> <b>Sea Urchin, <i>Arbacia punctulata</i></b>	Acute, survival <b>Chronic, growth</b> Acute, survival <b>Chronic, growth</b> Acute and Chronic <b>Chronic fertilization</b>	EPA-821-R-02-012 2006.0 <b>EPA-821-R-02-014 1006.0</b> EPA-821-R-02-012 2007.0 <b>EPA-821-R-02-014; 1007.0</b> EPA ERLN <b>EPA-821-R-02-014: 1008.0</b>

\*Use EPA/600/3-88/029 for preparing elutriates from soils. Use EPA-823-8-98-004 for preparing elutriates from sediments

\*\* Not suitable for use with some groundwater.

ASTM E1676-12. Standard Guide for Conducting Laboratory Soil Toxicity or Bioaccumulation Tests with the Lumbricid Earthworm *Eisenia fetida* and the Enchytraeid Potworm *Enchytraeus albidus*.

ASTM E2172-01:2014. Standard Guide for Conducting Laboratory Soil Toxicity Tests with the Nematode *Caenorhabditis elegans*.

EPA/600/3-88/029. Protocols for short-term toxicity screening of hazardous waste sites.

EPA-823-8-98-004. Evaluation of dredge material proposed for discharge in waters of the U.S. - Testing manual.

EPA/600/R-99/064. Methods for measuring the toxicity and bioaccumulation of sediment-associated contaminants with freshwater

invertebrates, 2nd ed. EPA/600/R-94/025. Methods for measure the toxicity and bioaccumulation of sediment-associated contaminants with estuarine and marine amphipods EPA-821-R-02-013. Short-term methods for estimating the chronic toxicity of effluents and receiving waters to freshwater organisms, 4th Edition.

EPA-821-R-02-014. Short-term methods for estimating the chronic toxicity of effluents ad receiving waters to marine and estuarine organisms, 3rd Edition. EPA-821-R-02-012. Methods for measuring the acute toxicity of effluents and receiving waters to freshwater and marine organisms, 5th Ed.

EPA ERLN Embryo-larval test using the bivalve *Mulinia lateralis* - SOP Rev. 0, March 1993. Narragansett ERL.

ISO 11268-2:2012. Soil Quality - Effects of Pollutants on Earthworms (*Eisenia fetida*) - Part 2: Determination of Effects on Reproduction.

ISO/CD 16387:2014. Soil Quality - Effects of Pollutants on Enchytraeidae (*Enchytraeus* sp.) - Determinations of effects on reproduction and survival.

ISO 11267:2014. Soil Quality - Inhibition of Reproduction of Collembola (*Folsomia candida*) by Soil contaminants.

Sutherland, S.L., P.W. Santelmann, and T.A. Baughman. 1991. A rapid, sensitive soil bioassay for sulfonyleurea herbicides. Weed Science 39: 296-298.