NCA Northeast Year 2003 Sediment Toxicity Data

These data have not passed final QA and should be considered provisional.

To download Ascii Text data files, select state, view data, then use your browser's "File" "Save As..." option. All data files are comma delineated CSV files.

To download SAS Export files in Zipped SAS Export Format, select from list then "Save it to disk". Several software packages are available to unzip files. The SAS software system is needed to process unzipped SAS XPORT files.

These datasets contain the results of Amphipod survival tests. The variables in the data files are:

STATION	Station Identifier
STAT_ALT	Alternate Site Sampled (A, B, or C)
EVNTDATE	Date of Sampling Event
SAMPLEID	Sediment Toxicity Sample Identifier
SPECIES	Test Organism
MNPCTSRV	Mean Survival as Percent of Control Survival
SIG	Statistically Significant Diff in Survival (p<=.05)
ATOXSIG	Biologically Significant Toxicity (NT, <80%, or <60% Surv.)

STATION and STAT_ALT should be used to link test results with Station locations recorded in the STATIONS dataset. MNPCTSRV is the mean percent survival of test organisms in all replicate tests, normalized to the percent survival in control sample. The variable SIG indicates whether or not the difference in sample and control survival was statistically significant (p<=.05). The variable ATOXSIG is a three category summarization of the results: “NT” indicates no significant toxicity, “<80%” indicates that sediment is toxic and survival was less than 80%, ”<60%” indicates that sediment is highly toxic, with survival less than 60%.

The methods used in these toxicity tests follows:

Sediments were tested for toxicity using the 10-day *Ampelisca abdita* assay. Amphipods were exposed to sediments for 10 days under static conditions following EMAP procedures (EPA 1994, 1995). Sediment samples were stored in the dark at 4 ^{o}C prior to analysis. Control sediments were obtained from a clean salt water site. Each sediment sample was passed through a 1 or 2 mm mesh to remove resident organisms, pebbles, *etc.*, and was stirred to homogenize. Five replicate tests were performed with each field sample along with a test using the control sediment. For each test, 200 mL of sediment sample were placed in a glass container and covered with 750 mL of clean, filtered water (maintained at 20 ^{o}C, a salinity of 30ppt, and a dissolved oxygen concentration >60% of saturation). Total ammonia concentration was measured colorimetrically on filtered pore water taken from a sixth replicate. For concentrations greater than 20 mg/L, the sediment was flushed until ammonia levels fell below 20 mg/L. Twenty juvenile amphipods between 1 and mm in length (curled) were added to each test chamber for a ten-day exposure. The surviving amphipods were counted, and the results reported

as the average number of amphipods surviving in the sample tests divided by the number of amphipods surviving in the control sediment, expressed as a percent. Lower values of this result indicate higher toxicity. The result was considered to be statistically significant if sample and control values were distinct with a p-value $\leq$ 0.05 in a one way ANOVA F test. The assay was taken to indicate toxicity if the survival rate was less than 80% of the control and the test was statistically significant.