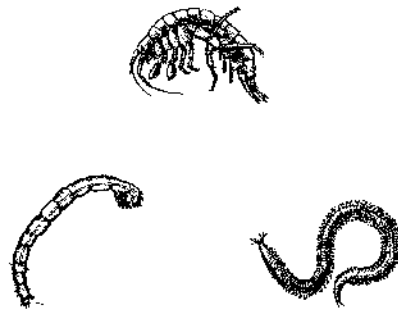


APPENDIX C:

B-H LABORATORY TOXICITY TESTING REPORT

**Results of Whole Sediment
Toxicity Testing for the
Meadowlands Environmental
Research Institute
Lyndhurst, New Jersey**

B-H Laboratories Study No. 0465



Prepared for:

ENSR International, Inc.



February 2004

Results of 28-Day Whole Sediment
Toxicity Testing for the

Meadowlands Environmental
Research Institute
Lyndhurst, New Jersey

Using the

Freshwater amphipod, *Hyalella azteca*,
Midge Larvae, *Chironomus tentans* and
Marine Annelid, *Neanthes arenaceodentata*



1 through 29 October 2003,
3 through 13 October 2003 and
12 through 22 October 2003

Prepared for:

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B-H laboratories Study No. 0465

February 2004

TABLE OF CONTENTS

	Page
LIST OF APPENDICES	
INTRODUCTION	1
MATERIALS	2
TEST ORGANISMS	2
NEGATIVE CONTROL SEDIMENT	3
TEST SEDIMENTS	3
OVERLYING WATER	3
METHODS	4
<i>HYALELLA AZTECA</i>	
28-DAY WHOLE SEDIMENT TOXICITY TEST METHODS	4
<i>CHIRONOMUS TENTANS</i>	
10-DAY WHOLE SEDIMENT TOXICITY TEST METHOD	5
<i>NEANTHES ARENACEODENTATA</i>	
10-DAY WHOLE SEDIMENT TOXICITY TEST METHOD	6
STATISTICAL ANALYSIS	6
RESULTS AND TABLES	8
Table 1a.	Summary of Survival Data – <i>Hyaella azteca</i> 28-Day Whole Sediment Toxicity Test Conducted at 10-ppt using Reference Sediment SAW-01. NJMC-MERI Wetland Ecological Risk Assessment, 1 through 29 October 2003.
Table 1b.	Summary of Growth Data – <i>Hyaella azteca</i> 28-Day Whole Sediment Toxicity Test Conducted at 10-ppt using Reference Sediment SAW-01. NJMC-MERI Wetland Ecological Risk Assessment, 1 through 29 October 2003.
Table 2a.	Summary of Survival Data – <i>Hyaella azteca</i> 28-Day Whole Sediment Toxicity Test Conducted with Moderately Hard Reconstituted Water using the Negative Control Sediment. NJMC-MERI Wetland Ecological Risk Assessment, 1 through 29 October 2003.
Table 2b.	Summary of Growth Data – <i>Hyaella azteca</i> 28-Day Whole Sediment Toxicity Test Conducted with Moderately Hard Reconstituted Water using the Negative Control Sediment. NJMC-MERI Wetland Ecological Risk Assessment, 1 through 29 October 2003.
Table 3a.	Summary of Survival Data – <i>Chironomus tentans</i> 10-Day Whole Sediment Toxicity Test Conducted with Moderately Hard Reconstituted Water using the Negative Control Sediment. NJMC-MERI Wetland Ecological Risk Assessment, 3 through 13 October 2003.
Table 3b.	Summary of Growth Data – <i>Chironomus tentans</i> 10-Day Whole Sediment Toxicity Test Conducted with Moderately Hard Reconstituted Water using the Negative Control Sediment. NJMC-MERI Wetland Ecological Risk Assessment, 3 through 13 October 2003.

RESULTS AND TABLES (continued)

Table 4a.	Summary of Survival Data – <i>Neanthes arenaceodentata</i> 10-Day Whole Sediment Toxicity Test Conducted at 25-ppt using Reference Sediment SAW-01. NJMC-MERI Wetland Ecological Risk Assessment, 12 through 22 October 2003.
Table 4b.	Summary of Growth Data – <i>Neanthes arenaceodentata</i> 10-Day Whole Sediment Toxicity Test Conducted at 25-ppt using Reference Sediment SAW-01. NJMC-MERI Wetland Ecological Risk Assessment, 12 through 22 October 2003.
Table 5a-h	Daily Observation Data – <i>Hyalella azteca</i> 28-Day Whole Sediment Toxicity Test Conducted at 10-ppt, 1 through 29 October 2003.
Table 6a-b	Daily Observation Data – <i>Hyalella azteca</i> 28-Day Whole Sediment Toxicity Test Conducted with Moderately Hard Reconstituted Water, 1 through 29 October 2003
Table 7a-h	Daily Observation Data – <i>Chironomus tentans</i> 10-Day Whole Sediment Toxicity Test Conducted with Moderately Hard Reconstituted Water, 3 through 13 October 2003
Table 8a-c	Daily Observation Data – <i>Neanthes arenaceodentata</i> 10-Day Whole Sediment Toxicity Test Conducted with Moderately Hard Reconstituted Water, 11 through 22 October 2003
Table 9a-h.	Temperature, dissolved oxygen, pH, Conductivity and Ammonia Data – <i>Hyalella azteca</i> 28-Day Whole Sediment Toxicity Test Conducted at 10-ppt. NJMC-MERI Wetland Ecological Risk Assessment, 1 through 29 October 2003.
Table 10a-d.	Temperature, dissolved oxygen, pH, Conductivity and Ammonia Data – <i>Hyalella azteca</i> 28-Day Whole Sediment Toxicity Test Conducted with Moderately Hard Reconstituted Water. NJMC-MERI Wetland Ecological Risk Assessment, 1 through 29 October 2003.
Table 11a-b.	Temperature, dissolved oxygen, pH, Conductivity and Ammonia Data – <i>Chironomus tentans</i> 10-Day Whole Sediment Toxicity Test Conducted with Moderately Hard Reconstituted. NJMC-MERI Wetland Ecological Risk Assessment, 3 through 13 October 2003.
Table 12a-d.	Temperature, dissolved oxygen, pH, Conductivity and Ammonia Data – <i>Neanthes arenaceodentata</i> 10-Day Whole Sediment Toxicity Test Conducted at 25-ppt. NJMC-MERI Wetland Ecological Risk Assessment, 12 through 22 October 2003.

LIST OF APPENDICES

- Appendix A Original Data – Amphipod, *Hyalella azteca* 28-Day Whole Sediment Toxicity Test Conducted at 10-ppt.
- 1) Copies of Original Data - 28-Day Whole Sediment Toxicity Test, NJMC-MERI Wetland Ecological Risk Assessment, 1 through 29 October 2003.
 - Daily Observation Data
 - Daily Temperature, Dissolved Oxygen, pH and Conductivity Data
 - Weight Data
- Appendix B Statistical Analyses – Amphipod, *Hyalella azteca* 28-Day Whole Sediment Toxicity Test Conducted at 10-ppt.
- 1) Survival - Amphipod, *Hyalella azteca*
 - 2) Weight – Amphipod, *Hyalella azteca*
- Appendix C Original Data – Amphipod, *Hyalella azteca* 28-Day Whole Sediment Toxicity Test Conducted with Moderately Hard Reconstituted Water.
- 1) Copies of Original Data - 28-Day Whole Sediment Toxicity Test, NJMC-MERI Wetland Ecological Risk Assessment, 1 through 29 October 2003.
 - Daily Observation Data
 - Daily Temperature, Dissolved Oxygen, pH and Conductivity Data
 - Weight Data
- Appendix D Statistical Analyses – Amphipod, *Hyalella azteca* 28-Day Whole Sediment Toxicity Test Conducted with Moderately Hard Reconstituted Water.
- 1) Survival - Amphipod, *Hyalella azteca*
 - 2) Weight – Amphipod, *Hyalella azteca*
- Appendix E Original Data – Midge, *Chironomus tentans* 10-Day Whole Sediment Toxicity Test
- 1) Copies of Original Data - 10-Day Whole Sediment Toxicity Test, NJMC-MERI Wetland Ecological Risk Assessment, 3 through 13 October 2003.
 - Daily Observation Data
 - Daily Temperature, Dissolved Oxygen, pH and Conductivity Data
 - Weight Data
 - Alkalinity/Hardness Data
- Appendix F Statistical Analyses – Midge, *Chironomus tentans* 10-Day Whole Sediment Toxicity Test Conducted with Moderately Hard Reconstituted Water using the Negative Control Sediment.
- 1) Survival – Midge, *Chironomus tentans*
 - 2) Weight - Midge, *Chironomus tentans*
- Appendix G Original Data – Annelid, *Neanthes arenaceodentata* 28-Day Whole Sediment Toxicity Test Conducted at 25-ppt using Reference Sediment SAW-01
- 1) Copies of Original Data - 28-Day Whole Sediment Toxicity Test, NJMC-MERI Wetland Ecological Risk Assessment, 1 through 29 October 2003.
 - Daily Observation Data
 - Daily Temperature, Dissolved Oxygen, pH and Conductivity Data
 - Weight Data

LIST OF APPENDICES (Continued)

- Appendix H Statistical Analyses – Annelid, *Hyalella azteca* 10-Day Whole Sediment Toxicity Test Conducted at 25-ppt using Reference Sediment SAW-02
- 1) Survival - Annelid, *Neanthes arenaceodentata*
 - 2) Weight - Annelid, *Neanthes arenaceodentata*
- Appendix I QA/QC
- 1) Acute Control Charts
 - 2) Raw Data
- Appendix J Chain-of-Custody Forms

INTRODUCTION

Whole sediment toxicity testing was conducted on sediment samples collected from the Hackensack Meadowlands in Bergen and Hudson Counties, New Jersey. Whole sediment toxicity testing was conducted 1 through 29 October 2003 using the freshwater amphipod, *Hyaella azteca* (*H. azteca*). Whole sediment toxicity testing was conducted 3 through 13 October 2003 using the freshwater midge, *Chironomus tentans* (*C. tentans*). Whole sediment toxicity testing was conducted 12 through 22 October 2003 using the marine annelid, *Neanthes arenaceodentata* (*N. arenaceodentata*). The samples were collected by ENSR International, Inc. personnel and transported to B-H Laboratories' Spring City, Pennsylvania laboratory. The objective of this testing was to determine chronic toxicity of the sediments to *H. azteca*, *C. tentans* and *N. arenaceodentata*.

The NJMC/MERI proposed to assess the ecological risks from contamination from wetland sites throughout the Meadowlands. The data generated from these studies is part of a larger study that will help guide future decisions about acquisition and restoration of the Meadowlands wetlands.

All testing was conducted in accordance with procedures outlined in Ingersoll, C.G., G.T. Ankley, G.A. Burton, F.J. Dwyer, R.A. Hoke, T.J. Norbert-King and P.V. Winger. 1994. *Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates*. EPA/600/R-99/064. U.S. EPA Office of Research and Development, Duluth, MN, ASTM. 1995. *Standard Test Methods for Measuring the Toxicity of Sediment-Associated Contaminants with Fresh Water Invertebrates*. E1706-95. American Society for Testing and Materials, Philadelphia, PA and ASTM. 1994. *Standard Guide for Conducting Sediment Toxicity Tests with Marine and Estuarine Polychaetous Annelids*. E1611-94. American Society for Testing and Materials, Philadelphia, PA.

MATERIALS

TEST ORGANISMS

Freshwater Amphipod, *Hyalella azteca* (10-ppt)

Immature *H. azteca* (13-days old) used in testing were obtained from Aquatic Research Organisms (ARO), a commercial culture facility located in Hampton, New Hampshire. This species is a representative invertebrate and a United States Environmental Protection Agency (EPA) accepted test organism. The amphipods used for testing were hatched on 18 September 2003 and held at the culture facility until shipment on 30 September 2003. The amphipods were acclimated to a salinity 10-ppt prior to shipping to B-H Laboratories Biological Services Division. The amphipods were acclimated over a five-day period (26 through 30 September 2003) at an exchange rate of 2-ppt per 24-hour period. Prior to shipping, the amphipods were fed Tetra Fin flake food during acclimation and holding at ARO. The amphipods were placed in a plastic cubitainer with 10-ppt seawater and shipped overnight to B-H Laboratories' Biological Services Division in Spring City, Pennsylvania. The amphipods were received at B-H Laboratories on 1 October 2003. Upon receipt at B-H Laboratories, the amphipods were inspected for mortality and transferred to several 2-liter crystallizing dishes. The amphipods were fed YCT and gentle aeration was provided to the crystallizing dish. The amphipods were acclimated to the overlying water by partial replacements with 10-ppt seawater. Amphipods were fed 1.0-mL YCT daily during the test, unless otherwise noted (see Daily Observation Data Sheets, Appendix A). The amphipods were held in 10-ppt seawater until test initiation.

Freshwater Amphipod, *Hyalella azteca* (moderately-hard reconstituted water)

Immature *H. azteca* (13-days old) used in testing were obtained from Aquatic Research Organisms (ARO), a commercial culture facility located in Hampton, New Hampshire. This species is a representative invertebrate and a United States Environmental Protection Agency (EPA) accepted test organism. Prior to shipping, the amphipods were fed Tetra Fin flake food during acclimation and holding at ARO. The amphipods were placed in a plastic cubitainer with moderately-hard reconstituted water and shipped overnight to B-H Laboratories' Biological Services Division in Spring City, Pennsylvania. The amphipods were received at B-H Laboratories on 1 October 2003. Upon receipt at B-H Laboratories, the amphipods were inspected for mortality and transferred to several 2-liter crystallizing dishes. The amphipods were fed YCT and gentle aeration was provided to the crystallizing dish. The amphipods were acclimated to the overlying water by partial replacements with moderately-hard reconstituted water. Amphipods were fed 1.0-mL YCT daily during the test, unless otherwise noted (see Daily Observation Data Sheets, Appendix A). The amphipods were held in moderately-hard reconstituted water until test initiation.

Larval Midge, *Chironomus tentans*

C. tentans larvae (14-days old, 2nd to 3rd instar) used in testing were obtained from Aquatic Research Organisms (ARO), a commercial culture facility located in Hampton, New Hampshire. This species is a representative invertebrate and United States Environmental Protection Agency (EPA) accepted test organism. Prior to shipping, the amphipods were fed rabbit pellets during acclimation and holding at ARO. Midge larvae (14-days old) were placed in a plastic cubitainer with moderately hard re-constituted water and shipped overnight to B-H Laboratories' Biological Services Division in Spring City, Pennsylvania. The midges were received at B-H Laboratories on 3 October 2003. Upon receipt at B-H Laboratories, the midge larvae were inspected and transferred to 2-liter crystallizing dishes. A gentle aeration was provided. The midges were acclimated to the overlying water by partial replacements with moderately hard re-constituted water. Midges were fed 1.5-mL of Tetra-Min slurry daily during the test, unless otherwise noted (see Daily Observation Data Sheets, Appendix A). The midges were held in moderately hard re-constituted water until test initiation.

Marine Annelid, *Neanthes arenaceodentata*

N. arenaceodentata (two to three weeks old) used in testing were obtained from California State University at Long Beach, a non-commercial culture facility located in Long Beach, California. This species is a representative invertebrate and United States Environmental Protection Agency (EPA) accepted test organism. Annelids were placed in a plastic cubitainer with 25-ppt seawater and shipped overnight to B-H Laboratories' Biological Services Division in Spring City, Pennsylvania. The annelids were received at B-H Laboratories on 12 October 2003. Upon receipt at B-H Laboratories, the annelids were inspected and transferred to 2-liter crystallizing dishes. A gentle aeration was provided. The annelids were acclimated to the overlying water by partial replacements with 25-ppt seawater. Annelids were not fed during the test. The annelids were held in 25-ppt seawater until test initiation.

NEGATIVE CONTROL SEDIMENT

Sediment to be used as the negative controls was collected from Blue Marsh Reservoir located in Lower Heidelberg, Pennsylvania. The sediment was collected on 25 September 2003 and transported to the Spring City laboratory. The sediments were collected from a cove south of the boat launch. The sediments were collected approximately five-feet from the shoreline in two-feet of water.

Control sediment was collected by B-H Laboratories personnel and placed in a 5-gallon plastic bucket with high-density polyethylene liners. The sediment was covered with overlying water from the reservoir and sealed with the liner and a plastic lid. B-H Laboratories personnel transported the sediment to the Spring City, PA office on the day of collection. Chain-of-Custody forms accompanied all sediments. Prior to use, the control sediments were homogenized and sieved through a no. 6 (3.35-mm) stainless steel sieve to remove large pebbles, stones, twigs and plant clumps.

TEST SEDIMENTS

Sediments were collected on 15 through 17 September 2003 by ENSR International, Inc. personnel. The sediments were identified as sediment no(s), RBM-01, RBM-02, SHS-01, SHS-02, SAW-01, SAW-02, SAW-03, ORM-01, ORM-02, KFM-01, KFM-02 and KFM-03. Sediment samples were picked up at ENSR International's Piscataway, New Jersey office by B-H Laboratories' personnel and transported to B-H Laboratories' Spring City office on 15, 16 and 17 October 2003. Chain-of-Custody forms accompanied all sediments. All sediments were stored at 1° to 4.4°C in their original containers when not being used. Sediments were warmed to test temperature prior to test initiation. Prior to use, the sediments were homogenized and sieved through a no. 6 (3.35-mm) stainless steel sieve to remove large pebbles, stones, twigs and plant clumps.

OVERLYING WATER

Moderately-Hard Reconstituted Water

Reconstituted water is prepared in accordance to procedures outlined in EPA/600/R-99/064 to be used as acclimation and overlying water for the toxicity tests. Water is decanted through a mixed bed de-ionizing system (U. S. Filter, Inc.) consisting of carbon, mixed resin-bed and membrane filters. A 190-liter Nalgene tank is filled with about 150-liters of de-ionized water. In a five-gallon bucket of de-ionized water, 9.5-grams of CaSO₄ and 9.5-grams CaCl₂ is mixed into solution by vigorously aerating for 30-minutes or until the salts dissolve.. Into a second 5-gallon bucket of de-ionized water, 5.7-grams of MgSO₄, 18.2-grams of NaHCO₃ and 0.76-grams KCl is mixed by aerating for 30-minutes or until the salts dissolve. The two five-gallon aliquots are added to the 150-liters of de-ionized water and the volume is brought to 190-liters with de-ionized water. Reconstituted water is aerated for at least 24-hours prior to use.

10-ppt

Natural seawater was collected at the Manasquan Inlet in Brielle, New Jersey. Manasquan Inlet is a New Jersey Department of Environmental Protection approved site for the collection of natural seawater used for testing. The seawater was collected on 24 September 2003 by B-H laboratories personnel. The seawater that was collected had a salinity of 32-ppt. The 10-ppt seawater is prepared by filtering the natural seawater through a 0.5- μ m polypropylene string-wound cartridge filter. The natural seawater is adjusted to 10-ppt by incremental additions of de-ionized water. The water is aerated for 24-hours. After aerating for 24 hours, the salinity is measured and the salinity is adjusted either by adding additional seawater or de-ionized water. The water is aerated an additional 24-hours prior to use as acclimation or overlying water. Natural 10-ppt salt water is prepared in 190-liter batches.

25-ppt

Natural seawater was collected at the Manasquan Inlet in Brielle, New Jersey. The seawater was collected on 24 September 2003 by B-H laboratories personnel. The 25-ppt seawater is prepared by filtering the natural seawater through a 0.5- μ m polypropylene string-wound cartridge filter. The natural seawater is adjusted to 25-ppt by incremental additions of de-ionized water. The water is aerated for 24-hours. After aerating for 24 hours, the salinity is measured and the salinity is adjusted either by adding additional seawater or de-ionized water. The water is aerated an additional 24-hours prior to use as acclimation or overlying water. Natural 25-ppt salt water is prepared in 190-liter batches.

METHODS

***HYALELLA AZTECA*, 28-DAY WHOLE SEDIMENT TOXICITY TEST METHOD**

(10-ppt)

Sediments were warmed to test temperature prior to test initiation. The day prior to test initiation, 100-mL of sediment and 175-mL of overlying water (10-ppt seawater) was placed into the each test chamber. Renewal of overlying water was begun 24-hours prior to introduction of the test organisms. *H. azteca* (13-days old) were exposed to the sediment under static renewal conditions for 28-days. The amphipods were exposed in-groups of ten in 300-mL high-form lip-less Kimax beakers with eight replicates per sample (80 amphipods per sample). Test chambers were placed in a temperature controlled environmental chamber maintained at $23 \pm 1^\circ\text{C}$. Negative control sediments were also tested.

Test organisms were fed 1.0-mL YCT suspension daily unless otherwise noted on the raw data sheets. Water renewals were accomplished by siphoning off the old solution and replacing it with fresh overlying water twice daily (A.M. and P.M.). Dead organisms observed during the renewal process were removed and recorded. Dissolved oxygen and pH were measured daily in the fresh overlying water. Temperature, dissolved oxygen, pH and conductivity were measured in the pooled replicates after each 24-hour exposure period. Alkalinity and hardness were measured in the overlying water on day 0. Ammonia was measured in the pooled replicates from each sample on days 0, 14, and 28. The lighting regime was 16-hours light, 8-hours dark using cool white fluorescent lights.

The test was terminated at the end of 28-days. Surviving amphipods within each replicate were collected with a U.S. Standard No. 50 stainless steel sieve. The amphipods were counted, rinsed with de-ionized water and transferred as a group to pre-weighed pans. The number of surviving amphipods was recorded on the *Hyaella azteca* Weight Data sheet. Amphipods were dried in an oven at 100°C for at least eight hours and then transferred to a desiccator. Each pan containing amphipods was weighed to the nearest 0.01-mg on an Ohaus Model AP250D Plus analytical balance. The total amphipod dry weight was divided by the number of surviving amphipods to obtain the average amphipod weight (growth) per replicate. In addition, the total dry weight divided by the initial number of amphipods (biomass) was calculated and included in Appendix B of this report.

***HYALELLA AZTECA*, 28-DAY WHOLE SEDIMENT TOXICITY TEST METHOD (Moderately-Hard Reconstituted Water)**

Sediments were warmed to test temperature prior to test initiation. The day prior to test initiation, 100-mL of sediment and 175-mL of overlying water (moderately-hard reconstituted water) were placed into the each test chamber. Renewal of overlying water was begun 24-hours prior to introduction of the test organisms. *H. azteca* (13-days old) were exposed to the sediment under static renewal conditions for 28-days. The amphipods were exposed in-groups of ten in 300-mL high-form lip-less Kimax beakers with eight replicates per sample (80 amphipods per sample). Test chambers were placed in a temperature controlled environmental chamber maintained at $23 \pm 1^\circ\text{C}$. Negative control sediments were also tested.

Test organisms were fed 1.0-mL of YCT suspension daily unless otherwise noted on the raw data sheets. Water renewals were accomplished by siphoning off the old solution and replacing it with fresh overlying water renewed overlying water twice daily (A.M. and P.M.). Dead organisms observed during the renewal process were removed and recorded. Dissolved oxygen and pH were measured daily in the fresh overlying water. Temperature, dissolved oxygen, pH and conductivity were measured in the pooled replicates after each 24-hour exposure period. Alkalinity and hardness were measured in the overlying water on day 0. Ammonia was measured in the pooled replicates from each sample on days 0, 14, and 28. The lighting regime was 16-hours light, 8-hours dark using cool white fluorescent lights.

The test was terminated at the end of 28-days. Surviving amphipods within each replicate were collected with a U.S. Standard No. 50 stainless steel sieve. The amphipods were counted, rinsed with de-ionized water and transferred as a group to pre-weighed pans. The number of surviving amphipods was recorded on the *Hyalella azteca* Weight Data sheet. Amphipods were dried in an oven at 100°C for at least eight hours and then transferred to a desiccator. Each pan containing amphipods was weighed to the nearest 0.01-mg on an Ohaus Model AP250D Plus analytical balance. The total amphipod dry weight was divided by the number of surviving amphipods to obtain the average amphipod weight (growth) per replicate. In addition, the total dry weight divided by the initial number of amphipods (biomass) was calculated and included in Appendix B of this report.

***CHIRONOMUS TENTANS*, 10-DAY WHOLE SEDIMENT TOXICITY TEST METHOD**

Sediments were warmed to test temperature prior to test initiation. The day prior to test initiation, 100-mL of sediment and 175-mL of overlying water (moderately hard-reconstituted water) was placed into the each test chamber. Renewal of overlying water was begun 24-hours prior to introduction of the test organisms. *C. tentans* (less than 24-hours old) were exposed to the sediment under static renewal conditions for 10-days. The midges were exposed in-groups of ten in 300-mL high-form lip-less Kimax beakers with eight replicates per sample (80 midges per sample). Test chambers were placed in a temperature controlled environmental chamber maintained at $23 \pm 1^\circ\text{C}$. Negative control sediments were also tested.

Test organisms were fed 1.5-mL of Tetra-min® slurry daily unless otherwise noted on the raw data sheets. Water renewals were accomplished by siphoning off the old solution and replacing it with fresh overlying water renewed overlying water twice daily (A.M. and P.M.). Any dead organisms observed during the renewal process were removed and recorded. Dissolved oxygen and pH were measured daily in the fresh overlying water. Temperature, dissolved oxygen, pH and conductivity were measured in the pooled replicates after each 24-hour exposure period. Alkalinity and hardness were measured in the overlying water on day 0. Ammonia was measured in the pooled replicates from each sample on days 0 and 10. The lighting regime was 16-hours light, 8-hours dark using cool white fluorescent lights.

The test was terminated at the end of 10-days. Surviving *C. tentans* within each replicate were collected with a U.S. Standard No. 50 stainless steel sieve. The midges were counted, rinsed with de-ionized water and transferred as a group to pre-weighed pans. The number of surviving midges was recorded on the *Chironomus tentans* Weight Data sheet. Midges are dried in an oven at 100° C for at least eight hours and then transferred to a desiccator. Each pan containing midges was weighed to the nearest 0.01-mg on an Ohaus Model AP250D Plus analytical balance. The pans were transferred to a muffle furnace at 550° C for at least two hours and then transferred to the desiccator. The pans containing midges were re-weighed to the nearest 0.01-mg on an Ohaus Model AP250D Plus analytical balance. The tissue mass of the larvae is determined as the difference between the weight of the dried larvae plus pan and the weight of the ashed larvae plus pan.

NEANTHES ARENACEODENTATA, 10-DAY WHOLE SEDIMENT TOXICITY TEST METHOD

Sediments were warmed to test temperature prior to test initiation. The day prior to test initiation, 200-mL of sediment and 800-mL of overlying water (25-ppt seawater) was placed into the each test chamber. Renewal of overlying water was begun 24-hours prior to introduction of the test organisms. *N. arenaceodentata* (two to three weeks old) were exposed to the sediment under static renewal conditions for 10-days. The annelids were exposed in-groups of five in 1000-mL Kimax beakers with eight replicates per sample (40 annelids per sample). Test chambers were placed in a temperature controlled environmental chamber maintained at 20 ± 1°C. Negative control sediments were also tested.

Test organisms were not fed during the test. Water renewals were accomplished by siphoning off the old solution and replacing it with fresh overlying water renewed overlying water twice daily (A.M. and P.M.). Any dead organisms observed during the renewal process were removed and recorded. Dissolved oxygen and pH were measured daily in the fresh overlying water. Temperature, dissolved oxygen, pH and conductivity were measured in the pooled replicates after each 24-hour exposure period. Alkalinity and hardness were measured in the overlying water on day 0. Ammonia was measured in the pooled replicates from each sample on days 0 and 10. The lighting regime was 16-hours light, 8-hours dark using cool white fluorescent lights.

The test was terminated at the end of 10-days. Surviving *N. arenaceodentata* within each replicate was collected with a U.S. Standard No. 50 stainless steel sieve. The annelids were counted, rinsed with de-ionized water and transferred as a group to pre-weighed pans. The number of surviving annelids was recorded on the *N. arenaceodentata* Weight Data sheet. Annelids are dried in an oven at 100° C for at least eight hours and then transferred to a desiccator. Each pan containing midges was weighed to the nearest 0.01-mg on an Ohaus Model AP250D Plus analytical balance. The total annelid dry weight was divided by the number of surviving amphipods to obtain the average amphipod weight (growth) per replicate. In addition, the total dry weight divided by the initial number of annelids (biomass) was calculated and included in Appendix B of this report.

STATISTICAL ANALYSES

Statistical comparisons for the toxicity testing were performed between the negative control and site sediments to identify statistically significant differences in survival. Arc-sine transformed survival data were tested for normal distribution using either Shapiro-Wilk's Test or Kolmogorov D Test. Survival data were tested for equality of variance using Bartlett's Test. If the data met the assumptions for normality and equality of variance, the parametric Analysis of Variance (ANOVA)/Dunnett's Test was used to identify significant differences in survival between the test samples and reference sediments. If these assumptions were not met, the non-parametric Steels Many-One Rank Test was used to identify significant differences in survival between the test samples and reference sediments. A summary of survival data for *H. azteca*, *C. tentans* and *N. arenaceodentata* can be found in Tables 1a through 6a.

Statistical comparisons for the toxicity testing were performed between the negative control and site sediments to identify statistically significant differences in growth. Non-transformed growth data were tested for normal distribution using either Shapiro-Wilk's Test or Kolmogorov D Test. Growth data were tested for equality of variance using Bartlett's Test. If the data met the assumptions for normality and equality of variance, the parametric Analysis of Variance (ANOVA)/Dunnett's Test was used to identify significant differences in survival between the test samples and reference sediments. If these assumptions were not met, the non-parametric Steels Many-One Rank Test was used to identify significant differences in survival between the test samples and reference sediments.

A summary of growth data for *H. azteca*, *C. tentans* and *N. arenaceodentata* can be found in Tables 1a through 4b.

RESULTS

Table 1a. Summary of Survival Data – *Hyalella azteca* 28-Day Whole Sediment Toxicity Test conducted at 10 ppt NJMC-MERI Wetland Ecological Risk Assessment, 1 through 29 October, 2003

Sample No./ Sample Location	Amphipod Survival, By Replicate, At 28-Days (10 organisms per replicate at test initiation)								Mean Survival %	Significant Difference from Negative Control $\alpha = 0.05$
	A	B	C	D	E	F	G	H		
Negative Control	7	9	10	10	10	10	8	8	90.00%	N/A
Sediment Site ORM-01	10	8	8	9	7	2	10	5	73.75%	NO
Sediment Site ORM-02	7	9	8	8	10	9	5	8	80.00%	NO
Sediment Site RBM-01	4	3	4	2	5	4	3	4	36.25%	YES
Sediment Site RBM-02	4	5	6	7	10	8	5	8	66.25%	NO
Sediment Site SHS-01	4	6	6	8	6	7	6	7	62.50%	YES
Sediment Site SHS-02	10	9	10	9	9	10	9	10	95.00%	NO
Sediment Site SHS-03	8	9	10	10	8	10	10	10	93.75%	NO
Sediment Site SAW-01	4	6	5	5	7	8	4	6	56.25%	YES
Sediment Site SAW-02	7	8	8	8	8	8	7	8	77.50%	NO

RESULTS (continued)

Table 1b. Summary of Growth Data – *Hyalella azteca* 28-Day Whole Sediment Toxicity Test conducted at 10 ppt NJMC-MERI Wetland Ecological Risk Assessment, 1 through 29 October, 2003

Sample No./ Sample Location	Amphipod Weight (mg), By Replicate, At 28-Days (10 organisms per replicate at test initiation)								Mean Weight (mg)	Significant Difference from Negative Control $\alpha = 0.05$
	A	B	C	D	E	F	G	H		
Negative Control	0.6400	0.5556	0.6270	0.4200	0.4560	0.6300	0.4975	0.5350	0.5451	N/A
Sediment Site ORM-01	0.5770	0.5950	0.6125	0.6844	0.9900	0.7000	0.7080	0.5900	0.6821	NO
Sediment Site ORM-02	0.8143	0.9656	1.1300	0.9525	1.0350	1.0056	0.9200	1.1362	0.9949	NO
Sediment Site RBM-01	0.5575	0.2500	0.2750	0.2700	0.2580	0.2675	0.2600	0.5275	0.3332	YES
Sediment Site RBM-02	0.5850	0.7260	0.4983	0.3943	0.5450	0.4988	0.7400	0.4813	0.5586	NO
Sediment Site SHS-01	0.5975	0.6567	0.5550	0.7463	0.7033	0.7700	0.6833	0.5771	0.6612	NO
Sediment Site SHS-02	0.7020	0.7711	0.7880	0.7356	0.7678	0.9150	0.9544	0.6400	0.7842	NO
Sediment Site SHS-03	0.4387	0.6967	0.6290	0.4670	0.6375	0.5800	0.5610	0.6190	0.5786	NO
Sediment Site SAW-01	1.0325	1.0150	1.0360	0.9000	1.0886	1.0063	0.9750	1.1183	1.0215	NO
Sediment Site SAW-02	0.5871	0.5962	0.6875	0.6400	0.7012	0.5862	0.8457	0.5563	0.6500	NO

RESULTS (continued)

Table 2a. Summary of Survival Data – *Hyalella azteca* 28-Day Whole Sediment Toxicity Test conducted with MHRW *
 NJMC-MERI Wetland Ecological Risk Assessment, 1 through 29 October, 2003

Sample No./ Sample Location	Amphipod Survival, By Replicate, At 28-Days (10 organisms per replicate at test initiation)								Mean Survival %	Significant Difference from Negative Control $\alpha = 0.05$
	A	B	C	D	E	F	G	H		
Negative Control	9	9	8	8	9	9	8	9	86.25%	
Sediment Site KFM-01	8	6	9	6	7	9	9	9	78.75%	NO
Sediment Site KFM-02	10	8	8	10	8	7	8	8	83.75%	NO
Sediment Site KFM-03	10	9	10	8	9	10	10	9	93.75%	NO

Table 2b. Summary of Growth Data – *Hyalella azteca* 28-Day Whole Sediment Toxicity Test conducted with MHRW *
 NJMC-MERI Wetland Ecological Risk Assessment, 1 through 29 October, 2003

Sample No./ Sample Location	Amphipod Weight (mg), By Replicate, At 28-Days (10 organisms per replicate at test initiation)								Mean Weight (mg)	Significant Difference from Negative Control $\alpha = 0.05$
	A	B	C	D	E	F	G	H		
Negative Control	0.5422	0.4044	0.5688	0.4688	0.5956	0.3589	0.4075	0.2222	0.4460	
Sediment Site KFM-01	0.6050	0.3683	0.3522	0.6900	0.3629	0.3556	0.5233	0.4189	0.4595	NO
Sediment Site KFM-02	0.4510	0.5300	0.6525	0.4380	0.7100	0.7029	0.4150	0.5113	0.5513	NO
Sediment Site KFM-03	0.6250	0.6511	0.6200	0.5475	0.6867	0.6660	0.6410	0.6722	0.6387	NO

* MHRW: Moderately Hard Reconstituted Water was used as the overlying water.

RESULTS (continued)

Table 3a. Summary of Survival Data -- *Chironomus tentans* 10-Day Whole Sediment Toxicity Test conducted with MHRW
 * - NJMC-MERI Wetland Ecological Risk Assessment, 3 through 13 October, 2003

Sample No./ Sample Location	Midge Survival, By Replicate, At 10-Days (10 organisms per replicate at test initiation)								Mean Survival %	Significant Difference from Negative Control $\alpha = 0.05$
	A	B	C	D	E	F	G	H		
Negative Control	9	10	9	10	10	10	9	10	96.25%	
Sediment Site KFM-01	9	10	7	6	5	7	10	7	76.25%	YES
Sediment Site KFM-02	10	8	10	9	8	9	8	9	88.75%	NO
Sediment Site KFM-03	10	8	10	9	10	10	10	10	96.25%	NO

Table 3b. Summary of Growth Data -- *Chironomus tentans* 10-Day Whole Sediment Toxicity Test conducted with MHRW
 * - NJMC-MERI Wetland Ecological Risk Assessment, 3 through 13 October, 2003

Sample No./ Sample Location	Midge Weight (mg), By Replicate, At 10-Days (10 organisms per replicate at test initiation)								Mean Weight (mg)	Significant Difference from Negative Control $\alpha = 0.05$
	A	B	C	D	E	F	G	H		
Negative Control	1.8111	1.6120	1.5289	1.5060	1.6170	1.6690	1.6889	1.7350	1.6460	
Sediment Site KFM-01	0.5278	0.2300	0.9271	0.5567	0.8000	0.6757	0.4830	0.8171	0.6272	YES
Sediment Site KFM-02	0.5780	0.5513	0.5590	0.7822	0.5588	0.4122	0.4975	0.5167	0.5570	YES
Sediment Site KFM-03	0.5890	0.4587	0.7440	0.5522	0.7530	0.7070	0.6320	0.7660	0.6502	YES

* MHRW: Moderately Hard Reconstituted Water was used as the overlying water.

RESULTS (continued)

Table 4a. Summary of Survival Data – *Neanthes arenaceodentata* 10-Day Whole Sediment Toxicity Test conducted at 25 ppt - NJMC-MERI Wetland Ecological Risk Assessment, 12 through 22 October, 2003

Sample No./ Sample Location	<i>N. arenaceodentata</i> Survival, By Replicate, At 10-Days (5 organisms per replicate at test initiation)								Mean Survival %	Significant Difference from Negative Control $\alpha = 0.05$
	A	B	C	D	E	F	G	H		
Negative Control	5	5	5	4	4	5	4	5	92.50%	N/A
Sediment Site ORM-01	4	4	3	4	2	1	3	1	55.00%	YES
Sediment Site ORM-02	1	3	3	1	1	2	1	3	37.50%	YES
Sediment Site RBM-01	1	1	1	1	1	1	1	3	25.00%	YES
Sediment Site RBM-02	3	0	4	1	4	2	5	5	60.00%	NO
Sediment Site SHS-01	0	3	3	5	3	1	3	2	50.00%	YES
Sediment Site SHS-02	3	3	3	4	5	2	4	3	67.50%	NO
Sediment Site SHS-03	4	5	4	5	5	4	3	4	85.00%	NO
Sediment Site SAW-01	3	5	5	3	5	4	5	5	87.50%	NO
Sediment Site SAW-02	5	4	4	5	5	5	4	5	92.5%	NO

RESULTS (continued)

Table 4b. Summary of Growth Data – *Neanthes arenaceodentata* 10-Day Whole Sediment Toxicity Test conducted at 25 ppt - NJMC-MERI Wetland Ecological Risk Assessment, 12 through 22 October, 2003

Sample No./ Sample Location	<i>N. arenaceodentata</i> Weight (mg), By Replicate, At 28-Days (5 organisms per replicate at test initiation)								Mean Weight (mg)	Significant Difference from Negative Control $\alpha = 0.05$
	A	B	C	D	E	F	G	H		
Negative Control	0.2640	0.3580	0.5600	0.3025	0.4225	0.2380	0.3025	0.2340	0.3352	N/A
Sediment Site ORM-01	0.2100	0.2425	0.2500	0.1975	0.3100	0.4100	0.2767	0.4800	0.2971	NO
Sediment Site ORM-02	1.1100	0.1767	0.3033	0.6200	0.3200	0.1400	0.4500	0.2167	0.4171	NO
Sediment Site RBM-01	1.5200	0.6700	0.5900	0.4900	1.3300	1.0700	0.9700	0.5400	0.8975	NO
Sediment Site RBM-02	0.1800	N/A	0.2325	0.1100	0.2950	0.1750	0.1960	0.2080	0.1995	YES
Sediment Site SHS-01	N/A	0.1900	0.1967	0.2480	0.2233	0.2100	0.3733	0.3050	0.2495	NO
Sediment Site SHS-02	0.3033	0.3167	0.3700	0.2350	0.2700	0.2000	0.5250	0.6500	0.3588	NO
Sediment Site SHS-03	0.2575	0.2580	0.2725	0.2300	0.2880	0.2175	0.2967	0.1950	0.2519	NO
Sediment Site SAW-01	0.2333	0.2000	0.2480	0.2367	0.2160	0.1550	0.2120	0.2980	0.2249	YES
Sediment Site SAW-02	0.3140	0.3125	0.2700	0.2000	0.2300	0.2120	0.2875	0.2100	0.2545	NO

Table 5a. Daily Observation Data – *Hyalella azteca*

PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 28-Day Whole Sediment Toxicity Test Conducted at 10-ppt
 DATE: 1 through 29 October 2003

Sample Identification	Rep	No.	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14
ORM-01 Ortiani Marsh 10-ppt	A	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	B	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	C	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	D	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	E	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	F	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	G	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	H	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
ORM-02 Ortiani Marsh 10-ppt	A	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1A
	B	10	N	N	N	N	N	N	N	N	N	N	N	N	N	2A	N
	C	10	N	N	N	N	N	N	N	N	N	N	N	N	N	1A	N
	D	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	E	10	N	N	N	N	N	N	N	N	N	N	N	N	N	1A	N
	F	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	G	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	H	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1A
RBM-01 Riverbend Marsh 10-ppt	A	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	B	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	C	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	D	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	E	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	F	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1A
	G	10	N	N	N	N	N	N	N	N	N	N	N	N	N	3A	N
	H	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
RBM-02 Riverbend Marsh 10-ppt	A	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	3A
	B	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	C	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	D	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1A
	E	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	2A
	F	10	N	N	N	N	N	N	N	N	N	N	N	N	N	1A	N
	G	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	H	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1A

Observation Codes: N = Normal, # D = Number Amphipods Observed Dead, # E = Number Amphipods Observed Emerged, # A = Number Amphipods Observed Avoiding Sediment, # F = Number Amphipods Observed Floating on Surface

Table 5b. Daily Observation Data – *Hyaella azteca*

PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 28-Day Whole Sediment Toxicity Test Conducted at 10-ppt
 DATE: 1 through 29 October 2003

Sample Identification	Rep	N ₀	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14		
SHS-01 Secaucus High School Marsh 10-ppt	A	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N		
	B	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N		
	C	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N		
	D	10	N	N	N	N	N	N	N	N	N	N	N	N	N	1A	N	N	
	E	10	N	N	N	N	N	N	N	N	N	N	N	N	N	2A	N	2A	
	F	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
	G	10	N	N	N	N	N	N	N	N	N	N	N	N	N	1A	N	N	
	H	10	N	N	N	N	N	N	N	N	N	N	N	N	N	1A	N	N	
SHS-02 Secaucus High School Marsh 10-ppt	A	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
	B	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
	C	10	N	N	N	N	N	N	N	N	N	N	N	N	N	1A	1A	2A	
	D	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1A	
	E	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
	F	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
	G	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
	H	10	N	N	N	N	N	N	N	N	N	N	N	N	N	1A	N	N	
SHS-03 Secaucus High School Marsh 10-ppt	A	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
	B	10	N	N	N	N	N	N	N	N	N	N	N	N	N	2A	N	N	
	C	10	N	N	N	N	N	N	N	N	N	1A	1A	N	N	N	N	N	
	D	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1A	N	
	E	10	N	N	N	N	N	N	N	N	N	N	N	N	N	1A	N	1A	
	F	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1A	
	G	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	2A	3A	N
	H	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
SAW-01 Saw Mill Creek 10-ppt	A	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
	B	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1A	N	
	C	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
	D	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1A	N	
	E	10	N	N	N	N	N	N	N	N	N	N	N	N	N	1A	N	N	
	F	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1A	
	G	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
	H	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	3A	N	

Observation Codes: N – Normal, # D – Number Amphipods Observed Dead, # E – Number Amphipods Observed Emerged, # A – Number Amphipods Observed Avoiding Sediment,
 # F – Number Amphipods Observed Floating on Surface

Table 5c. Daily Observation Data – *Hyalella azteca*

PROJECT: NJMC-MERJ Wetland Ecological Risk Assessment
 TEST: 28-Day Whole Sediment Toxicity Test Conducted at 10-ppt
 DATE: 1 through 29 October 2003

Sample Identification	Rep	N ₀	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14
SAW-02 Saw Mill Creek 10-ppt	A	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	B	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	C	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	D	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	E	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	F	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	G	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	H	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Negative Control Blue Marsh Reservoir 10-ppt	A	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	B	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	C	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	D	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	E	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	F	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	G	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	H	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Observation Codes: N - Normal, # D - Number Amphipods Observed Dead, # E - Number Amphipods Observed Emerged, # A - Number Amphipods Observed Avoiding Sediment.
 # F - Number Amphipods Observed Floating on Surface

Table 5d. Daily Observation Data – *Hyalella azteca*

PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 28-Day Whole Sediment Toxicity Test Conducted at 10-ppt
 DATE: 1 through 29 October 2003

Sample Identification	Rep	N ₀	Day 15	Day 16	Day 17	Day 18	Day 19	Day 20	Day 21	Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	Day 28	Final Live Count	
ORM-01 Ortiani Marsh 10-ppt	A	10	N	2A	N	N	N	N	N	N	N	N	N	N	N	N	10	
	B	10	N	2A	N	N	N	N	N	N	N	N	N	N	N	N	8	
	C	10	N	N	3A	N	1A	N	1A	1F	1D	N	N	N	N	3A	8	
	D	10	N	3A	3A	N	2A	N	N	N	N	N	N	N	N	1A	2A	9
	E	10	N	3A	N	N	N	N	N	N	N	N	N	N	N	N	N	7
	F	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1A	2
	G	10	N	2A	N	N	N	N	N	N	N	N	N	1A	1A	1A	1A	10
	H	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	5
ORM-02 Ortiani Marsh 10-ppt	A	10	N	N	N	N	N	N	N	3A	3A	N	2A	2A	N	N	7	
	B	10	N	N	N	N	2A	N	N	N	N	1A	1A	1A	N	N	9	
	C	10	N	N	N	2A	N	N	N	2A	N	N	N	N	N	1A	8	
	D	10	N	1A	1A	N	N	N	1A	N	2A	N	N	1A	1A	N	N	8
	E	10	N	1A	N	N	N	N	N	1A	N	N	N	N	N	N	N	10
	F	10	N	1A	N	N	N	N	N	N	N	N	N	N	N	N	N	9
	G	10	N	N	N	N	N	N	N	1A	N	N	N	N	N	N	N	5
	H	10	N	1A	N	N	N	N	N	N	N	N	N	N	N	N	N	8
RBM-01 Riverbend Marsh 10-ppt	A	10	N	N	N	N	N	N	N	N	N	N	1A	1A	N	N	4	
	B	10	N	N	N	N	N	N	N	N	N	N	2A	2A	N	1A	3	
	C	10	N	N	1A	N	N	N	N	N	2A	1F	4A	4A	N	1A	4	
	D	10	N	N	N	N	N	N	N	N	N	N	1A	1A	3A	N	2	
	E	10	N	N	N	N	N	N	N	N	N	N	2A	2A	N	N	5	
	F	10	N	N	N	N	N	N	N	N	N	N	1A	1A	N	N	4	
	G	10	N	N	1A	N	N	N	N	N	N	N	N	N	N	N	3	
	H	10	N	N	1A	N	N	N	N	N	1A	N	N	1A	1A	N	4	
RBM-02 Riverbend Marsh 10-ppt	A	10	N	1A	2A	N	1A	N	2A	N	1A	N	1A	1A	N	1A	4	
	B	10	N	N	N	N	1A	N	1A	2A	1A	1A	3A	3A	N	N	5	
	C	10	N	N	N	N	N	N	1A	N	2A	1A	1D,4A	1D,4A	3A	1D	6	
	D	10	1A	1A	N	N	2A	N	N	N	N	1A	1A	1A	N	N	7	
	E	10	1A	3A	N	2A	N	N	1A	1A	1A	N	N	N	N	2A	10	
	F	10	2A	4A	1A	2A	N	N	N	N	N	N	N	2A	2A	N	8	
	G	10	1A	N	1A	N	N	N	N	N	N	N	2A	N	N	N	5	
	H	10	3A	N	1A	N	N	N	N	N	3A	N	1A	1A	N	N	8	

Observation Codes: N - Normal, # D - Number Amphipods Observed Dead, # E - Number Amphipods Observed Emerged, # A - Number Amphipods Observed Avoiding Sediment, # F - Number Amphipods Observed Floating on Surface

Table 5e. Daily Observation Data – *Hyalella azteca*

PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 28-Day Whole Sediment Toxicity Test Conducted at 10-ppt
 DATE: 1 through 29 October 2003

Sample Identification	Rep	N ₀	Day 15	Day 16	Day 17	Day 18	Day 19	Day 20	Day 21	Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	Day 28	Final Live Count	
SHS-01 Secaucus High School Marsh 10-ppt	A	10	N	2A	3A	3A	1A	1D,1A	1A	1A	2A	N	2A	2A	N	N	4	
	B	10	1A	3A	N	N	1A	2A	2A	1A	1A	1A	2A	2A	N	N	6	
	C	10	1A	N	N	N	N	N	N	N	N	2A	N	N	N	N	6	
	D	10	N	N	N	N	N	N	4A	1A	1A	1A	N	N	N	N	8	
	E	10	3A	3A	3A	N	N	N	N	N	N	1A	1A	N	N	1F	6	
	F	10	N	2A	2A	2A	N	N	N	N	1A	1A	2A	N	N	1A	N	7
	G	10	N	1A	1A	1A	1A	1A	N	N	N	N	2A	N	1A	N	N	6
	H	10	N	N	1A	1A	1A	1A	N	N	2A	N	N	N	N	N	N	7
	A	10	2A	N	3A	3A	1A	1A	N	2A	N	N	N	N	1A	2A	1A	10
	B	10	1A	N	1A	1A	2A	2A	N	1A	1A	N	N	N	3A	2A	N	9
	C	10	1A	1A	1A	N	N	3A	N	1A	1A	1A	1A	N	5A	N	N	10
D	10	N	N	N	N	1A	1A	N	2A	N	N	N	N	2A	N	N	9	
E	10	N	1A	1A	2A	3A	3A	N	N	N	N	1A	N	2A	N	1A	9	
F	10	1A	1A	1A	1A	1A	4A	N	N	3A	1A	2A	N	1A	N	N	10	
G	10	N	N	N	N	N	N	N	N	N	N	1A	N	3A	1A	N	9	
H	10	1A	N	N	N	1A	N	N	N	N	N	N	N	1A	N	N	10	
SHS-03 Secaucus High School Marsh 10-ppt	A	10	2A	N	5A	N	N	N	N	N	N	N	N	1A	N	N	8	
	B	10	1A	1A	N	1A	N	N	N	N	N	N	N	N	N	N	9	
	C	10	N	N	N	N	N	N	N	N	N	N	N	2A	1A	N	10	
	D	10	1A	N	N	N	N	N	N	N	N	N	N	N	1A	2A	N	10
	E	10	1A	1A	N	N	N	N	N	N	N	N	1A	N	N	N	N	8
	F	10	N	1A	N	N	N	N	N	N	N	N	N	N	2A	N	N	9
	G	10	N	1A	2A	N	N	N	N	N	N	N	N	N	N	N	N	9
	H	10	N	3A	N	N	N	N	N	N	N	N	N	N	N	N	N	9
SAW-01 Saw Mill Creek 10-ppt	A	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	4	
	B	10	1A	4A	N	N	N	N	N	N	N	N	N	1D,3A	N	N	6	
	C	10	N	N	N	1A	1A	N	N	N	N	N	N	N	N	N	5	
	D	10	N	1A	1A	2A	N	N	N	N	N	N	N	N	1A	1A	N	5
	E	10	N	1A	1A	1A	N	N	1A	N	1A	N	N	N	N	N	N	7
	F	10	N	N	N	N	N	N	N	N	N	1A	N	N	1D	N	1A	8
	G	10	2A	N	N	N	N	N	N	N	N	N	N	N	1A	N	N	4
	H	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	6

Observation Codes: N – Normal, # D – Number Amphipods Observed Dead, # E – Number Amphipods Observed Emerged, # A – Number Amphipods Observed Avoiding Sediment, # F – Number Amphipods Observed Floating on Surface

Table 5f. Daily Observation Data - *Hyalella azteca*

PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 28-Day Whole Sediment Toxicity Test Conducted at 10-ppt
 DATE: 1 through 29 October 2003

Sample Identification	Rep	N ₀	Day 15	Day 16	Day 17	Day 18	Day 19	Day 20	Day 21	Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	Day 28	Final Live Count
SAW-02 Saw Mill Creek 10-ppt	A	10	2A	1A	N	N	N	N	N	1A	N	N	N	N	N	N	7
	B	10	N	N	N	N	N	N	N	N	1A	N	N	1D,3A	N	N	8
	C	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	8
	D	10	3A	2A	2A	1A	1A	N	N	N	N	N	N	1A	1A	N	8
	E	10	N	2A	2A	2A	N	N	1A	N	N	N	N	N	N	N	8
	F	10	N	2A	1A	N	N	N	N	N	N	N	N	1D	N	N	8
	G	10	N	N	N	N	N	N	N	1A	N	N	N	1A	N	N	7
	H	10	N	1A	1A	N	N	N	N	N	N	N	N	N	N	N	8
Negative Control Blue Marsh Reservoir 10-ppt	A	10	N	N	N	N	N	N	1A	N	N	N	N	3A	N	N	7
	B	10	2A	N	N	N	N	N	1A	N	N	N	N	2A	1A	N	9
	C	10	N	N	N	N	N	N	1A	N	N	N	N	2A	N	N	10
	D	10	N	N	N	N	N	N	1A	N	1A	N	N	1A	N	N	10
	E	10	N	2A	1A	2A	2A	N	1A	1A	N	2A	N	3A	1A	N	10
	F	10	N	N	N	N	N	N	N	N	N	N	N	4A	N	N	10
	G	10	N	N	N	N	N	N	N	N	N	N	1A	1A	N	N	8
	H	10	1A	N	N	N	N	N	N	N	N	N	N	1A	N	N	8

Observation Codes: N - Normal, #D -- Number Amphipods Observed Dead, #E - Number Amphipods Observed Emerged, #A - Number Amphipods Observed Avoiding Sediment, #F - Number Amphipods Observed Floating on Surface

Table 6a. Daily Observation Data – *Hyalella azteca*

PROJECT: NJMC-MER1 Wetland Ecological Risk Assessment
 TEST: 28-Day Whole Sediment Toxicity Test Conducted with Moderately-Hard Reconstituted Water
 DATE: 1 through 29 October 2003

Sample Identification	Rep	N ₀	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14
KFM-01 Kearny Marsh MHRW	A	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	B	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	C	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	D	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	E	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	F	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	G	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
KFM-01 Kearny Marsh MHRW	A	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	B	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	C	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	D	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	E	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	F	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	G	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
KFM-01 Kearny Marsh MHRW	A	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	B	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	C	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	D	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	E	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	F	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	G	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Negative Control Blue Marsh Reservoir	A	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	B	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	C	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	D	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	E	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	F	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	G	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Observation Codes: N – Normal, # D – Number Amphipods Observed Dead, # E – Number Amphipods Observed Emerged, # A – Number Amphipods Observed Avoiding Sediment,

F – Number Amphipods Observed Floating on Surface

MHRW = Moderately-Hard Reconstituted Water

Table 6b. Daily Observation Data – *Hyaletta azteca*

PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 28-Day Whole Sediment Toxicity Test Conducted with Moderately-Hard Reconstituted Water
 DATE: 1 through 29 October 2003

Sample Identification	Rep	N _e	Day 15	Day 16	Day 17	Day 18	Day 19	Day 20	Day 21	Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	Day 28	Final Live Count	
KFM-01 Kearny Marsh MHRW	A	10	N	N	1A	N	N	N	1A	N	N	N	N	N	N	N	8	
	B	10	N	N	N	N	N	N	N	N	N	N	N	N	1A	N	6	
	C	10	N	N	N	N	N	N	N	N	N	N	N	N	1A	N	9	
	D	10	N	1A	1A	N	N	N	2A	1A	N	N	N	N	2A	N	6	
	E	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	7	
	F	10	N	1A	N	N	N	N	N	N	N	N	N	N	N	N	9	
	G	10	N	N	N	N	N	N	N	N	N	2A	N	N	N	N	9	
	H	10	N	N	N	N	N	N	N	N	1A	N	N	N	N	N	9	
KFM-01 Kearny Marsh MHRW	A	10	N	1A	1A	N	N	N	1A	N	N	1A	N	N	N	N	10	
	B	10	1A	N	N	N	N	N	1A	N	N	2A	N	N	1A	N	8	
	C	10	N	2A	N	1A	N	N	1A	N	N	2A	N	N	1A	N	8	
	D	10	1A	N	2A	1A	N	N	N	1A	N	N	N	N	N	N	10	
	E	10	1A	N	N	1A	N	N	N	N	N	N	N	N	N	N	8	
	F	10	1A	N	N	N	N	N	N	N	1A	N	N	N	N	N	7	
	G	10	N	2A	N	N	N	N	N	N	N	N	N	N	N	N	8	
	H	10	1A	N	N	N	N	N	N	N	N	N	N	N	N	N	8	
KFM-01 Kearny Marsh MHRW	A	10	N	3A	1A	N	1A	1A	1A	N	N	N	1A	1A	1A	N	10	
	B	10	N	2A	1A	N	N	N	1A	N	N	N	N	N	N	N	9	
	C	10	N	2A	2A	N	N	N	1A	3A	N	N	N	N	1A	N	10	
	D	10	3A	1A	N	1A	N	N	1A	N	2A	N	N	N	2A	N	9	
	E	10	N	1A	N	N	N	N	N	N	N	1A	N	N	N	N	9	
	F	10	N	1A	2A	N	N	N	N	N	2A	N	N	N	N	N	10	
	G	10	N	1A	1A	N	N	N	N	N	N	N	N	N	N	N	10	
	H	10	N	2A	N	N	N	N	N	N	N	N	N	N	N	N	9	
	A	10	N	N	N	N	N	1A	N	N	N	N	N	N	1A	2A	N	9
	B	10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	9
	Negative Control Blue Marsh Reservoir	C	10	N	N	N	N	1A	N	N	1A	N	N	N	N	1A	N	8
D		10	N	N	N	N	N	N	N	N	1A	N	N	N	N	N	8	
E		10	N	N	N	N	N	1A	N	2A	N	N	N	N	N	N	9	
F		10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	9	
G		10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	8	
H		10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	9	

Observation Codes: N – Normal, # D – Number Amphipods Observed Dead, # E – Number Amphipods Observed Emerged, # A – Number Amphipods Observed Avoiding Sediment,
 # F – Number Amphipods Observed Floating on Surface
 MHRW = Moderately-Hard Reconstituted Water

Table 7. Daily Observation Data -- *Chironomus tentans*

PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 10-Day Whole Sediment Toxicity Test Conducted with Moderately-Hard Reconstituted Water
 DATE: 3 through 13 October 2003

Sample Identification	Rep	N ₀	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Final Live Count
KFM-01 Kearny Marsh MHRW	A	10	N	N	N	N	N	N	N	N	N	N	N	9
	B	10	N	N	N	N	N	N	N	N	N	N	N	10
	C	10	N	N	N	N	N	N	N	N	N	N	N	7
	D	10	N	N	N	N	N	N	N	N	N	N	N	6
	E	10	N	N	N	N	N	N	N	N	N	N	N	5
	F	10	N	N	N	N	N	N	N	N	N	N	N	7
	G	10	N	N	N	N	N	N	N	N	N	N	N	10
	H	10	N	N	N	N	N	N	N	N	N	N	N	7
KFM-01 Kearny Marsh MHRW	A	10	N	N	N	N	N	N	N	N	N	N	N	10
	B	10	N	N	N	N	N	N	N	N	N	N	N	8
	C	10	N	N	N	N	N	N	N	N	N	N	N	10
	D	10	N	N	N	N	N	N	N	N	N	N	N	9
	E	10	N	N	N	N	N	N	N	N	N	N	N	8
	F	10	N	N	N	N	N	N	N	N	N	N	N	9
	G	10	N	N	N	N	N	N	N	N	N	N	N	8
	H	10	N	N	N	N	N	N	N	N	N	N	N	9
KFM-01 Kearny Marsh MHRW	A	10	N	N	N	N	N	N	N	N	N	N	N	10
	B	10	N	N	N	N	N	N	N	N	N	N	N	8
	C	10	N	N	N	N	N	N	N	N	N	N	N	10
	D	10	N	N	N	N	N	N	N	N	N	N	N	9
	E	10	N	N	N	N	N	N	N	N	N	N	N	10
	F	10	N	N	N	N	N	N	N	N	N	N	N	10
	G	10	N	N	N	N	N	N	N	N	N	N	N	10
	H	10	N	N	N	N	N	N	N	N	N	N	N	10
Negative Control Blue Marsh Reservoir	A	10	N	N	N	1 A	N	N	N	N	N	N	N	9
	B	10	N	N	N	N	N	N	N	N	N	N	N	10
	C	10	N	N	N	N	N	N	N	1 A	1 A	N	N	9
	D	10	N	N	N	N	N	N	N	N	1 A	N	N	10
	E	10	N	N	N	N	N	N	N	N	N	N	N	10
	F	10	N	N	N	N	N	N	N	N	N	N	N	10
	G	10	N	N	N	N	N	N	N	1 A	1 A	N	N	10
	H	10	N	N	N	N	N	N	N	N	N	N	N	9

Observation Codes: N - Normal, # D - Number Midges Observed Dead, # A - Number Midges Observed Avoiding Sediment, # F - Number Midges Observed Floating on Surface
 MHRW - Moderately-Hard Reconstituted Water

Table 8a. Daily Observation Data – *Neanthes arenaceolentata*
 PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 10-Day Whole Sediment Toxicity Test Conducted at 25-ppt
 DATE: 12 through 22 October 2003

Sample Identification	Rep	N ₀	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Final Live Count
ORM-01 Oriani Marsh 25-ppt	A	5	N	N	N	N	N	N	N	N	N	N	N	4
	B	5	N	N	N	N	N	N	N	N	N	N	N	4
	C	5	N	N	N	N	N	N	N	N	N	N	N	3
	D	5	N	N	N	N	N	N	N	N	N	N	N	4
	E	5	N	N	N	N	N	N	N	N	N	N	N	2
	F	5	N	N	N	N	N	N	N	N	N	N	N	1
	G	5	N	N	N	N	N	N	N	N	N	N	N	3
	H	5	N	N	N	N	N	N	N	N	N	N	N	1
ORM-02 Oriani Marsh 25-ppt	A	5	N	N	N	N	N	N	N	N	N	N	N	1
	B	5	N	N	N	N	N	N	N	N	N	N	N	3
	C	5	N	N	N	N	N	N	N	N	N	N	N	3
	D	5	N	N	N	N	N	N	N	N	N	N	N	1
	E	5	N	N	N	N	N	N	N	N	N	N	N	1
	F	5	N	N	N	N	N	N	N	N	N	N	N	2
	G	5	N	N	N	N	N	N	N	N	N	N	N	1
	H	5	N	N	N	N	N	N	N	N	N	N	N	3
RBM-01 Riverbend Marsh 25-ppt	A	5	N	N	N	N	N	N	N	N	N	N	N	2
	B	5	N	N	N	N	N	N	N	N	N	N	N	1
	C	5	N	N	N	N	N	N	N	N	N	N	N	1
	D	5	N	N	N	N	N	N	N	N	N	N	N	1
	E	5	N	N	N	N	N	N	N	N	N	N	N	1
	F	5	N	N	N	N	N	N	N	N	N	N	N	1
	G	5	N	N	N	N	N	N	N	N	N	N	N	1
	H	5	N	N	N	N	N	N	N	N	N	N	N	3
RBM-02 Riverbend Marsh 25-ppt	A	5	N	N	N	N	N	N	N	N	N	N	N	3
	B	5	N	N	N	N	N	N	N	N	N	N	N	0
	C	5	N	N	N	N	N	N	N	N	N	N	N	4
	D	5	N	N	N	N	N	N	N	N	N	N	N	1
	E	5	N	N	N	N	N	N	N	N	N	N	N	4
	F	5	N	N	N	N	N	N	N	N	N	N	N	2
	G	5	N	N	N	N	N	N	N	N	N	N	N	5
	H	5	N	N	N	N	N	N	N	N	N	N	N	5

Observation Codes: N – Normal, # D – Number Annelids Observed Dead, # E – Number Annelids Observed Emerged, # A – Number Annelids Observed Avoiding Sediment, # F – Number Annelids Observed Floating on Surface

Table 8b. Daily Observation Data – Neanthes arenaceodentata
 PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 10-Day Whole Sediment Toxicity Test Conducted at 25-ppt
 DATE: 12 through 22 October 2003

Sample Identification	Rep	N ₀	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Final Live Count
SHS-01 Secaucus High School Marsh 25-ppt	A	5	N	N	N	N	N	N	N	N	N	N	N	0
	B	5	N	N	N	N	N	N	N	N	N	N	N	3
	C	5	N	N	N	N	N	N	N	N	N	N	N	3
	D	5	N	N	N	N	N	N	N	N	N	N	N	5
	E	5	N	N	N	N	N	N	N	N	N	N	N	3
	F	5	N	N	N	N	N	N	N	N	N	N	N	1
	G	5	N	N	N	N	N	N	N	N	N	N	N	3
	H	5	N	N	N	N	N	N	N	N	N	N	N	2
SHS-02 Secaucus High School Marsh 25-ppt	A	5	N	N	N	N	N	N	N	N	N	N	N	3
	B	5	N	N	N	N	N	N	N	N	N	N	N	3
	C	5	N	N	N	N	N	N	N	N	N	N	N	3
	D	5	N	N	N	N	N	N	1 A	N	N	N	N	4
	E	5	N	N	N	N	N	N	N	N	N	N	N	5
	F	5	N	N	N	N	N	N	N	N	N	N	N	2
	G	5	N	N	N	N	N	N	N	N	N	N	N	4
	H	5	N	N	N	N	N	N	N	N	N	N	N	3
SHS-03 Secaucus High School Marsh 25-ppt	A	5	N	N	N	N	N	N	N	N	N	N	N	4
	B	5	N	N	N	N	N	N	N	N	N	N	N	5
	C	5	N	N	N	N	N	N	N	N	N	N	N	4
	D	5	N	N	N	N	N	N	N	N	N	N	N	5
	E	5	N	N	N	N	N	N	N	N	N	N	N	5
	F	5	N	N	N	N	N	N	N	N	N	N	N	4
	G	5	N	N	N	N	N	N	N	N	N	N	N	3
	H	5	N	N	N	N	N	N	N	N	N	N	N	4
SAW-01 Saw Mill Creek 25-ppt	A	5	N	N	N	N	N	N	N	N	N	N	N	3
	B	5	N	N	N	N	N	N	N	N	N	N	N	5
	C	5	N	N	N	N	N	N	N	N	N	N	N	5
	D	5	N	N	N	N	N	N	N	N	N	N	N	3
	E	5	N	N	N	N	N	N	N	N	N	N	N	5
	F	5	N	N	N	N	N	N	N	N	N	N	N	4
	G	5	N	N	N	N	N	N	N	N	N	N	N	5
	H	5	N	N	N	N	N	N	N	N	N	N	N	5

Observation Codes: N - Normal, # D - Number Annelids Observed Dead, # E - Number Annelids Observed Emerged, # A - Number Annelids Observed Avoiding Sediment,
 # F - Number Annelids Observed Floating on Surface

Table 8c. Daily Observation Data – Neanthes arenaceodentata
 PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 10-Day Whole Sediment Toxicity Test Conducted at 25-ppt
 DATE: 12 through 22 October 2003

Sample Identification	Rep	N ₀	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Final Live Count
SAW-02 Saw Mill Creek 25-ppt	A	5	N	N	N	N	N	N	N	N	N	N	N	5
	B	5	N	N	N	N	N	N	N	N	N	N	N	4
	C	5	N	N	N	N	N	N	N	N	N	N	N	4
	D	5	N	N	N	N	N	N	N	N	N	N	N	5
	E	5	N	N	N	N	N	N	N	N	N	N	N	5
	F	5	N	N	N	N	N	N	N	N	N	N	N	5
	G	5	N	N	N	N	N	N	N	N	N	N	N	4
	H	5	N	N	N	N	N	N	N	N	N	N	N	5
Negative Control Blue Marsh Reservoir 25-ppt	A	5	N	N	N	N	N	N	N	N	N	N	N	5
	B	5	N	N	N	N	N	N	N	N	N	N	N	5
	C	5	N	N	N	N	N	N	N	N	N	N	N	5
	D	5	N	N	N	N	N	N	N	N	N	N	N	4
	E	5	N	N	N	N	N	N	N	N	N	N	N	4
	F	5	N	N	N	N	N	N	N	N	N	N	N	5
	G	5	N	N	N	N	N	N	N	N	N	N	N	4
	H	5	N	N	N	N	N	N	N	N	N	N	N	5

Observation Codes: N – Normal; # D – Number Annelids Observed Dead; # E – Number Annelids Observed Emerged; # A – Number Annelids Observed Avoiding Sediment.
 # F – Number Annelids Observed Floating on Surface

Table 9a. Daily Physical and Chemical Data – *Hyalella azteca*
 PROJECT: NIMC-MERI Wetland Ecological Risk Assessment
 TEST: 10-Day Whole Sediment Toxicity Test Conducted at 10-ppt
 DATE: 1 through 29 October 2003

Sample Identification	P/Chem Parameter	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14	
ORM-01 Oritani Marsh 10 ppt	Temperature	23.1	22.6	22.9	22.8	22.5	22.6	23.0	22.6	23.6	22.5	22.4	22.0	22.0	23.6	
	Initial D.O.	7.1	7.6	8.2	8.1	7.9	7.5	7.7	7.4	7.4	7.9	7.8	7.1	7.6	7.9	
	Final D.O.	6.2	6.3	6.4	7.2	5.3	5.1	4.5	4.6	4.6	4.4	4.5	5.7	5.2	5.1	
	Initial pH	7.92	7.73	7.69	7.71	7.63	7.57	7.50	7.52	7.52	7.48	7.65	7.63	7.92	7.64	
	Final pH	7.33	7.33	7.41	7.81	8.08	8.37	8.42	8.28	8.28	8.02	8.31	8.42	8.33	8.18	7.87
	Conductivity	16750	17100	15270	15196	15140	15540	15570	15690	15690	17160	17400	17140	17200	14760	17350
ORM-02 Oritani Marsh 10 ppt	Salinity (ppt)	10.1	10.1	10.1	10.1	9.4	9.4	9.4	9.5	10.6	10.6	10.3	10.3	9.0	10.5	
	Ammonia	1.1													<0.6	
	Temperature	23.2	22.6	22.7	22.8	22.5	22.6	23.0	22.6	22.6	23.5	22.5	22.4	22.0	22.0	23.6
	Initial D.O.	7.1	7.6	8.2	8.1	7.9	7.5	7.7	7.4	7.4	7.4	7.9	7.8	7.1	7.6	7.9
	Final D.O.	5.6	5.4	5.6	6.3	5.5	5.9	5.9	6.0	6.0	6.8	8.5	7.3	7.4	6.8	6.1
	Initial pH	7.92	7.73	7.69	7.71	7.63	7.57	7.50	7.52	7.52	7.48	7.57	7.65	7.63	7.92	7.64
RBM-01 Riverbend Marsh 10 ppt	Final pH	7.17	7.13	7.26	7.20	8.11	7.15	7.31	7.25	7.42	7.96	8.22	8.24	8.23	8.08	
	Conductivity	16750	17100	15270	15196	15140	15540	15570	15690	17160	17400	17140	17200	14760	17350	
	Salinity (ppt)	10.1	10.1	10.1	10.1	9.4	9.4	9.4	9.5	10.6	10.6	10.3	10.3	9.0	10.5	
	Ammonia	0.8													<0.6	
	Temperature	23.2	22.6	22.9	22.8	22.5	22.6	23.0	22.6	22.6	23.5	22.5	22.4	22.0	22.0	23.6
	Initial D.O.	7.1	7.6	8.2	8.1	7.9	7.5	7.7	7.4	7.4	7.4	7.9	7.8	7.1	7.6	7.9
RBM-01 Riverbend Marsh 10 ppt	Final D.O.	6.0	6.1	6.3	6.0	5.4	5.2	4.9	4.5	4.7	6.2	5.6	6.7	6.4	6.1	
	Initial Ph	7.92	7.73	7.69	7.71	7.63	7.57	7.50	7.52	7.48	7.57	7.65	7.63	7.92	7.64	
	Final Ph	7.39	7.51	7.42	8.56	7.08	8.29	8.35	8.11	7.89	8.16	8.18	8.18	8.22	8.31	8.13
	Conductivity	16750	17100	15270	15196	15140	15540	15570	15690	17160	17400	17140	17200	14760	17350	
	Salinity (ppt)	10.1	10.1	10.1	10.1	9.4	9.4	9.4	9.5	10.6	10.6	10.3	10.3	9.0	10.5	
	Ammonia	<0.6													<0.6	

Table 9b. Daily Physical and Chemical Data – *Hyalella azteca*
 PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 10-Day Whole Sediment Toxicity Test Conducted at 10-ppt
 DATE: 1 through 29 October 2003

Sample Identification	P/Chem Parameter	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14
RBM-02 Riverbend Marsh 10 ppt	Temperature	22.0	22.6	22.8	23.0	22.6	22.6	22.9	22.6	22.9	22.6	22.4	22.0	22.2	23.7
	Initial D.O.	7.1	7.6	8.2	8.1	7.9	7.5	7.7	7.4	7.4	7.9	7.8	7.1	7.6	7.9
	Final D.O.	6.1	6.1	6.3	6.4	5.7	5.0	4.5	4.0	4.1	5.1	4.5	5.6	4.6	5.0
	Initial pH	7.92	7.73	7.69	7.71	7.63	7.57	7.50	7.52	7.48	7.48	7.65	7.63	7.92	7.64
	Final pH	7.40	7.38	7.46	7.69	7.56	7.67	7.74	7.60	7.26	7.76	7.97	8.08	8.01	7.75
	Conductivity	16750	17100	15270	15196	15140	15540	15570	15690	17160	17400	17140	17200	14760	17350
	Salinity (ppt)	10.1	10.1	10.1	10.1	9.4	9.4	9.4	9.4	9.5	10.6	10.3	10.3	9.0	10.5
Ammonia	1.1														< 0.6
SHS-01 Seacaus High School Marsh 10 ppt	Temperature	22.1	22.7	22.6	22.7	22.5	22.6	22.9	22.6	23.6	22.6	22.4	22.0	22.2	23.7
	Initial D.O.	7.1	7.6	8.2	8.1	7.9	7.5	7.7	7.4	7.4	7.9	7.8	7.1	7.6	7.9
	Final D.O.	6.0	6.1	6.1	6.2	5.7	5.0	5.0	4.7	4.6	5.7	5.3	6.2	5.5	5.2
	Initial Ph	7.92	7.73	7.69	7.71	7.63	7.57	7.50	7.52	7.48	7.57	7.65	7.63	7.92	7.64
	Final Ph	7.35	7.34	7.39	7.47	7.56	7.79	7.84	7.57	7.43	7.62	7.63	7.73	7.84	7.80
	Conductivity	16750	17100	15270	15196	15140	15540	15570	15690	17160	17400	17140	17200	14760	17350
	Salinity (ppt)	10.1	10.1	10.1	10.1	9.4	9.4	9.4	9.4	9.5	10.6	10.3	10.3	9.0	10.5
Ammonia	0.8														< 0.6
SHS-02 Seacaus High School Marsh 10 ppt	Temperature	22.2	22.7	22.8	22.9	22.6	22.6	23.0	22.6	23.6	22.3	22.4	22.0	22.3	23.7
	Initial D.O.	7.1	7.6	8.2	8.1	7.9	7.5	7.7	7.4	7.4	7.9	7.8	7.1	7.6	7.9
	Final D.O.	6.0	6.1	6.2	6.1	5.3	5.1	4.8	4.7	5.1	6.4	5.9	6.9	5.9	5.4
	Initial Ph	7.92	7.73	7.69	7.71	7.63	7.57	7.50	7.52	7.48	7.57	7.65	7.63	7.92	7.64
	Final Ph	7.35	7.35	7.48	7.85	7.92	8.14	8.17	7.93	7.99	8.31	8.52	8.47	8.48	8.29
	Conductivity	16750	17100	15270	15196	15140	15540	15570	15690	17160	17400	17140	17200	14760	17350
	Salinity (ppt)	10.1	10.1	10.1	10.1	9.4	9.4	9.4	9.4	9.5	10.6	10.3	10.3	9.0	10.5
Ammonia	<0.6														< 0.6

Table 9c. Daily Physical and Chemical Data – *Hyalella azteca*
 PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 10-Day Whole Sediment Toxicity Test Conducted at 10-ppt
 DATE: 1 through 29 October 2003

Sample Identification	P/Chem Parameter	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14	
SHS-03 Secaucus High School Marsh 10 ppt	Temperature	22.3	22.6	22.9	22.6	22.5	22.6	22.9	22.6	23.6	22.5	22.4	22.0	22.2	23.6	
	Initial D.O.	7.1	7.6	8.2	8.1	7.9	7.5	7.7	7.4	7.4	7.9	7.8	7.1	7.6	7.9	
	Final D.O.	5.9	6.1	6.2	6.3	5.5	5.0	4.7	4.7	4.7	5.0	5.6	6.4	5.3	5.3	
	Initial pH	7.92	7.73	7.69	7.71	7.63	7.57	7.50	7.52	7.52	7.48	7.65	7.63	7.92	7.64	
	Final pH	7.34	7.31	7.39	7.48	7.72	8.06	8.10	7.80	7.80	7.62	7.83	7.81	7.72	7.54	
	Conductivity	16750	17100	15270	15196	15140	15540	15570	15690	15690	17160	17400	17140	17200	14760	17350
	Salinity (ppt)	10.1	10.1	10.1	10.1	9.4	9.4	9.4	9.5	9.5	10.6	10.6	10.3	10.3	9.0	10.5
Ammonia	<0.6														<0.6	
SAW-01 Saw Mill Creek 10 ppt	Temperature	22.4	22.8	22.7	22.9	22.6	22.65	22.9	22.6	23.8	22.5	22.4	22.0	22.3	23.5	
	Initial D.O.	7.1	7.6	8.2	8.1	7.9	7.5	7.7	7.4	7.4	7.9	7.8	7.1	7.6	7.9	
	Final D.O.	6.2	6.3	7.69	6.8	5.6	5.9	6.0	5.9	6.0	6.0	6.3	7.1	6.2	5.8	
	Initial pH	7.92	7.73	7.69	7.71	7.63	7.57	7.50	7.52	7.48	7.57	7.65	7.63	7.92	7.64	
	Final pH	7.45	7.40	7.68	8.23	8.27	8.46	8.61	8.50	8.58	8.64	8.66	8.48	8.47	8.28	
	Conductivity	16750	17100	15270	15196	15140	15540	15570	15690	15690	17160	17400	17140	17200	14760	17350
	Salinity (ppt)	10.1	10.1	10.1	10.1	9.4	9.4	9.4	9.4	9.5	10.6	10.6	10.3	10.3	9.0	10.5
Ammonia	<0.6														<0.6	
SAW-02 Saw Mill Creek 10 ppt	Temperature	22.4	22.7	22.7	23.1	22.6	22.5	22.9	22.6	23.4	22.5	22.5	22.0	22.2	23.6	
	Initial D.O.	7.1	7.6	8.2	8.1	7.9	7.5	7.7	7.4	7.4	7.9	7.8	7.1	7.6	7.9	
	Final D.O.	6.0	6.1	6.6	6.1	5.6	6.1	5.9	5.6	5.6	6.9	6.5	7.6	7.3	6.3	
	Initial pH	7.92	7.73	7.69	7.71	7.63	7.57	7.50	7.52	7.48	7.57	7.65	7.63	7.92	7.64	
	Final pH	7.40	7.46	7.68	8.41	7.82	7.96	8.14	8.01	8.19	8.37	8.55	8.50	8.63	8.46	
	Conductivity	16750	17100	15270	15196	15140	15540	15570	15690	15690	17160	17400	17140	17200	14760	17350
	Salinity (ppt)	10.1	10.1	10.1	10.1	9.4	9.4	9.4	9.4	9.5	10.6	10.6	10.3	10.3	9.0	10.5
Ammonia	<0.6														<0.6	

Table 9d. Daily Physical and Chemical Data – *Hyalella azteca*
 PROJECT: NJMC-MER1 Wetland Ecological Risk Assessment
 TEST: 10-Day Whole Sediment Toxicity Test Conducted at 10-ppt
 DATE: 1 through 29 October 2003

Sample Identification	P/Chem Parameter	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14
		Temperature	22.3	22.6	22.9	23.1	22.5	22.6	22.9	22.9	22.6	22.6	22.5	22.4	22.0
Initial D.O.	7.1	7.6	8.2	8.1	7.9	7.5	7.7	7.4	7.4	7.4	7.9	7.8	7.1	7.6	7.9
Final D.O.	5.9	6.1	6.8	6.3	5.5	5.0	4.7	4.7	4.7	5.0	6.4	5.6	6.4	5.3	5.3
Initial pH	7.92	7.73	7.69	7.71	7.63	7.57	7.50	7.52	7.52	7.48	7.57	7.65	7.63	7.92	7.64
Final pH	7.34	7.31	7.62	7.48	7.72	8.06	8.10	7.80	7.80	7.62	7.83	7.81	7.81	7.72	7.54
Conductivity	16750	17100	15270	15196	15140	15540	15570	15690	15690	17160	17400	17140	17200	14760	17350
Salinity (ppt)	10.1	10.1	10.1	10.1	9.4	9.4	9.4	9.4	9.5	10.6	10.6	10.3	10.3	9.0	10.5
Ammonia	<0.6														<0.6

Table 9e. Daily Physical and Chemical Data – *Hyalella azteca*
 PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 10-Day Whole Sediment Toxicity Test Conducted at 10-ppt
 DATE: 1 through 29 October 2003

Sample Identification	P/Chem Parameter	Day 15	Day 16	Day 17	Day 18	Day 19	Day 20	Day 21	Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	Day 28	
ORM-01 Oritani Marsh 10 ppt	Temperature	22.7	24.0	23.8	23.5	23.0	24.0	23.9	23.6	22.7	22.9	22.3	22.3	23.5	23.4	
	Initial D.O.	7.6	7.3	6.8	8.1	7.7	7.6	7.8	7.6	7.6	7.6	7.7	7.8	7.9	8.0	7.6
	Final D.O.	4.9	5.2	5.2	5.3	4.9	5.7	5.1	4.4	4.4	4.9	4.9	5.0	5.1	5.0	4.8
	Initial pH	7.65	7.59	7.60	7.72	7.66	7.63	7.52	7.51	7.51	7.36	7.48	7.51	7.59	7.46	7.46
	Final pH	7.78	7.43	7.34	7.39	7.33	7.31	7.05	7.04	7.04	7.00	7.00	7.11	7.20	7.11	7.00
	Conductivity	17640	17490	17660	17650	17570	17510	17450	17760	17760	17950	17760	17520	17465	14810	15260
	Salinity (ppt)	10.8	10.5	10.9	10.8	10.7	10.6	10.6	10.8	10.8	11.0	10.6	10.6	10.5	9.3	9.3
Ammonia															<0.6	
ORM-02 Oritani Marsh 10 ppt	Temperature	22.7	24.0	23.7	23.4	22.9	23.9	23.8	23.6	22.6	23.3	22.9	22.1	23.5	23.4	
	Initial D.O.	7.6	7.3	6.8	8.1	7.7	7.6	7.8	7.6	7.6	7.7	7.8	7.9	8.0	7.6	
	Final D.O.	6.6	6.1	5.4	5.8	5.6	7.0	5.3	4.7	4.7	5.7	5.2	6.0	5.2	4.8	
	Initial pH	7.65	7.59	7.60	7.72	7.66	7.63	7.52	7.51	7.51	7.36	7.48	7.51	7.59	7.46	7.46
	Final pH	8.18	7.80	7.43	7.49	7.36	7.58	7.17	7.08	7.08	7.12	7.11	7.18	7.21	7.04	6.86
	Conductivity	17640	17490	17660	17650	17570	17510	17450	17760	17760	17950	17760	17520	17465	14810	15260
	Salinity (ppt)	10.8	10.5	10.9	10.8	10.7	10.6	10.6	10.8	10.8	11.0	10.6	10.6	10.5	9.3	9.3
Ammonia															0.7	
RBM-01 Riverbend Marsh 10 ppt	Temperature	22.6	24.0	23.7	23.4	22.8	24.0	23.8	23.6	22.7	23.4	22.8	22.3	23.6	23.1	
	Initial D.O.	7.6	7.3	6.8	8.1	7.7	7.6	7.8	7.6	7.6	7.6	7.8	7.9	8.0	7.6	
	Final D.O.	6.5	6.1	5.5	5.8	5.4	7.2	5.3	5.0	5.0	6.1	5.3	5.8	7.0	5.8	5.1
	Initial Ph	7.65	7.59	7.60	7.72	7.66	7.63	7.52	7.51	7.51	7.36	7.48	7.51	7.59	7.46	7.46
	Final Ph	8.47	8.02	7.43	7.42	7.41	7.84	7.13	7.08	7.08	7.25	7.23	7.36	7.53	7.18	6.90
	Conductivity	17640	17490	17660	17650	17570	17510	17450	17760	17760	17950	17760	17520	17465	14810	15260
	Salinity (ppt)	10.8	10.5	10.9	10.8	10.7	10.6	10.6	10.8	10.8	11.0	10.6	10.6	10.5	9.3	9.3
Ammonia															<0.6	

Table 9F. Daily Physical and Chemical Data – *Hyalella azteca*
 PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 10-Day Whole Sediment Toxicity Test Conducted at 10-ppt
 DATE: 1 through 29 October 2003

Sample Identification	P/Chem Parameter	Day 15	Day 16	Day 17	Day 18	Day 19	Day 20	Day 21	Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	Day 28
RBM-02 Riverbend Marsh 10 ppt	Temperature	22.6	24.0	23.7	23.4	22.9	24.0	23.8	23.1	22.7	22.9	31.1	22.1	23.7	23.0
	Initial D.O.	7.6	7.3	6.8	8.1	7.7	7.6	7.8	7.6	7.6	7.6	7.8	7.9	8.0	7.6
	Final D.O.	4.7	4.5	4.8	5.1	4.5	4.9	4.8	4.3	4.9	4.9	4.8	5.4	4.5	4.1
	Initial pH	7.65	7.59	7.60	7.72	7.66	7.63	7.52	7.51	7.36	7.36	7.48	7.51	7.59	7.46
	Final pH	7.84	7.44	7.32	7.38	7.41	7.41	7.20	7.19	7.40	7.40	7.44	7.48	7.81	7.66
	Conductivity	17640	17490	17660	17650	17570	17510	17450	17760	17760	17950	17760	17520	17465	14810
Salinity (ppt)	10.8	10.5	10.9	10.8	10.7	10.6	10.6	10.8	10.8	11.0	10.6	10.6	10.5	9.3	
	Ammonia														<0.6
SHS-01 Secaucus High School Marsh 10 ppt	Temperature	22.6	24.0	23.7	23.4	22.9	24.0	23.9	23.2	22.7	23.1	23.6	22.1	23.6	23.6
	Initial D.O.	7.6	7.3	6.8	8.1	7.7	7.6	7.8	7.6	7.6	7.7	7.8	7.9	8.0	7.6
	Final D.O.	5.0	4.8	5.1	5.3	4.6	5.3	4.8	4.1	4.8	4.6	5.1	5.4	4.6	4.0
	Initial pH	7.65	7.59	7.60	7.72	7.66	7.63	7.52	7.51	7.36	7.48	7.51	7.59	7.46	7.46
	Final pH	8.02	7.54	7.44	7.50	7.53	7.53	7.60	7.24	7.38	7.51	7.70	7.58	7.58	7.41
	Conductivity	17640	17490	17660	17650	17570	17510	17450	17760	17760	17950	17760	17520	17465	14810
Salinity (ppt)	10.8	10.5	10.9	10.8	10.7	10.6	10.6	10.8	10.8	11.0	10.6	10.6	10.5	9.3	
	Ammonia														<0.6
SHS-02 Secaucus High School Marsh 10 ppt	Temperature	22.6	24.0	23.7	23.3	22.9	24.0	23.8	23.5	22.6	23.4	23.3	22.1	23.6	23.8
	Initial D.O.	7.6	7.3	6.8	8.1	7.7	7.6	7.8	7.6	7.6	7.7	7.8	7.9	8.0	7.6
	Final D.O.	5.3	4.9	4.9	5.1	4.6	5.1	4.7	4.0	4.9	4.3	4.9	5.0	4.1	3.6
	Initial pH	7.65	7.59	7.60	7.72	7.66	7.63	7.52	7.51	7.36	7.48	7.51	7.59	7.46	7.46
	Final pH	8.39	7.89	7.50	7.56	7.63	7.64	7.23	7.14	7.26	7.23	7.23	7.23	7.15	7.12
	Conductivity	17640	17490	17660	17650	17570	17510	17450	17760	17760	17950	17760	17520	17465	14810
Salinity (ppt)	10.8	10.5	10.9	10.8	10.7	10.6	10.6	10.8	10.8	11.0	10.6	10.6	10.5	9.3	
	Ammonia														0.6

Table 9g. Daily Physical and Chemical Data – *Hyalella azteca*
 PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 10-Day Whole Sediment Toxicity Test Conducted at 10-ppt
 DATE: 1 through 29 October 2003

Sample Identification	P/Chem Parameter	Day 15	Day 16	Day 17	Day 18	Day 19	Day 20	Day 21	Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	Day 28
SHS-03 Secaucus High School Marsh 10 ppt	Temperature	22.6	24.0	23.7	23.3	22.8	24.0	23.9	22.8	22.7	22.7	22.8	22.0	23.6	24.0
	Initial D.O.	7.6	7.3	6.8	8.1	7.7	7.6	7.8	7.6	7.6	7.6	7.7	7.9	8.0	7.6
	Final D.O.	4.9	4.4	4.9	5.0	4.8	5.1	4.6	4.2	4.2	4.9	4.4	5.2	4.5	3.9
	Initial pH	7.65	7.59	7.60	7.72	7.66	7.63	7.52	7.51	7.51	7.36	7.48	7.51	7.59	7.46
	Final pH	7.59	7.32	7.23	7.32	7.33	7.21	7.04	7.01	7.01	7.20	7.25	7.29	7.36	7.29
	Conductivity	17640	17490	17660	17650	17570	17510	17450	17760	17760	17950	17760	17520	17465	14810
Salinity (ppt)	10.8	10.5	10.9	10.8	10.7	10.6	10.6	10.6	10.8	11.0	10.6	10.6	10.5	9.3	
Ammonia															<0.6
SAW-01 Saw Mill Creek 10 ppt	Temperature	22.7	24.0	23.7	23.3	22.8	23.9	23.7	23.5	22.7	24.0	23.6	22.0	23.6	23.1
	Initial D.O.	7.6	7.3	6.8	8.1	7.7	7.6	7.8	7.6	7.6	7.7	7.8	7.9	8.0	7.6
	Final D.O.	5.5	5.1	4.8	5.0	4.6	5.5	4.6	4.3	4.3	5.2	4.7	5.3	4.3	4.0
	Initial pH	7.65	7.59	7.60	7.72	7.66	7.63	7.52	7.51	7.51	7.36	7.48	7.51	7.59	7.46
	Final pH	8.36	7.96	7.55	7.50	7.47	7.49	7.11	7.11	7.09	7.21	7.30	7.31	7.32	7.15
	Conductivity	17640	17490	17660	17650	17570	17510	17450	17760	17760	17950	17760	17520	17465	14810
Salinity (ppt)	10.8	10.5	10.9	10.8	10.7	10.6	10.6	10.6	10.8	11.0	10.6	10.6	10.5	9.3	
Ammonia															0.6
SAW-02 Saw Mill Creek 10 ppt	Temperature	22.6	24.0	23.7	23.3	22.9	23.9	23.6	23.3	22.7	24.0	23.1	22.1	23.6	23.4
	Initial D.O.	7.6	7.3	6.8	8.1	7.7	7.6	7.8	7.6	7.6	7.7	7.8	7.9	8.0	7.6
	Final D.O.	6.9	6.2	5.4	5.6	5.4	7.1	4.8	4.7	4.7	5.2	5.3	6.5	5.3	5.1
	Initial Ph	7.65	7.59	7.60	7.72	7.66	7.63	7.52	7.51	7.51	7.36	7.48	7.51	7.59	7.46
	Final Ph	8.68	8.23	7.67	7.69	7.74	7.95	7.17	7.11	7.11	7.21	7.23	7.39	7.46	7.10
	Conductivity	17640	17490	17660	17650	17570	17510	17450	17760	17760	17950	17760	17520	17465	14810
Salinity (ppt)	10.8	10.5	10.9	10.8	10.7	10.6	10.6	10.6	10.8	11.0	10.6	10.6	10.5	9.3	
Ammonia															<0.6

Table 9h. Daily Physical and Chemical Data – *Hyalella azteca*
 PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 10-Day Whole Sediment Toxicity Test Conducted at 10-ppt
 DATE: 1 through 29 October 2003

Sample Identification	Day 15	Day 16	Day 17	Day 18	Day 19	Day 20	Day 21	Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	Day 28
P/Chem Parameter														
Temperature	22.6	24.0	23.6	23.3	22.8	23.9	23.7	22.3	22.6	22.5	22.8	22.1	23.6	23.3
Initial D.O.	7.6	7.3	6.8	8.1	7.7	7.6	7.8	7.6	7.6	7.7	7.8	7.9	8.0	7.6
Final D.O.	4.9	4.4	5.5	5.7	5.4	5.5	5.1	4.4	5.4	5.3	5.5	5.9	5.2	5.3
Initial pH	7.65	7.59	7.60	7.72	7.66	7.63	7.52	7.51	7.36	7.48	7.51	7.59	7.46	7.46
Final pH	7.28	7.12	7.14	7.27	7.18	7.07	6.95	6.91	7.03	7.16	7.16	7.12	7.01	6.93
Conductivity	17640	17490	17660	17650	17570	17510	17450	17760	17950	17760	17520	17465	14810	15260
Salinity (ppt)	10.8	10.5	10.9	10.8	10.7	10.6	10.6	10.8	11.0	10.6	10.6	10.5	9.3	9.3
Ammonia														< 0.6

Table 10a. Daily Physical and Chemical Data – *Hyalella azteca*
 PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 28-Day Whole Sediment Toxicity Test Conducted with Moderately-Hard Reconstituted Water
 DATE: 1 through 29 October 2003

Sample Identification	P/Chem Parameter	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14
		Temperature	22.3	22.8	23.1	22.9	22.7	22.5	22.5	22.9	22.5	22.8	22.5	22.4	22.0
KFM-01 Kearny Marsh Reconstituted Water	Initial D.O.	7.7	7.6	7.8	7.7	7.5	7.7	7.8	8.0	7.6	7.7	7.7	7.7	8.1	7.7
	Final D.O.	6.1	5.7	5.9	6.1	6.2	5.4	4.7	4.7	4.7	5.8	6.0	6.6	5.7	5.6
	Initial pH	8.00	8.00	8.00	6.1	8.00	7.99	7.88	7.90	7.81	7.91	7.97	8.14	7.97	8.02
	Final pH	7.64	7.66	7.67	7.67	7.66	7.54	7.51	7.48	7.48	7.47	7.63	7.64	7.60	7.50
KFM-02 Kearny Marsh Reconstituted Water	Conductivity	309	307	319	320	316	319	304	310	304	306	303	316	307	327
	Salinity (ppt)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Ammonia	0.9													<0.6
	Temperature	22.3	22.8	23.2	23.0	22.7	22.5	22.9	22.5	22.5	22.9	22.5	22.3	22.0	22.2
KFM-02 Kearny Marsh Reconstituted Water	Initial D.O.	7.7	7.6	7.8	7.7	7.5	7.7	7.8	8.0	7.6	7.7	7.7	7.7	8.1	7.7
	Final D.O.	6.1	5.8	6.1	6.2	6.1	5.4	4.9	4.3	4.4	5.1	5.2	5.9	5.4	5.3
	Initial pH	8.00	8.00	8.00	7.89	8.00	7.99	7.88	7.90	7.81	7.91	7.97	8.14	7.97	8.02
	Final pH	7.68	7.66	7.66	7.66	7.60	7.48	7.46	7.39	7.34	7.41	7.48	7.51	7.48	7.39
KFM-02 Kearny Marsh Reconstituted Water	Conductivity	309	307	319	320	316	319	304	310	304	306	303	316	307	327
	Salinity (ppt)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Ammonia	<0.6													<0.6
	Temperature	22.1	22.7	23.1	23.0	22.6	22.5	22.8	22.5	22.5	22.7	22.5	22.3	22.0	22.2
KFM-02 Kearny Marsh Reconstituted Water	Initial D.O.	7.7	7.6	7.8	7.7	7.5	7.7	7.8	8.0	7.6	7.7	7.7	7.7	8.1	7.7
	Final D.O.	6.4	5.7	6.1	6.3	6.1	5.3	5.1	4.5	4.2	4.8	4.9	5.9	5.0	4.8
	Initial pH	8.00	8.00	8.00	7.89	8.00	7.99	7.88	7.90	7.81	7.91	7.97	8.14	7.97	8.02
	Final pH	7.61	7.60	7.65	7.63	7.58	7.48	7.47	7.40	7.35	7.47	7.53	7.60	7.60	7.54
KFM-02 Kearny Marsh Reconstituted Water	Conductivity	309	307	319	320	316	319	304	310	304	306	303	316	307	327
	Salinity (ppt)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Ammonia														<0.6
	Temperature	22.1	22.7	23.1	23.0	22.6	22.5	22.8	22.5	22.5	22.7	22.5	22.3	22.0	22.2
KFM-02 Kearny Marsh Reconstituted Water	Initial D.O.	7.7	7.6	7.8	7.7	7.5	7.7	7.8	8.0	7.6	7.7	7.7	7.7	8.1	7.7
	Final D.O.	6.4	5.7	6.1	6.3	6.1	5.3	5.1	4.5	4.2	4.8	4.9	5.9	5.0	4.8
	Initial pH	8.00	8.00	8.00	7.89	8.00	7.99	7.88	7.90	7.81	7.91	7.97	8.14	7.97	8.02
	Final pH	7.61	7.60	7.65	7.63	7.58	7.48	7.47	7.40	7.35	7.47	7.53	7.60	7.60	7.54
KFM-02 Kearny Marsh Reconstituted Water	Conductivity	309	307	319	320	316	319	304	310	304	306	303	316	307	327
	Salinity (ppt)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Ammonia														<0.6
	Temperature	22.1	22.7	23.1	23.0	22.6	22.5	22.8	22.5	22.5	22.7	22.5	22.3	22.0	22.2
KFM-02 Kearny Marsh Reconstituted Water	Initial D.O.	7.7	7.6	7.8	7.7	7.5	7.7	7.8	8.0	7.6	7.7	7.7	7.7	8.1	7.7
	Final D.O.	6.4	5.7	6.1	6.3	6.1	5.3	5.1	4.5	4.2	4.8	4.9	5.9	5.0	4.8
	Initial pH	8.00	8.00	8.00	7.89	8.00	7.99	7.88	7.90	7.81	7.91	7.97	8.14	7.97	8.02
	Final pH	7.61	7.60	7.65	7.63	7.58	7.48	7.47	7.40	7.35	7.47	7.53	7.60	7.60	7.54
KFM-02 Kearny Marsh Reconstituted Water	Conductivity	309	307	319	320	316	319	304	310	304	306	303	316	307	327
	Salinity (ppt)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Ammonia														<0.6

Table 10b. Daily Physical and Chemical Data – *Hyalella azteca*
 PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 28-Day Whole Sediment Toxicity Test Conducted with Moderately-Hard Reconstituted Water
 DATE: 1 through 29 October 2003

Sample Identification	P/Chem Parameter	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14
		Temperature	22.0	22.8	23.0	22.8	22.7	22.5	22.5	22.9	22.5	22.8	22.5	22.3	22.0
Initial D.O.	7.7	7.6	7.8	7.7	7.5	7.7	7.7	7.8	8.0	7.6	7.7	7.7	7.7	8.1	7.7
Final D.O.	6.3	5.9	6.2	6.3	5.9	5.5	5.5	5.5	4.6	4.6	5.6	6.0	7.3	6.5	6.3
Initial pH	8.00	8.00	8.00	7.89	8.00	7.99	7.99	7.88	7.90	7.81	7.91	7.97	8.14	7.97	8.02
Final pH	7.82	7.82	7.84	7.85	7.72	7.63	7.63	7.65	7.55	7.54	7.69	7.87	8.04	8.07	8.03
Conductivity	309	307	319	320	316	319	319	304	310	304	306	303	316	307	327
Salinity (ppt)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ammonia	<0.6														<0.6

Table 10c. Daily Physical and Chemical Data – *Hyalella azteca*
 PROJECT: NMC-MERI Wetland Ecological Risk Assessment
 TEST: 28-Day Whole Sediment Toxicity Test Conducted with Moderately-Hard Reconstituted Water
 DATE: 1 through 29 October 2003

Sample Identification	P/Chem Parameter	Day 15	Day 16	Day 17	Day 18	Day 19	Day 20	Day 21	Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	Day 28
			Temperature	22.6	24.0	23.6	23.5	23.0	24.0	23.9	23.6	22.6	22.9	23.1	22.1
KFM-01 Kearny Marsh Reconstituted Water	Initial D.O.	7.9	7.6	6.8	8.2	8.4	8.7	8.5	8.5	8.0	8.4	8.6	8.3	8.4	8.1
	Final D.O.	5.9	4.3	5.3	6.0	5.8	6.2	6.2	5.1	5.8	5.2	5.6	7.1	5.1	5.9
	Initial pH	7.99	7.88	7.88	8.01	7.95	7.92	7.74	7.61	7.59	7.66	7.90	7.88	7.79	7.75
	Final pH	7.64	7.59	7.53	7.56	7.52	7.58	7.40	7.25	7.36	7.50	7.53	7.73	7.44	7.44
	Conductivity	320	314	318	295	282	286	286	305	303	294	298	300	301	295
	Salinity (ppt)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Ammonia														<0.6
KFM-02 Kearny Marsh Reconstituted Water	Temperature	22.5	24.0	23.5	23.4	23.0	24.0	23.9	23.4	22.7	24.0	23.3	22.0	23.4	24.0
	Initial D.O.	7.9	7.6	6.8	8.2	8.4	8.7	8.5	8.5	8.0	8.4	8.6	8.3	8.4	8.1
	Final D.O.	5.4	4.3	4.8	5.8	6.0	5.3	6.3	4.1	5.9	4.8	5.1	6.6	4.6	5.9
	Initial pH	7.99	7.88	7.88	8.01	7.95	7.92	7.74	7.61	7.59	7.66	7.90	7.88	7.79	7.75
	Final pH	7.45	7.31	7.34	7.46	7.39	7.19	7.24	7.09	7.11	7.27	7.38	7.47	7.21	7.26
	Conductivity	320	314	318	295	282	286	286	305	303	294	298	300	301	295
	Salinity (ppt)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Ammonia														<0.6
KFM-02 Kearny Marsh Reconstituted Water	Temperature	22.6	24.0	23.5	23.5	23.0	24.0	23.9	23.3	22.6	24.0	23.6	22.1	23.5	
	Initial D.O.	7.9	7.6	6.8	8.2	8.4	8.7	8.5	8.5	8.0	8.4	8.6	8.3	8.4	8.1
	Final D.O.	4.9	4.8	4.7	5.7	5.5	5.2	6.1	4.1	5.6	4.7	5.2	6.7	4.7	6.0
	Initial pH	7.99	7.88	7.88	8.01	7.95	7.92	7.74	7.61	7.59	7.66	7.90	7.88	7.79	7.75
	Final pH	7.60	7.41	7.46	7.66	7.58	7.38	7.34	7.20	7.31	7.47	7.56	7.65	7.39	7.39
	Conductivity	320	314	318	295	282	286	286	305	303	294	298	300	301	295
	Salinity (ppt)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Ammonia														<0.6

Table 10d. Daily Physical and Chemical Data – *Hyalella azteca*
 PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 28-Day Whole Sediment Toxicity Test Conducted with Moderately-Hard Reconstituted Water
 DATE: 1 through 29 October 2003

Sample Identification	P/Chem Parameter	Day 15	Day 16	Day 17	Day 18	Day 19	Day 20	Day 21	Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	Day 28
Negative Control 10 ppt Blue Marsh Reservoir	Temperature	22.6	24.0	23.5	23.5	23.0	24.0	23.9	23.3	22.6	24.0	23.6	22.1	23.5	24.0
	Initial D.O.	7.9	7.6	6.8	8.2	8.4	8.7	8.5	8.5	8.0	8.4	8.6	8.3	8.4	8.1
	Final D.O.	7.5	6.5	6.6	6.3	6.0	6.8	6.5	4.4	5.9	4.9	5.8	7.1	4.9	6.6
	Initial pH	7.99	7.88	7.88	8.01	7.95	7.92	7.74	7.61	7.59	7.66	7.90	7.88	7.79	7.75
	Final pH	8.36	7.20	7.88	7.91	7.81	7.95	7.54	7.39	7.47	7.64	7.76	7.87	7.53	7.56
	Conductivity	320	314	318	295	282	286	286	305	303	294	298	300	301	295
Salinity (ppt)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ammonia															<0.6

Table 11a. Daily Physical and Chemical Data – *Chironomus tentans*
 PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 10-Day Whole Sediment Toxicity Test Conducted with Moderately-Hard Reconstituted Water
 DATE: 3 through 13 October 2003

Sample Identification	P/Chem Parameter	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
		Temperature	22.8	22.6	22.5	22.2	22.7	22.0	23.0	22.5	22.6
KFM-01 Kearny Marsh Reconstituted Water	Initial D.O.	7.8	8.1	7.5	7.7	7.8	8.0	7.6	7.7	7.7	
	Final D.O.	7.1	6.7	5.9	4.6	3.5	3.8	4.1	3.2	4.8	
	Initial pH	8.00	7.98	8.00	7.99	7.88	7.90	7.81	7.91	7.97	
	Final pH	7.73	7.69	7.46	7.41	7.35	7.29	7.41	7.46	7.56	
	Conductivity	319	318	316	319	304	310	304	306	303	
Salinity (ppt)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Ammonia	1.7										
KFM-02 Kearny Marsh Reconstituted Water	Temperature	22.9	23.2	22.2	22.6	22.4	22.0	23.5	22.9	22.5	
	Initial D.O.	7.8	8.1	7.5	7.7	7.8	8.0	7.6	7.7	7.7	
	Final D.O.	7.3	6.2	4.1	3.9	2.8	3.6	3.9	3.7	3.6	
	Initial pH	8.00	7.98	8.00	7.99	7.88	7.90	7.81	7.91	7.97	
	Final pH	7.74	7.71	7.40	7.36	7.34	7.27	7.30	7.30	7.39	
Conductivity	319	318	316	319	304	310	304	306	303		
Salinity (ppt)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Ammonia	<0.6										
KFM-02 Kearny Marsh Reconstituted Water	Temperature	22.6	22.6	22.2	22.2	22.3	22.5	22.8	22.8	23.1	
	Initial D.O.	7.8	8.1	7.5	7.7	7.8	8.0	7.6	7.7	7.7	
	Final D.O.	7.2	6.6	4.6	4.3	3.1	4.0	4.2	4.4	3.3	
	Initial pH	8.00	7.98	8.00	7.99	7.88	7.90	7.81	7.91	7.97	
	Final pH	7.68	7.70	7.46	7.42	7.37	7.34	7.37	7.38	7.45	
Conductivity	319	318	316	319	304	310	304	306	303		
Salinity (ppt)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Ammonia	<0.6										

Table 11b. Daily Physical and Chemical Data – *Chironomus tentans*
 PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 10-Day Whole Sediment Toxicity Test Conducted with Moderately-Hard Reconstituted Water
 DATE: 3 through 13 October 2003

Sample Identification	P/Chem Parameter	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
		Temperature	22.6	22.2	23.6	22.4	22.9	22.4	22.6	22.6	22.5
Initial D.O.	7.8	8.1	7.5	7.7	7.8	8.0	7.6	7.7	7.7	7.7	7.7
Final D.O.	7.1	6.7	4.0	3.8	2.9	3.3	2.5	2.5	3.9	4.2	6.0
Initial pH	8.00	7.98	8.00	7.99	7.88	7.90	7.81	7.81	7.91	7.97	8.14
Final pH	7.71	7.88	7.54	7.45	7.39	7.30	7.37	7.42	7.42	7.53	7.69
Conductivity	319	318	316	319	304	310	304	306	306	303	316
Salinity (ppt)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ammonia	0.7										1.5

Table 12a. Daily Physical and Chemical Data – *Neanthes arenaceodentata*
 PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 10-Day Whole Sediment Toxicity Test Conducted at 25-ppt
 DATE: 12 through 22 October 2003

Sample Identification	P/Chem Parameter	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
ORM-01 Oritani Marsh 25 ppt	Temperature	20.6	20.4	20.7	20.7	20.7	20.3	20.4	20.4	20.5	20.1
	Initial D.O.	7.8	8.7	7.4	7.1	7.3	6.8	6.9	7.3	7.1	7.2
	Final D.O.	4.6	4.6	4.9	5.0	5.3	4.6	6.1	6.2	5.8	6.0
	Initial pH	8.01	8.04	7.93	7.88	7.83	7.84	7.95	7.94	7.86	7.73
	Final pH	8.35	8.31	8.15	8.04	7.88	7.74	7.84	7.82	7.70	7.65
	Conductivity	35380	35070	35470	36210	36280	36640	36460	36080	35700	35640
	Salinity (ppt)	24.5	24.5	24.6	24.9	24.7	24.8	24.9	25.5	24.4	24.5
Ammonia	0.9										<0.6
ORM-02 Oritani Marsh 25 ppt	Temperature	20.5	20.4	20.7	20.7	20.7	20.1	20.4	20.3	20.5	20.1
	Initial D.O.	7.8	8.7	7.4	7.1	7.3	6.8	6.9	7.3	7.1	7.2
	Final D.O.	5.4	5.4	5.7	5.5	5.6	3.2	6.0	6.0	5.4	5.5
	Initial pH	8.01	8.04	7.93	7.88	7.83	7.84	7.95	7.94	7.86	7.73
	Final pH	7.61	7.61	7.65	7.66	7.62	7.38	7.87	7.92	7.85	7.90
	Conductivity	35380	35070	35470	36210	36280	36640	36460	36080	35700	35640
	Salinity (ppt)	24.5	24.5	24.6	24.9	24.7	24.8	24.9	25.5	24.4	24.5
Ammonia	<0.6										<0.6
RBM-01 Riverbend Marsh 25 ppt	Temperature	20.4	20.4	20.6	20.5	20.6	20.1	20.3	20.3	20.5	20.1
	Initial D.O.	7.8	8.7	7.4	7.1	7.3	6.8	6.9	7.3	7.1	7.2
	Final D.O.	4.4	4.5	4.8	4.7	4.9	3.0	5.6	5.9	5.5	5.4
	Initial pH	8.01	8.04	7.93	7.88	7.83	7.84	7.95	7.94	7.86	7.73
	Final pH	8.34	8.38	8.28	8.26	7.99	7.80	7.95	7.99	7.83	7.76
	Conductivity	35380	35070	35470	36210	36280	36640	36460	36080	35700	35640
	Salinity (ppt)	24.5	24.5	24.6	24.9	24.7	24.8	24.9	25.5	24.4	24.5
Ammonia	<0.6										<0.6

Table 12b. Daily Physical and Chemical Data – *Neanthes arenaceodentata*
 PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 10-Day Whole Sediment Toxicity Test Conducted at 25-ppt
 DATE: 12 through 22 October 2003

Sample Identification	P/Chem Parameter	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
RBM-02 Riverbend Marsh 25 ppt	Temperature	20.3	20.4	20.6	20.5	20.6	20.1	20.3	20.2	20.5	20.1
	Initial D.O.	7.8	8.7	7.4	7.1	7.3	6.8	6.9	7.3	7.1	7.2
	Final D.O.	4.8	4.9	5.1	4.8	5.2	3.9	5.5	5.9	5.8	5.7
	Initial pH	8.01	8.04	7.93	7.88	7.83	7.84	7.95	7.94	7.86	7.73
	Final pH	7.96	8.12	8.15	8.22	8.09	8.12	8.12	8.08	7.90	7.84
	Conductivity	35380	35070	35470	36210	36280	36640	36460	36080	35700	35640
	Salinity (ppt)	24.5	24.5	24.6	24.9	24.7	24.8	24.9	25.5	24.4	24.5
Ammonia	<0.6										<0.6
SHS-01 Secaucus High School Marsh 25 ppt	Temperature	20.2	20.4	20.5	20.4	20.6	20.1	20.3	20.2	20.4	20.0
	Initial D.O.	7.8	8.7	7.4	7.1	7.3	6.8	6.9	7.3	7.1	7.2
	Final D.O.	4.8	4.8	5.1	5.0	5.6	4.2	5.8	5.9	5.6	5.7
	Initial pH	8.01	8.04	7.93	7.88	7.83	7.84	7.95	7.94	7.86	7.73
	Final pH	8.31	8.24	8.06	7.94	7.76	7.56	7.80	7.82	7.68	7.64
	Conductivity	35380	35070	35470	36210	36280	36640	36460	36080	35700	35640
	Salinity (ppt)	24.5	24.5	24.6	24.9	24.7	24.8	24.9	25.5	24.4	24.5
Ammonia	<0.6										<0.6
SHS-02 Secaucus High School Marsh 25 ppt	Temperature	20.1	20.4	20.4	20.4	20.6	20.1	20.3	20.1	20.4	20.1
	Initial D.O.	7.8	8.7	7.4	7.1	7.3	6.8	6.9	7.3	7.1	7.2
	Final D.O.	4.6	4.8	5.0	4.7	5.2	4.0	5.7	5.9	5.8	5.8
	Initial pH	8.01	8.04	7.93	7.88	7.83	7.84	7.95	7.94	7.86	7.73
	Final pH	8.28	8.27	8.15	8.11	7.96	7.87	7.93	7.93	7.76	7.70
	Conductivity	35380	35070	35470	36210	36280	36640	36460	36080	35700	35640
	Salinity (ppt)	24.5	24.5	24.6	24.9	24.7	24.8	24.9	25.5	24.4	24.5
Ammonia	<0.6										<0.6

Table 12c. Daily Physical and Chemical Data – *Neanthes arenaceodentata*
 PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 10-Day Whole Sediment Toxicity Test Conducted at 25-ppt
 DATE: 12 through 22 October 2003

Sample Identification	P/Chem Parameter	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	
		Temperature	20.4	20.4	20.6	20.7	20.1	20.6	20.1	20.3	20.3	20.4
SHS-03 Secaucus High School Marsh 25 ppt	Initial D.O.	7.8	8.7	7.4	7.1	7.3	6.8	6.9	7.3	7.1	7.2	
	Final D.O.	4.7	5.1	5.3	5.0	4.3	4.3	5.7	6.1	5.8	5.8	
	Initial pH	8.01	8.04	7.93	7.88	7.84	7.83	7.84	7.95	7.94	7.86	7.73
	Final pH	8.31	8.23	8.04	7.91	7.59	7.78	7.59	7.80	7.82	7.75	7.75
	Conductivity	35380	35070	35470	36210	36640	36280	36640	36460	36080	35700	35640
	Salinity (ppt)	24.5	24.5	24.6	24.9	24.8	24.7	24.8	24.9	25.5	24.4	24.5
Ammonia	0.6										<0.6	
SAW-01 Saw Mill Creek 25 ppt	Temperature	20.4	20.5	20.7	20.8	20.2	20.2	20.4	20.3	20.5	20.1	
	Initial D.O.	7.8	8.7	7.4	7.1	6.8	7.3	6.9	7.3	7.1	7.2	
	Final D.O.	4.6	4.9	5.0	4.7	4.0	4.9	4.0	5.6	6.0	5.8	5.7
	Initial pH	8.01	8.04	7.93	7.88	7.84	7.83	7.84	7.95	7.94	7.86	7.73
	Final pH	8.35	8.24	8.24	8.21	8.08	8.10	8.08	8.02	7.98	7.85	7.82
	Conductivity	35380	35070	35470	36210	36640	36280	36640	36460	36080	35700	35640
Salinity (ppt)	24.5	24.5	24.6	24.9	24.8	24.7	24.8	24.9	25.5	24.4	24.5	
Ammonia	<0.6										<0.6	
SAW-02 Saw Mill Creek 25 ppt	Temperature	20.2	20.4	20.5	20.6	20.1	20.5	20.2	20.3	20.3	19.9	
	Initial D.O.	7.8	8.7	7.4	7.1	6.8	7.3	6.9	7.3	7.1	7.2	
	Final D.O.	4.9	5.1	5.4	5.0	3.8	5.3	3.8	5.5	5.9	5.5	5.4
	Initial pH	8.01	8.04	7.93	7.88	7.84	7.83	7.84	7.95	7.94	7.86	7.73
	Final pH	8.02	8.00	7.92	7.93	7.76	7.86	7.76	7.93	7.95	7.84	7.81
	Conductivity	35380	35070	35470	36210	36640	36280	36640	36460	36080	35700	35640
Salinity (ppt)	24.5	24.5	24.6	24.9	24.8	24.7	24.8	24.9	25.5	24.4	24.5	
Ammonia	<0.6										<0.6	

Table 12d. Daily Physical and Chemical Data – *Neanthes arenaceodentata*
 PROJECT: NJMC-MERI Wetland Ecological Risk Assessment
 TEST: 10-Day Whole Sediment Toxicity Test Conducted at 25-ppt
 DATE: 12 through 22 October 2003

Sample Identification	P/Chem Parameter	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
		Temperature	20.3	20.4	20.6	20.7	20.6	20.1	20.3	20.3	20.3
Initial D.O.	7.8	8.7	7.4	7.1	7.3	6.8	6.9	7.3	7.1	7.1	7.2
Final D.O.	5.7	5.9	5.9	5.5	5.7	4.0	6.1	6.3	5.7	5.7	5.9
Initial pH	8.01	8.04	7.93	7.88	7.83	7.84	7.95	7.94	7.86	7.86	7.73
Final pH	7.65	7.66	7.64	7.62	7.57	7.34	7.67	7.67	7.51	7.51	7.43
Conductivity	35380	35070	35470	36210	36280	36640	36460	36080	35700	35700	35640
Salinity (ppt)	24.5	24.5	24.6	24.9	24.7	24.8	24.9	25.5	24.4	24.4	24.5
Ammonia	0.6										<0.6