TECHNICAL AND ENGINEERING COORDINATION SECTION

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YEAR 14 DATA REPORT

Assessment of the Environmental Impacts of the Hart-Miller Island Confined Disposal Facility, Maryland

Year 14 Exterior Monitoring Data Report (September 1994-August 1995)

Prepared By
Dredging Coordination and Assessment Division
Maryland Department of the Environment

MDE

Prepared For
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DEFINITION OF TERMS

Amphipod	Crustacean order containing laterally compressed members such as the sand hoppers.
Bathymetric	Referring to the topography below the surface of a body of water which reveals depth profiles.
Benthic	Referring to the bottom-most layer of a body of water.
Benthos	The organisms living in or on top of the sediments at the bottom-most layer of a body of water.
Bioaccumulation	The accumulation of contaminants in the tissue of organisms through any route, including respiration, ingestion, or direct contact with contaminated water, sediment, pore water or dredged material.
Bioaccumulation factor	The degree to which an organism accumulates a chemical compared to the source. It is a dimensionless number or factor derived by dividing the concentration in the organism by that in the source.
Bioassay	A test using a biological system. It involves exposing an organism to a test material and determining a response. Two major types of bioassays are differentiated by response: toxicity tests which measure an effect (e.g., acute toxicity, sublethal/chronic toxicity) and bioaccumulation tests which measure a phenomenon (e.g., the uptake of contaminants into tissues).
Biogenic	Resulting from the activity of living organisms. For example, bivalve shells are biogenic materials.
Biomagnification	Bioaccumulation up the food chain, e.g., the route of accumulation is solely through food. Organisms at higher trophic levels will have higher body burdens than those at lower trophic levels.
Biota	The animal and plant life of a region.
Bioturbation	Mixing of sediments by the burrowing and feeding activities of sediment-dwelling organisms. This disturbs the normal, layered patterns of sediment accumulation.
Brackish	Salty, though less saline than sea water. Characteristic of estuarine water.

Bryozoa	Phylum of colonial animals that often share one coelomic cavity. Encrusting and branching forms secrete a protective housing (zooecium) of calcium carbonate or chitinous material. Possess lophophore feeding structure.
Bulk sediment chemistry	Results of chemical analyses of whole sediments (in terms of wet or dry weight), without normalization (e.g., to organic carbon, grain-size, acid volatile sulfide).
Confined disposal	A disposal method that isolates the dredged material from the environment. Confined disposal is placement of dredged material within diked containment facilities via pipeline or other means.
Confined disposal facility(CDF)	A diked area, either in-water or upland, used to contain dredged material. The terms confined disposal facility (CDF), dredged material containment area, diked disposal facility, and confined disposal area are used interchangeably.
Contaminant	A chemical or biological substance in a form that can be incorporated by, through one or more pathways, and that harms aquatic organisms, consumers of aquatic organisms, or users of the aquatic environment, and includes but is not limited to the substances on the 307(a)(1) list of toxic pollutants promulgated on January 31, 1978 (43 FR 4109).
Contaminated material	Material dredged from Baltimore Harbor, originating to the northwest of a line from North Point to Rock Point, or other polluted sites. Material shows high concentrations of metals, PCBs, organics, etc.
Dendrogram	A branching, diagrammatic representation of the interrelations of a group of items sharing some common factors (as of natural groups connected by ancestral forms).
Desiccation	The process of drying thoroughly; exhausting or depriving of moisture.

Diversity index	A statistical measure that incorporates information on the number of species present in a habitat with the abundance of each species. A low diversity index suggests that the habitat has been stressed or disturbed.
Dominant (species)	An organism or a group of organisms that by their size and/or numbers constitute the majority of a given community.
Dredge	Any of various machines equipped with scooping or suction devices used in deepening harbors and waterways and in underwater mining.
Effluent	Something that flows out or forth; an outflow or discharge of waste, as from a sewer.
Enrichment factor	A method of normalizing geochemical data to a reference material, which partially corrects for variation due to grain size.
Epifauna	Benthic animals living on the surface of, not within, bottom sediments.
Fine-grained material	Sediments consisting of particles less than or equal to 0.062 mm in diameter.
Flocculation	An agglomeration of particles bound by electrostatic forces.
Gas chromatography	A method of chemical analysis in which a sample is vaporized and diffused along with a carrier gas through a liquid or solid adsorbent for differential adsorption. A detector records separate peaks as various compounds are released (eluted) from the column.
Gravity core	A sample of sediment from the bottom of a body of water, obtained with a cylindrical device, used to examine sediments at various depths.
Gyre	A circular motion or eddy. Used mainly in reference to the circular motion of water in each of the major ocean basins centered in subtropical high-pressure regions.
Hydrodynamics	The study of the dynamics of fluids in motion.
Hydrography	The scientific description and analysis of the physical condition, boundaries, flow, and related characteristics of oceans, rivers, lakes, and other surface waters.

Hydrozoa	A class of coelenterate that characteristically exhibit alternation of generations, with a sessile polypoid colony giving rise to a pelagic medusoid form by asexual budding.
Infauna	Benthic animals living within bottom sediments.
Leachate	Water or any other liquid that may contain dissolved (leached) soluble materials, such as organic salts and mineral salts, derived from a solid material.
Littoral zone	The benthic zone between the highest and lowest normal water marks; the intertidal zone.
Mixing zone	A limited volume of water serving as a zone of initial dilution in the immediate vicinity of a discharge point where receiving waters may not meet water quality standards or other requirements otherwise applicable to the receiving water. The mixing zone may be defined by the volume and/or the surface area of the disposal site or specific mixing zone definitions in the Code of Maryland Regulations (COMAR).
Nephelometric turbidity unit (NTU)	A unit of measurement of the amount of light scattered or reflected by particles within a liquid.
Open water disposal	Direct placement of dredged material in rivers, lakes, estuaries or oceans via pipeline or surface release from hopper dredges or barges.
QA	Quality Assurance, the total integrated program for assuring the reliability of data. A system for integrating the quality planning, quality control, quality assessment, and quality improvement efforts to meet user requirements and defined standards of quality with a stated level of confidence.
QC	Quality Control, the overall system of technical activities for obtaining prescribed standards of performance in the monitoring and measurement process to meet user requirements.

Radiograph	An image produced on a radiosensitive surface, such as a photographic film, by radiation other than visible light, especially by x-rays passed through an object or by photographing a fluoroscopic image.
Salinity	The concentration of salt in a solution. Full strength seawater has a salinity of about 35 parts per thousand (ppt). Normally computed from conductivity or chlorinity.
Secchi depth	The depth at which a standard, black and white Secchi disk disappears from view when lowered into water.
Sediment	Material, such as sand, silt, or clay, suspended in or settled on the bottom of a water body.
Seine	A large fishing net made to hang vertically in the water by weights at the lower edge and floats on the top.
Spectrophotometer	An instrument used in chemical analysis to measure the intensity of color in a solution.
Spillway	A channel for an overflow of water.
Substrate	A surface on or in which a plant or animal grows or is attached.
Supernatant	The clear fluid over sediment or precipitate.
Total suspended solids (TSS)	A measurement (usually in milligrams per liter or parts per million) of the amount of particulate matter suspended in a liquid.
Trace metal	A metal that occurs in minute quantities in a substance.
Trawl	A large, tapered fishing net of flattened conical shape, towed along the sea bottom. To catch fish by means of a trawl.
Turbidity	The property of the scattering or reflection of light within a fluid, as caused by suspended or stirred-up particles.
Turbidity maximum	A zone in a water body where turbidity is typically the greatest, resulting from the influx of river-borne sediments, and flocculation of clay particles due to prevailing salinity patterns.

Water Quality Certification	A state certification, pursuant to Section 404 of the Clean Water act, that the proposed discharge of dredged material will comply with the applicable provisions of Sections 301, 303, 306 and 307 of the Clean Water Act and relevant State laws.
Water Quality Standard	A law or regulation that consists of the beneficial designated use or uses of a water body, the numeric and narrative water quality criteria that are necessary to protect the use or uses of that particular water body.

LIST OF ACRONYMS

AVS - Acid Volatile Sulfide

AAS - Atomic Absorption Spectrometry

CBL - Chesapeake Biological Laboratory

CDF - Confined Disposal Facility

CFR - Code of Federal Regulations

CWA - Clean Water Act

DNR - Department of Natural Resources

EPA - Environmental Protection Agency

FDA - Food and Drug Administration

FR - Federal Register

GC - Gas Chromatography

ICAP - Inductively Coupled Argon Plasma

MDE - Maryland Department of the Environment

MES - Maryland Environmental Service

MGS - Maryland Geological Survey

MPA - Maryland Port Administration

MS - Mass Spectrometry

NEPA - National Environmental Policy Act

NIST - National Institute of Standards and Technology

NOAA - National Oceanic and Atmospheric Administration

NPDES - National Pollutant Discharge Elimination System

PAH - Polynuclear Aromatic Hydrocarbons

PCB - Polychlorinated Biphenyl

QA - Quality Assurance

QC - Quality Control

SAB - Science Advisory Board

SOP - Standard Operating Procedure

SQC - Sediment Quality Criteria

SQS - Sediment Quality Standards

SRM - Standard Reference Material

TDL - Target Detection Limit

TOC - Total Organic Carbon

USACE - U.S. Army Corps of Engineers

USCS - Unified Soil Classification System

WQC - Water Quality Certification

WQS - Water Quality Standard

CONVERSIONS[1]

WEIGHT:

1Kg = 1000g = 2.205lbs
1g = 1000mg = 2.205 x 10^{-3}lbs
1mg = 1000μg = 2.205 x 10^{-3}lbs

1 lb = 16oz = 0.4536Kg

LENGTH:

1m = 100cm = 3.28ft = 39.370in
1cm = 10mm = 0.3937in
1mm = 1000μm = 0.03937in

1ft = 12in = 0.348m

CONCENTRATION:

1ppm = 1mg/L = 1mg/Kg = 1μg/g = 1mL/m^3
1g/cc = 1Kg/L = 8.3454 lbs/gallon
1g/m^3 = 1mg/L = 6.243 x 10^{-5}lbs/ft^3

1 lb/gal = 7.481 lbs/ft^3 = 0.12g/cc = 119.826g/L = 119.826Kg/m^3
1oz/gal = 7.489Kg/m^3

VOLUME:

1L = 1000mL
1mL = 1000μL
1cc = $10^{-6}m^3$

1yd^3 = 27ft^3 = 764.555L = 0.764m^3
1acre-ft = 1233.482m^3
1 gallon = 3785cc
1ft^3 = 0.028m^3 = 28.3168L

FLOW:

1m/s = 196.85ft/min = 3.281ft/s
1m^3/s = 35.7ft^3/s

1ft^3/s = 1699.011 L/min = 28.317L/s
1ft^2/hr = 2.778 x $10^{-4}ft^2$/s = 2.581 x $10^{-5}m^2$/s
1ft/s = 0.03048m/s
1yd^3/min = 0.45ft^3/s
1yd^3/s = 202.03gal/s = 764.55L/s

AREA:

1m^2 = 10.764ft^2
1hectare = 10000m^2 = 2.471acres

1ft^2 = 0.0929m^2
1acre = 4046.856m^2 = 0.405 hectares

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[1]Modified from the June 1994 Draft "Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. - Testing Manual" published by the United States Environmental Protection Agency and the U.S. Army Corp of Engineers.

ACKNOWLEDGMENTS

The Year 14 Hart-Miller Island (HMI) Exterior Monitoring Program would not have been successful without the help of several Technical and Regulatory Services Administration (TARSA) staff members, including: Mr. Visty P. Dalal, Chairman; Mr. Matthew Rowe, Technical Coordinator; Mr. Nathaniel Brown, Budget Manager; and, Ms. Ellen Lathrop-Davis, Environmental Specialist. The Chairman was responsible for making sure that the project work was done efficiently in a coordinated manner and met all the technical goals set by the Technical Review Committee for Year 14. The Technical Coordinator wrote the Project I sections of the HMI reports, standardized the Data and Technical reports among projects, conducted data management, and facilitated the peer review process. The Budget Manager was responsible for assuring that all project related budgetary products, services, and activities had been implemented by each Principal Investigator (PI) and accounted for in a budgetary tracking system. The Environmental Specialist provided insightful comments on and scientific review of the data and technical reports.

The Maryland Department of the Environment would like to thank all the members of the HMI Exterior Monitoring Program's Technical Review Committee and the HMI Citizens Oversight Committee for their useful comments and suggestions throughout the project year. Special thanks to the Maryland Port Administration, under the auspices of the Maryland Department of Transportation, for their continued commitment to and financial support of the Exterior Monitoring Program. The efforts and cooperation of the PIs for each project during the Year 14 monitoring effort were greatly appreciated. A thank you also goes out to the Maryland Environmental Service (MES) for providing information on the dredged material inputs to HMI for Year 14.

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INTRODUCTION

Sediments originating from tributaries to Chesapeake Bay naturally accumulate on the bay floor, creating shoals and shallows which pose navigation difficulties to ships entering the Port of Baltimore. Annual dredging of Baltimore Harbor and its approaches is necessary to keep Baltimore competitive with other port cities and facilitate the flow of commerce through the state of Maryland. Hart-Miller Island Confined Disposal Facility (HMI) was constructed in 1981 to provide storage capacity for these sediments dredged from Baltimore Harbor and its approaches.

A 29,000 foot dike was constructed around the historical footprint of Hart and Miller Islands, which had rapidly eroded over the past century, creating a protected basin for dredged material placement. An interior dike, roughly 4,300 feet long, was constructed across HMI's midsection, dividing the facility into a 300 acre south cell and an 800 acre north cell. The original dike elevation was 18 feet above mean low water but has since been raised to 44 feet above mean low water, increasing dredged material placement capacity from approximately 50 million to 100 million cubic yards. Placement activities in the south cell were discontinued in October 1990 and crust management activities have begun to convert the area to a wildlife refuge. The north cell is projected to reach full capacity in 2009, whereupon it will also be converted into a wildlife refuge.

The Exterior Monitoring Program for HMI was developed in response to a special condition of State Wetlands License [No. 72-127(R)], requiring that water quality and biota in the facility area be monitored comprehensively. This report represents the fourteenth consecutive year of data gathered under the auspices of the HMI Exterior Monitoring Program. The monitoring program has evolved over the years, but four projects have continued to the present and are included among this year's monitoring. Following is a list of the projects conducted for Year 14 and a summary of the types of data gathered for each project.

Project I: Scientific Coordination and Data Management

Beginning with the Year 13 report (September 1993 - August 1994), the Maryland Department of the Environment (MDE) has been the lead agency involved in project management for the HMI Exterior Monitoring program. The Dredging Coordination and Assessment Division (DCAD) of MDE is responsible for coordinating field sampling, reviewing project proposals, technical/scientific review of the Exterior Monitoring Reports, facilitating HMI Technical Review Committee meetings, coordinating peer review of the HMI reports, and data and budget management. In short, it is DCAD's responsibility to ensure smooth and efficient operation in every aspect of the Exterior Monitoring Program.

Quality assurance through standardization among the reports for each project, promoting rigorous standards of scientific/technical review, meeting the expectations of the public, and guaranteeing that the newest technological and analytical methods are used for laboratory and data analysis are among MDE's top priorities. Because Project I does not directly entail the collection of data, no separate chapter for Project I is included in this data report.

Project II: Sedimentary Environment

The Maryland Geological Survey (MGS) of the Maryland Department of Natural Resources has conducted studies of the sedimentary environment around HMI since the inception of the monitoring program. These studies include both physical (grain size analysis and gravity core assessment) and chemical (sediment analysis for trace metal concentrations) components. Data collected for Project II are presented in this report, along with a summary of methodological techniques. Results, interpretation, analyses, discussion and conclusions appear in the *Year 14 Technical Report.*

Project III: Benthic Community Studies

Benthic community studies at HMI were performed by the University of Maryland's Center for Environmental Science/Chesapeake Biological Laboratory (UMCES/CBL) in Solomons, Maryland. Benthic studies assessed presence, abundance, diversity and interstation variance among benthic macroinvertebrates living in the vicinity of HMI. This data report contains a methodological summary as well as species lists and other raw data. Indices of benthic community health along with results, interpretation, analyses, discussion and conclusions appear in the *Year 14 Technical Report.*

Project IV: Analytical Services

The Analytical Services component of monitoring for Year 14 was performed by Artesian Laboratories, Inc., of Newark, Delaware, and interpreted by UMCES. Project IV includes an assessment of trace metal contaminants in the tissues of the clam *Rangia cuneata.* Included in this data report are the raw data in tabular format. Analyses, interpretation and discussion of these data can be found in the *Year 14 Technical Report.*

CHAPTER 1: SEDIMENTARY ENVIRONMENT (PROJECT II)

By

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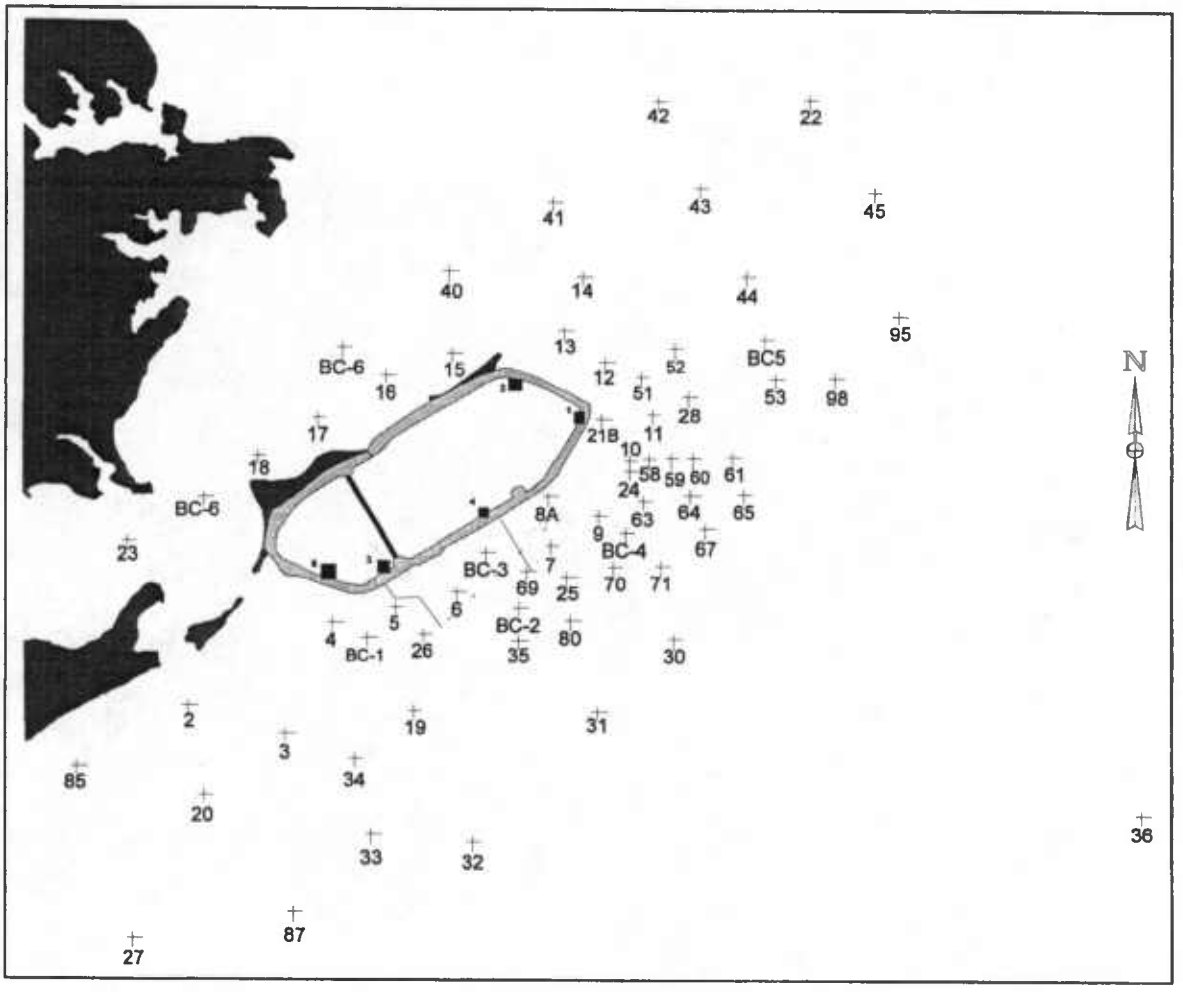
INTRODUCTION

This report partially fulfills the requirements of a contract with the State of Maryland to assess the environmental impacts of the construction and operation of Hart-Miller Island Confined Disposal Facility (HMI). The data were collected under the Sedimentary Environment Project (Project II) of that contract. One of the primary objectives of the project was to identify the sedimentological and geochemical conditions of near-surface sediments in the vicinity of HMI.

Figure 2-1: HMI and vicinity with the locations of the surficial sediment and core stations



sampled during Year 14.

METHODS AND MATERIALS

FIELD METHODS

The information presented in this report is based on observations and analyses of sediment samples collected on two cruises aboard the *R/V Discovery* during Year 14. This year, sampling sites (Figure 2-1) were located in the field by means of an MX300 survey-grade Differential Global Positioning System (DGPS) with an MS50R radio beacon receiver for differential corrections. The DGPS replaced the LORAN-C navigation system that had been used to locate sampling stations during the preceding eleven monitoring years (Hill et al. 1998). To convert from LORAN-C coordinates (X and Y time delays, or TDs) to DGPS coordinates (latitude/longitude, North American Datum of 1983 or NAD83), the boat captain used LORAN-C to navigate to a sampling station and then recorded the DGPS coordinates at that point. Those geographic coordinates were subsequently used to locate stations occupied during both Year 14 cruises.

Switching from LORAN-C to DGPS greatly improved the "repeatability", or the ability to return to a location at which a navigation fix has previously been obtained, of the navigation system. LORAN-C is affected by seasonal and weather-related changes along the signal transmission path. Halka (1987) estimated that when a vessel equipped with LORAN-C reoccupies an established station in Chesapeake Bay, it is within about 100 m (328 ft) of its original location. In contrast, the accuracy of the DGPS unit, according to manufacturer's specifications, is 3-5 m (10-16 ft). On the basis of experimental results, the actual accuracy is 1-3 m (3-10 ft).

For each station sampled during Year 14, Table 2-1 lists (1) the target LORAN-C TDs, (2) 'corrected' latitude and longitude ([NAD27], derived from the LORAN-C TDs using a computer program that incorporated the results of a LORAN-C calibration in Chesapeake Bay [Halka 1987]), and (3) latitude and longitude (NAD83) computed by the DGPS unit. The differences in the latitude/longitude values are due partly to a datum shift (NAD27 to NAD83) and partly to the fact that the NAD27 geographic coordinates were approximated from LORAN-C TDs. In the study area, the change in datum accounts for about 0.4 seconds of the difference in latitude readings and for about 1.15 seconds of the difference in longitude. (In the vicinity of HMI, the datum change amounts to a total shift of about 30 meters [98 ft] - 27.5 meters [90 ft] east to west and 12.3 m [40 ft] north to south.) The remainder of the difference is largely due to approximating the NAD27 geographic coordinates. Note that the station locations themselves have not changed over time, only the geographic coordinates assigned to them. The 1983 DGPS coordinates are the more accurate of the two latitude/longitude pairs.

Surficial sediment samples were collected in November 1994 (Cruise 32) and April 1995 (Cruise 33). During Year 9, the number of sampling stations was increased in response to the detection of abnormally high zinc (Zn) levels in sediments near HMI spillway #1 (Hennessee and Hill 1992). Sampling sites were added to determine the extent of the area of Zn enrichment and to coincide with benthic sampling stations. The expanded sampling scheme (60-66 locations/cruise) was retained through Year 11.

During Year 12 the number of stations sampled during each cruise was reduced to 47, based, in part, on output from a 3-D hydrodynamic model of the Upper Chesapeake Bay (Wang 1993). The 22 stations that had been monitored continuously since dike completion were retained, as were the stations that corresponded to benthic sampling sites. Selection of the remaining stations was based on discharge activity during the months preceding each cruise, coupled with the results of the 3-D model. All of the sites chosen on the basis of the 3-D model had been occupied previously. The same locations sampled during Year 12 were revisited during Year 13 and 14.

Undisturbed samples of the surficial sediments surrounding HMI were obtained with a dip-galvanized Petersen sampler. At least one grab sample was collected at each station and split for textural and trace metal analyses. Triplicate grab samples were collected at seven stations (11, 16, 24, 25, 28, BC3, and BC6). During the April cruise, additional grab samples were taken for organic contaminant analysis at eight stations (23, 24, 25, 28, 30, 34, BC3, and BC6)[2]. Upon collection, each sediment sample was described lithologically (Tables 2-3 and 2-6) and subsampled.

Sediment and trace metal subsamples were collected using plastic scoops rinsed with distilled water. These samples were taken several centimeters from the top, below the flocculent layer, and away from the sides of the sampler to avoid contamination from the sampler itself. They were placed in 18-oz Whirl-Pak™ bags. Samples designated for textural analysis were stored out of direct sunlight at ambient temperatures. Those intended for trace metal analysis were refrigerated and maintained at 4°C until they could be processed in the laboratory.

Subsamples for organic analysis were collected with an aluminum scoop (also rinsed with distilled water), placed in pre-treated glass jars, and immediately refrigerated. They were delivered to the Maryland Environmental Service (MES) office at HMI and then transferred to a private laboratory for analysis.

In April 1995, gravity cores were collected at the seven box core (BC) stations and at stations 12 and 25 (Figure 2-1). A Benthos gravity corer (Model #2171) fitted with clean cellulose acetate butyrate (CAB) liners, 6.7 cm in diameter, was used. Each core was cut and capped at the sediment-water interface and then refrigerated until it could be x-rayed and processed in the lab.

LABORATORY PROCEDURES

1. Radiographic Technique

Prior to processing, the upper 50 cm of each core were x-rayed at the Maryland Geological Survey, using a TORR-MED x-ray unit (x-ray settings: 90 kv, 5 mas, 30 sec). A negative x-ray image of the core was obtained by xeroradiographic processing. On a negative

[2]Although samples were collected, no organic analyses were conducted this year.

xeroradiograph, denser objects or materials, such as shells or sand, produce lighter images. Objects of lesser density permit easier penetration of x-rays and, therefore, appear as darker features. The xeroradiographs are reproduced in the Appendix of this report.

Each core was then extruded, split with an electro-osmotic knife, photographed, and described. Visual and radiographic observations of the cores are also presented in the Appendix. On the basis of these observations, sediment samples for textural and trace metal analyses were taken at selected intervals from each core.

2. Textural Analysis

In the laboratory, subsamples from both the surficial grabs and gravity cores were analyzed for water content and grain size composition (sand-silt-clay content).

Water content was calculated as the percentage of the water weight to the total weight of the wet sediment:

(1) $$Wc = \frac{Ww}{Wt} \times 100$$

where: Wc = water content (%)
Ww = weight of water (g)
Wt = wet weight of sediment (g).

Water weight was determined by weighing approximately 25 g of the wet sample, drying the sediment at 65°C and reweighing it. The difference between total wet weight (Wt) and dry weight equals water weight (Ww). Bulk density was also determined from water content measurements.

The relative proportions of sand, silt, and clay were determined using the sedimentological procedures described by Kerhin (1988). The sediment samples were pre-treated with hydrochloric acid and hydrogen peroxide to remove carbonate and organic matter, respectively. Then the samples were wet sieved through a 62-μm mesh to separate the sand from the mud (silt plus clay) fraction (Table 2-2). The finer fraction was analyzed using the pipette method to determine the silt and clay components (Blatt et al. 1980). Each fraction was: (1) weighed; (2) percent sand, silt, and clay were determined;

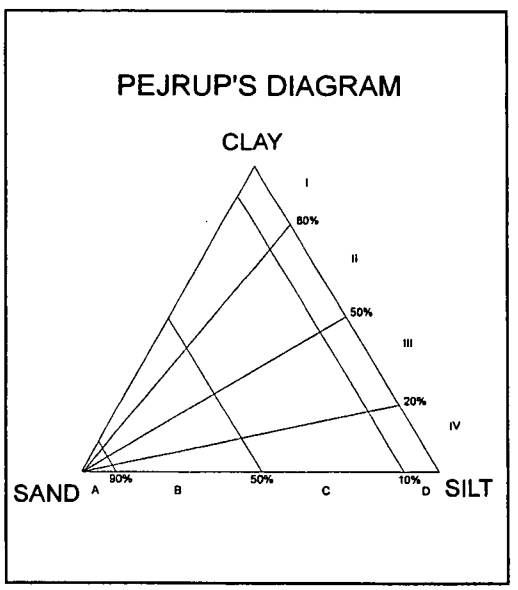


Figure 2-2: Pejrup's (1988) classification of sediment type.

and, (3) the sediments were categorized according to Pejrup's (1988) classification (Figure 2-2).

Water content and grain size composition of surficial samples collected in November 1994 and April 1995 are presented in Tables 2-4 and 2-7, respectively. Table 2-9 contains comparable results for subsamples of gravity cores collected in April 1995.

3. Trace Metal Analysis

Sediment solids were analyzed for six trace metals – iron (Fe), manganese (Mn), zinc (Zn), copper (Cu), chromium (Cr), and nickel (Ni). These metals are particularly useful in interpreting geochemical trends (Sinex and Helz 1981; Kerhin et al. 1982). Trace metal concentrations were determined using a microwave digestion technique, followed by analysis of the digestate on an Inductively Coupled Argon Plasma unit (ICAP).

Microwave digestion of the samples has several advantages over other digestion methods:

1. The system is sealed, so no volatile elements are lost.

2. Compared to strong acid reflux methods, microwave digestion is rapid (on the order of minutes as opposed to hours).

3. Samples must be weighed accurately, but not to precisely defined target weights, as in fusion methods.

4. Only acids are used. No flux is required, as in fusion, so additional sources of contamination are minimized. Also, in using an ICAP, as opposed to an atomic absorption spectrophotometer (AAS), matrix modifiers are not required, further reducing sources of error.

5. Recovery of the metals of interest is as good or better than other digestion methods.

The steps in microwave digestion, modified from EPA Method #3051, are outlined below:

1. Samples were homogenized in the Whirl-Pak™ bags in which they were stored and refrigerated (4°C).

2. Approximately 10 g of wet sample were transferred to Teflon evaporating dishes and dried overnight at 105-110°C.

3. Dried samples were then hand-ground with an agate mortar and pestle, powdered in a ball mill, and stored in Whirl-Pak™ bags.

4. 0.5000±0.0005 g of dried, ground sample was weighed and transferred to a Teflon digestion vessel.

5. 2.5 ml concentrated HNO_3 (trace metal grade), 7.5 ml concentrated HCl (trace metal grade), and 1 ml ultra-pure water were added to the Teflon vessel.

6. The vessel was capped with a Teflon seal, and the cap was hand tightened. Between four and twelve vessels were placed in the microwave carousel. (Preparation blanks were made by using 0.5 ml of high purity water plus the acids used in Step 5.)

7. Samples were irradiated using programmed steps appropriate for the number of samples in the carousel. These steps have been optimized based on pressure and percent power. The samples were brought to a temperature of 175°C in 5.5 minutes, then maintained between 175-180°C for 9.5 minutes. (The pressure during this time peaks at approximately 6 atmospheres for most samples.)

8. Vessels were cooled to room temperature and uncapped. The contents were transferred to a 100 ml volumetric flask, and high purity water was added to bring the volume to 100 ml. The dissolved samples were transferred to polyethylene bottles and stored for analysis.

9. The samples were analyzed.

Samples were analyzed using a Thermo Jarrel-Ash Atom-Scan 25 sequential ICAP. The wavelengths and conditions selected for the elements of interest were determined using digested bottom sediments from the vicinity of HMI and standard reference materials from the National Institute of Standards and Technology (#1646 - Estuarine Sediment; #2704 - Buffalo River Sediment) and the National Research Council of Canada (PACS-1 - Marine Sediment).

The wavelengths and conditions were optimized for the expected metal levels and the sample matrix. Quality control was maintained by routinely including blanks, replicates and standard reference materials in the analysis. Blanks were run every 10 samples; one sample in every ten was replicated; and a standard reference material was analyzed after every ten samples. Trace metal concentrations of surficial samples and core subsamples are reported in the tables in the back of this report.

Table 2-1: Target locations of stations sampled during Year 14.

Station	LORAN-C Time delays		Latitude* (NAD27)	Longitude* (NAD27)	Latitude** (NAD83)	Longitude** (NAD83)
	X	Y	(DD MM SS.S)	(DD MM SS.S)	(DD MM SS.S)	(DD MM SS.S)
2	27640.8	42888.1	39 13 32.2	76 23 43.8	39 13 33.5	76 23 45.1
3	27636.5	42886.5	39 13 21.7	76 22 58.1	39 13 23.2	76 22 57.9
4	27637.3	42895.6	39 14 5.4	76 22 35.5	39 14 6.4	76 22 35.2
5	27635.4	42897	39 14 10.8	76 22 8.0	39 14 11.7	76 22 6.8
6	27633.4	42898.5	39 14 16.6	76 21 38.9	39 14 17.9	76 21 37.9
7	27631	42902.6	39 14 34.5	76 20 56	39 14 35.6	76 20 54.4
8A	27632.3	42906.5	39 14 53.8	76 20 57.7	39 14 54.7	76 20 56.3
9	27629.9	42905.2	39 14 46.1	76 20 33.9	39 14 47.1	76 20 32.7
10	27630	42909.7	39 15 7.6	76 20 19.3	39 15 8.8	76 20 17.3
11	27630.2	42913.4	39 15 25.3	76 20 8.7	39 15 26.7	76 20 7.7
12	27633.3	42917.4	39 15 46.3	76 20 31.2	39 15 47.5	76 20 30.5
13	27635.5	42919.7	39 15 58.6	76 20 49.1	39 15 59.8	76 20 49.1
14	27636.1	42924	39 16 19.4	76 20 41	39 16 20.3	76 20 41.3
15	27639.2	42917.2	39 15 49.1	76 21 41.7	39 15 50.5	76 21 42.7
16	27641.1	42914.9	39 15 39.5	76 22 12.4	39 15 40.1	76 22 13.6
17	27642.6	42911.4	39 15 23.8	76 22 42.7	39 15 24.9	76 22 42.8
18	27643.9	42908	39 15 8.6	76 23 10.2	39 15 10.0	76 23 10.9
19	27632.3	42889	39 13 30.8	76 21 59.3	39 13 31.8	76 21 58.0
20	27638.1	42881.4	39 12 58.6	76 23 35.1	39 13 0.2	76 23 34.9
21B	27632.1	42912.9	39 15 24.1	76 20 32.9	39 15 25.8	76 20 33.1
22	27631.7	42939.2	39 17 29	76 18 55.7	39 17 30.3	76 18 55.9
23	27646.8	42900.5	39 14 35	76 24 11.5	39 14 36.8	76 24 12.8

Table 2-1: Continued

Station	LORAN-C Time delays		Latitude* (NAD27)	Longitude* (NAD27)	Latitude** (NAD83)	Longitude** (NAD83)
	X	Y	(DD MM SS.S)	(DD MM SS.S)	(DD MM SS.S)	(DD MM SS.S)
24	27629.8	42909	39 15 4.1	76 20 19.3	39 15 5.2	76 20 18.2
25***	27629.7	42900.4	39 14 23.2	76 20 48.3	39 14 24.1	76 20 47.9
26	27633.6	42895	39 14 0.1	76 21 53.6	39 14 0.7	76 21 51.7
27	27637.4	42869.7	39 12 2.7	76 24 8.1	39 12 4.1	76 24 7.9
28***	27629.4	42915.1	39 15 32.8	76 19 53.3	39 15 34.3	76 19 52.4
30***	27624.3	42896.1	39 13 59.2	76 19 59.5	39 14 0.1	76 19 57.7
31	27625.5	42890	39 13 31	76 20 35	39 13 33.9	76 20 33.2
32	27627	42879	39 12 39.8	76 21 31.3	39 12 40.9	76 21 29.5
34***	27633.4	42884.9	39 13 12	76 22 26.8	39 13 13.0	76 22 26.3
40	27641.2	42923.6	39 16 20.8	76 21 42.8	39 16 22.1	76 21 43.7
41	27639	42929.6	39 16 47.9	76 20 55.5	39 16 48.9	76 20 55.7
43	27633.8	42931.6	39 16 54.1	76 19 47.2	39 16 55.4	76 19 47.2
44	27630	42924.9	39 16 19.8	76 19 26	39 16 20.6	76 19 25.4
51	27631.5	42916.3	39 15 39.9	76 20 13.8	39 15 41.2	76 20 12.5
61	27626.2	42910.5	39 15 8.9	76 19 31.6	39 15 10.2	76 19 30.4
64	27627	42907.5	39 14 55.2	76 19 51.5	39 14 56.8	76 19 50.3
71	27626.4	42901.7	39 14 27.2	76 20 4.8	39 14 28.4	76 20 3.2
87	27632.1	42872.6	39 12 12.9	76 22 54.5	39 12 13.9	76 22 52.9
BC-1	27635.7	42894.5	39 13 59.1	76 22 20.3	39 14 0.1	76 22 19.4
BC-2	27630.7	42897.6	39 14 10.5	76 21 10	39 14 11.5	76 21 8.3
BC-3	27633.3	42901.9	39 14 32.6	76 21 25.8	39 14 33.7	76 21 25.0
BC-4	27628.5	42904	39 14 39.5	76 20 21.5	39 14 40.9	76 20 19.4

Table 2-1: Continued

Station	LORAN-C Time delays		Latitude* (NAD27) (DD MM SS.S)	Longitude* (NAD27) (DD MM SS.S)	Latitude** (NAD83) (DD MM SS.S)	Longitude** (NAD83) (DD MM SS.S)
	X	Y				
BC-5	27627.8	42920.1	39 15 55.6	76 19 16.9	39 15 57.1	76 19 16.1
BC-6	27643.4	42917.1	39 15 51.4	76 22 32	39 15 52.4	76 22 31.0
BC-7	27645	42904.6	39 14 53.2	76 23 35.4	39 14 54.2	76 23 35.7

* Latitude and longitude (NAD27) were derived from LORAN-C TDs using a computer program that incorporates the results of a LORAN-C calibration in Chesapeake Bay (Halka 1987).

** Latitude and longitude (NAD83) were determined by locating a station with LORAN-C and reading latitude and longitude from a DGPS unit operating simultaneously with LORAN-C.

*** Coincides with a benthic station

Table 2-2: Wentworth size nomenclature*

Diameter (mm)	Phi (f)	Wentworth size class
Gravel		
> 2.00	< -1.0	gravel
Sand		
1.00 to 2.00	0.0 to -1.0	very coarse sand
0.50 to 1.00	1.0 to 0.0	coarse sand
0.25 to 0.50	2.0 to 1.0	medium sand
0.125 to 0.25	3.0 to 2.0	fine sand
0.0625 to 0.125	4.0 to 3.0	very fine sand
Mud		
0.0039 to 0.0625	8.0 to 4.0	silt
< 0.0039	> 8.0	clay

* from Folk (1974)

Table 2-3: Field descriptions - surficial sediment samples collected on November 14, 1994 (Cruise 32) [Note: Munsell colors and numerical designations from Rock-Color Chart (Rock-Color Chart Committee 1984)]

Station number	Water depth (ft)	Description
2	10.4	No floc layer; well sorted, dusky brown (5 YR 2/2) fine sand; a few disarticulated *Rangia cuneata*, 2.5-4 cm long; heavy minerals; no odor.
3	14	Floc layer, 2-3 cm thick, consisting of soft, slightly gritty, dark yellowish brown (10 YR 4/2) mud, grading to olive gray (5 Y 4/1); overlies dark gray (N3) fine to very fine sandy mud, uniform in color and texture; no shells in floc layer; a few articulated and disarticulated *Rangia* and a few/some broken shell fragments, several mm in size, in dark gray layer; worms; no odor.
4	12.3	Floc layer, 2-3 cm thick, consisting of soft, smooth, fluffy, dark yellowish brown (10 YR 4/2) mud, grading to olive gray (5 Y 4/1); overlies smooth, cottage cheesy, grayish black (N2) mud, uniform in color; very few articulated *Rangia*, a few *Macoma*, and a few/some shell fragments, several mm in size; worms; no odor.
5	15.6	Floc layer, 2-3 cm thick, consisting of soft, soupy, dark yellowish brown (10 YR 4/2) mud; overlies stiff, cohesive, grayish black? (N2) mud; some articulated and disarticulated *Rangia*, 1-2.5 cm long, at top of and within grayish black layer; worms; plant matter.
6	15.3	Thin (0.5 cm), shelly floc layer consisting of smooth, soupy, dark yellowish brown (10 YR 4/2) mud; overlies smooth, cohesive grayish black (N2) mud; many disarticulated *Rangia* at top of grayish black layer, some with barnacles; some disarticulated *Macoma* at depth; burrows; no odor.
7	17.3	Thin (1 cm) floc layer consisting of soft, smooth, fluffy, dark yellowish brown (10 YR 4/2) mud; overlies smooth (not gritty), lumpy, dark gray to grayish black (N2.5) mud; some/many articulated and disarticulated *Rangia* at top of dark gray to grayish black layer and a few articulated *Macoma* at depth; barnacles on some shells; some oxidized burrows; worms; some plant matter - twigs.
8A	13.3	Floc layer, 2-3 cm thick, consisting of very gritty, soupy, dark yellowish brown (10 YR 4/2) mud; overlies mottled dark gray (N3) and olive gray (5 Y 4/1) medium to fine sandy mud or muddy sand; articulated and disarticulated *Rangia* at top of mottled layer; many burrows; worms; no odor.

Table 2-3: Continued

Station number	Water depth (ft)	Description
9	18.9	Thin (0.5 cm), shelly floc layer consisting of slightly gritty, soupy, dark yellowish brown (10 YR 4/2) mud; overlies smooth, cottage cheesy, dark gray to grayish black (N2.5) mud; many disarticulated *Rangia*, 1-2.5 cm long, at top of dark gray to grayish black layer and a few articulated *Macoma* at depth; oxidized burrows; worms; plant matter.
10	15.6	No floc layer; well-sorted fine sand, grading from grayish brown (5 YR 3/2) to dark yellowish brown (10 YR 4/2); a few articulated and disarticulated *Rangia*; worm; no odor.
11	14.6	No floc layer; very well-sorted medium to fine sand, grading from moderate brown (5 YR 3/4) to dark yellowish brown (10 YR 4/2); a few disarticulated *Rangia*, 2 cm long; no odor; sample 11-1 taken from the first grab, and samples 11-2 and 11-3 taken from the second grab.
12	12.3	Thin (<1 cm) floc layer consisting of soft, gritty, dark yellowish brown (10 YR 4/2) mud, grading to olive gray (5 Y 4/1); overlies dark gray (N3) fine sandy mud; *Rangia*, mostly disarticulated, ranging in length from 1-5 cm; oyster shells; shell fragments; worms; no odor.
13	9.1	No floc layer; clean, well-sorted, pale to dark yellowish brown (10 YR 5/2) medium sand; a few articulated and disarticulated *Rangia*; heavy minerals; no odor.
14	13.3	Floc layer, 4 cm thick, consisting of soft, smooth, fluffy, dark yellowish brown (10 YR 4/2) mud, grading to olive gray (5 Y 4/1); overlies soft, smooth, dark gray to grayish black (N2.5) mud; a few/some articulated and disarticulated *Rangia* at top of dark gray to grayish black layer.
15	11.7	Floc layer, 2-3 cm thick, consisting of soft, smooth, fluffy, dark yellowish brown (10 YR 4/2) mud; overlies smooth (not gritty), dark gray (N3) mud mottled with olive gray (5 Y 4/1); some/many disarticulated adult and articulated *Rangia* at top of dark gray layer; burrows; worms; no odor.

Table 2-3: Continued

Station number	Water depth (ft)	Description
16	11	Floc layer, 2-3 cm thick, consisting of very gritty, soft, dark yellowish brown (10 YR 4/2) mud; overlies dark gray to grayish black (N2.5) fine sandy mud, variably sandier and muddier; some *Rangia*, mostly disarticulated, near top of dark gray to grayish black layer; worms; plant material; sample 16-1 taken from the first grab, and samples 16-2 and 16-3 taken from the second grab.
17	10.7	Floc layer, 2-3 cm thick, consisting of soft, smooth, fluffy mud and grading from dark yellowish brown (10 YR 4/2) to olive gray (5 Y 4/1); overlies soft, sticky, very lumpy, dark gray (N3) mud; disarticulated *Rangia*, 2.5 cm in length, in dark gray layer; many oxidized burrows; worms; plant matter.
18	10	Dark yellowish brown (10 YR 4/2) floc layer, 3 cm thick, consisting of very smooth, soft, fluffy mud; overlies cohesive, soft, lumpy, dark gray to grayish black (N2.5) mud, not gritty, firmer than floc; disarticulated *Rangia*, 4 cm in length, at top of dark gray to grayish black layer.
19	16.9	Floc layer, 2-3 cm thick, consisting of soft, smooth, dark yellowish brown (10 YR 4/2) mud; no shells in floc layer; overlies very smooth (not gritty), dark gray to grayish black (N2.5) mud; a few/some articulated and disarticulated *Rangia*; pocket of disarticulated oyster shells; burrows.
20	14.3	Dark yellowish brown (10 YR 4/2) floc layer consisting of 2-3 cm of soft, smooth (not gritty) mud; overlies soft, smooth, grayish black (N2) mud mottled with dark yellowish brown (10 YR 4/2); some articulated and disarticulated *Rangia* in grayish black layer; articulated *Macoma*; burrows; worms; single, live *Cyathura*.
21B	13.7	No floc layer; well-sorted medium to fine sand, grading from grayish brown (5 YR 3/2) to dark yellowish brown (10 YR 4/2); a few articulated and disarticulated *Rangia*, 1-4 cm in length; heavy minerals; no odor.
22	11.4	Floc layer, 2-3 cm thick, consisting of soft, gritty mud and grading from dark yellowish brown (10 YR 4/2) to olive gray (5 Y 4/1); overlies grayish black (N2) fine sandy mud; some/many articulated and disarticulated *Rangia*, 2.5 cm in length; many worms; plant matter.

Table 2-3: Continued

Station number	Water depth (ft)	Description
23	10.7	Floc layer, 2-3 cm thick, consisting of soft, slightly gritty mud and grading from dark yellowish brown (10 YR 4/2) to olive gray (5 Y 4/1); overlies very sticky, gritty, dark gray to grayish black (N2.5) mud; some disarticulated *Rangia*, 4 cm in length; shell fragments; worm; plant matter; gas bubbles appeared on water surface as sampler was raised; no odor.
24	18.9	Floc layer, 3-4 cm thick, consisting of fluffy, gritty mud and grading from dark yellowish brown (10 YR 4/2) to olive gray (5 Y 4/1); overlies soft, grayish black (N2) sandy mud; some articulated and disarticulated adult *Rangia* at top of grayish black layer; no odor; sample 24-1 taken from the first grab, and samples 24-2 and 24-3 taken from the second grab.
25	17.9	Thin (0.5 cm), shelly floc layer consisting of soupy, slightly gritty, dark yellowish brown (10 YR 4/2) mud; overlies, lumpy, dark gray to grayish black (N2.5) mud, not gritty, uniform in texture; many *Rangia*, mostly disarticulated and ranging from 1-2.5 cm in length, at top of dark gray to grayish black layer; a few disarticulated *Macoma* at depth; twig in floc layer; no odor; sample 25-1 taken from the first grab, and samples 25-2 and 25-3 taken from the second grab; description of sample 25-1.
26	16	Floc layer, 2-3 cm thick, consisting of soft, smooth, soupy, dark yellowish brown (10 YR 4/2) mud; overlies smooth (not lumpy or gritty), cohesive, dark gray (N3) mud; many disarticulated *Rangia*, 1-4 cm in length, at top of dark gray layer; some oxidized burrows.
27	15.3	Floc layer, 2-3 cm thick, consisting of very slightly gritty, fluffy, soupy, dark yellowish brown (10 YR 4/2) mud; overlies smooth (not gritty), cohesive, grayish black (N2) mud mottled with olive gray (5 Y 4/1) and dark yellowish brown (10 YR 4/2); some/many articulated and disarticulated *Rangia* in mottled layer; a few disarticulated *Macoma*, 7-8 cm in length; a few burrows; no odor.

Table 2-3: Continued

Station number	Water depth (ft)	Description
28	19.6	Shelly floc layer, 1-2 cm thick, consisting of soupy, gritty, dark yellowish brown (10 YR 4/2) (mud); overlies grayish black (N2) fine sandy mud; many disarticulated *Rangia* at top of grab and many articulated *Rangia* below those; disarticulated adult *Macoma*; shell fragments; oxidized burrows; lots of worms; sample 28-1 taken from the first grab, and samples 28-2 and 28-3 taken from the second grab; second grab 28 m away from first grab.
30	17.3	Floc layer, 2-3 cm thick, consisting of soft, smooth, fluffy, dark yellowish brown (10 YR 4/2) mud and grading to olive gray (5 Y 4/1); overlies smooth, cottage cheesy, grayish black (N2) mud, firmer than floc layer; some articulated and disarticulated *Rangia* at top of grayish black layer; not many shells at depth; burrows; worms.
31	16.6	Floc layer, 3-4 cm thick, consisting of soupy, smooth, very slightly gritty, dark yellowish brown (10 YR 4/2) mud; overlies smooth, medium dark gray to dark gray (N3.5) mud mottled with dark yellowish brown (10 YR 4/2), neither soft nor firm; some/many oyster shells at top of medium dark gray to dark gray layer; a few disarticulated *Macoma*; worms; single, live, *Cyathura*; gas bubbles appeared on water surface as sampler was raised; no odor.
32	16.3	Floc layer consisting of 2 cm of soft, smooth, soupy, dark yellowish brown (10 YR 4/2) mud; overlies very soft, smooth, cohesive, dark gray (N3) mud mottled with dark yellowish brown (10 YR 4/2); articulated adult *Rangia* at top of dark gray layer; shell fragments at depth; worms; burrows - some oxidized; no odor.
34	18.2	Floc layer, 2.5 cm thick, consisting of 0.5 cm of soft, smooth, dark yellowish brown (10 YR 4/2) mud grading into 2 cm of olive gray (5 Y 4/1); overlies soft, smooth, mushy, dark greenish gray (5 GY 4/1) mud; single, articulated *Macoma*, 2 cm in length; plant matter; mushy throughout.
40	12	Floc layer, 2-3 cm thick, consisting of soft, smooth, fluffy (mud) and grading from dark yellowish brown (10 YR 4/2) to olive gray (5 Y 4/1); overlies soft, lumpy, grayish black (N2) mud, not gritty; articulated and disarticulated *Rangia*, 2.5-3 in length, at top of grayish black layer; pocket of tiny shells; worms; some oxidized burrows; plant matter; no odor.

Table 2-3: Continued

Station number	Water depth (ft)	Description
41	13	Surface layer, 3-4 cm thick, of soft, fluffy mud, grading from dark yellowish brown (10 YR 4/2) to olive gray (5 Y 4/1); overlies soft, mushy, dark gray (N3) mud, uniform in texture; a few articulated *Rangia* at depth; a few burrows.
43	13.3	Surface layer of soft, smooth, fluffy mud, 2-3 cm thick, grading from dark yellowish brown (10 YR 4/2) to olive gray (5 Y 4/1); overlies soft, cottage cheesy, dark gray to grayish black (N2.5) mud, uniform in color and texture, not gritty; *Rangia*, varying in size, at top of dark gray to grayish black layer; some shell fragments; live crab, 1 cm in length; worms; burrows.
44	15	Surface layer consisting of soft, smooth, fluffy mud, 3-4 cm thick, grading from dark yellowish brown (10 YR 4/2) to olive gray (5 Y 4/1); overlies soft, smooth (not gritty), lumpy, grayish black (N2) mud, firmer than surface layer; *Rangia*, mostly disarticulated, at top of grayish black layer; worms; many burrows.
51	15.3	Floc layer, 1 cm thick, consisting of soft, fluffy, gritty, dark yellowish brown (10 YR 4/2) fine sandy mud; overlies dark gray (N3) fine to very fine sandy mud or muddy sand; many disarticulated *Rangia* at top of dark gray layer and within it; no odor.
61	19.9	Thin (<1 cm), shelly floc layer consisting of smooth, soupy, dark yellowish brown (10 YR 4/2) mud; overlies smooth (not gritty), lumpy, cohesive, dark gray (N3) mud; many disarticulated *Rangia* at top of grab; not many shells at depth; no odor.
64	21.2	Thin (1 cm), shelly floc layer consisting of soft, smooth, soupy, dark yellowish brown (10 YR 4/2) mud; overlies somewhat soft, smooth (not gritty), dark gray to grayish black (N2.5) mud, uniform in color and texture; many disarticulated *Rangia*, 2-2.5 cm in length, at top of dark gray to grayish black layer; a few oxidized burrows; worms; stick.
71	17.9	Thin (<1 cm), shelly floc layer consisting of smooth, soupy, dark yellowish brown (10 YR 4/2) mud; overlies soft, dark gray to grayish black (N2.5) mud; many *Rangia*, mostly disarticulated and ranging in length from 1-2.5 cm, at top of dark gray to grayish black layer; worms; some burrows - mucus-lined and oxidized.

Table 2-3: Continued

Station number	Water depth (ft)	Description
87	16.6	Floc layer, 2-3 cm thick, consisting of fluffy, very slightly gritty, dark yellowish brown (10 YR 4/2) mud; no shells in floc layer; overlies grayish black (N2) mud, neither soft nor firm; a few/some disarticulated *Rangia*, 1-5 cm in length, some with barnacles; a few disarticulated *Macoma*(?); oyster shells; very few worms; plant matter; no odor; three grabs taken at site - first was empty, second contained mostly oyster shells, third approximately 30 m off location.
BC1	15.6	Floc layer, 3-4 cm thick, consisting of soft, very slightly gritty, dark yellowish brown (10 YR 4/2) mud; no shells in floc layer; overlies soft, smooth, slick, creamy, cohesive, dark gray? (N3) mud mottled with dark yellowish brown (10 YR 4/2) and pockets of softer, olive gray (5 Y 4/1); a few disarticulated *Macoma*; worms; no odor.
BC2	16.9	Floc layer, 2-3 cm thick, consisting of smooth, soupy, dark yellowish brown (10 YR 4/2) mud; overlies smooth (not gritty), sticky, cottage cheesy, grayish black (N2) mud, not firm; many disarticulated *Rangia*, varying in size, and some articulated adults at top of grayish black layer; many burrows; no odor.
BC3	14.6	Floc layer, 2-3 cm thick, consisting of soft, soupy, dark yellowish brown (10 YR 4/2) mud; overlies creamy, medium gray (N5) and dark gray (N3) "fluid mud" with pale red (5 R 6/2) streaks; many *Rangia*, mostly disarticulated, at top of fluid mud layer; burrows; top of fluid mud layer bioturbated; gas bubbles appeared on water surface as sampler was raised; sample BC3-1 taken from the first grab, and samples BC3-2 and BC3-3 taken from the second grab.
BC4	18.9	Shelly floc layer consisting of slightly gritty, soupy, dark yellowish brown (10 YR 4/2) mud; overlies smooth, dark gray (N3) mud; many *Rangia*, mostly disarticulated and ranging in length from 1-4 cm, at top and within dark gray layer; a few disarticulated adult *Macoma* at depth; a few burrows; plant matter; gas bubbles in dark gray layer; no odor.
BC5	16	Surface layer, 3-4 cm thick, consisting of soft, smooth, fluffy mud and grading from dark yellowish brown (10 YR 4/2) to olive gray (5 Y 4/1); no shells in surface layer; overlies soft, lumpy, grayish black (N2) mud, soft throughout, but not as soft as floc layer; very few articulated and disarticulated *Rangia* in grayish black layer; no odor.

Table 2-3: Continued

Station number	Water depth (ft)	Description
BC6	21.5	Floc layer, 2-3 cm thick, consisting of soft, smooth, fluffy, dark yellowish brown (10 YR 4/2) mud; overlies very soft, smooth (not gritty), slightly lumpy, grayish black (N2) mud mottled with dark yellowish brown (10 YR 4/2), firmer than floc layer; some *Rangia*, mostly disarticulated, 2.5 cm in length, at top of grayish black layer; a few oyster shells; some shell fragments at depth; worms; no odor; sample BC6-1 taken from the first grab, and samples BC6-2 and BC6-3 taken from the second grab.

Table 2-4: Sedimentological parameters - surficial sediment samples collected on November 14, 1994 (Cruise 32)

Station	Water (%)	Sand (%)	Silt (%)	Clay (%)	Clay:mud	Pejrup's class
2	26.68	98.50	0.45	1.05	0.70	A,II
3	44.68	73.82	12.35	13.83	0.53	B,II
4	64.22	5.55	54.40	40.06	0.42	D,III
5	65.96	3.13	39.06	57.81	0.60	D,II
6	58.49	1.93	43.86	54.20	0.55	D,II
7	63.76	4.71	41.76	53.53	0.56	D,II
8A	41.62	73.63	15.13	11.24	0.43	B,III
9	62.81	6.27	41.53	52.20	0.56	D,II
10	31.35	91.29	3.77	4.94	0.57	A,II
11-1	28.20	96.52	1.40	2.08	0.60	A,II
11-2	29.76	97.58	1.03	1.39	0.57	A,II
11-3	29.59	96.34	1.54	2.12	0.58	A,II
12	40.57	90.72	4.72	4.56	0.49	A,III
13	29.15	98.70	0.67	0.63	0.48	A,III
14	65.95	2.51	46.74	50.75	0.52	D,II
15	61.60	3.19	42.25	54.56	0.56	D,II
16-1	52.96	52.20	24.94	22.85	0.48	B,III
16-2	51.62	42.66	29.34	28.00	0.49	C,III
16-3	54.91	48.55	26.24	25.21	0.49	C,III
17	60.43	3.84	45.58	50.58	0.53	D,II
18	66.19	4.98	48.55	46.47	0.49	D,III
19	70.92	1.16	46.11	52.73	0.53	D,II
20	68.61	2.54	44.56	52.90	0.54	D,II

Table 2-4: Continued

Station	Water (%)	Sand (%)	Silt (%)	Clay (%)	Clay:mud	Pejrup's class
21B	30.31	95.23	2.14	2.63	0.55	A,II
22	46.15	53.76	20.76	24.67	0.54	B,II
23	46.51	61.39	24.10	14.52	0.38	B,III
24-1	59.14	28.61	31.23	40.17	0.56	C,II
24-2	67.45	11.74	39.60	48.66	0.55	C,II
24-3	68.55	11.93	39.74	48.33	0.55	C,II
25-1	64.79	2.07	42.61	55.33	0.56	D,II
25-2	64.41	1.91	43.21	54.87	0.56	D,II
25-3	62.83	2.14	43.14	54.72	0.56	D,II
26	73.60	2.15	42.82	55.03	0.56	D,II
27	67.42	2.26	41.19	56.55	0.58	D,II
28-1	51.22	57.12	18.56	24.33	0.57	B,II
28-2	47.90	55.78	19.17	25.05	0.57	B,II
28-3	49.15	60.80	17.02	22.18	0.57	B,II
30	65.56	0.59	48.22	51.18	0.51	D,II
31	66.21	1.67	49.58	47.87	0.49	D,III
32	67.41	0.62	49.35	50.03	0.50	D,II
34	69.97	0.97	45.42	53.61	0.54	D,II
40	64.54	1.02	39.44	59.54	0.60	D,II
41	67.10	0.33	44.04	55.63	0.56	D,II
43	66.65	0.98	44.28	54.74	0.55	D,II
44	65.09	1.14	43.61	55.25	0.56	D,II
51	44.36	79.79	9.04	11.17	0.55	B,II
61	61.40	1.42	42.63	55.95	0.57	D,II

Table 2-4: Continued

Station	Water (%)	Sand (%)	Silt (%)	Clay (%)	Clay:mud	Pejrup's class
64	64.44	0.88	49.03	50.09	0.51	D,II
71	63.88	0.85	41.95	57.20	0.58	D,II
87	70.40	3.81	45.81	50.28	0.52	D,II
BC1	68.06	4.93	45.57	49.50	0.52	D,II
BC2	64.21	1.86	40.55	57.60	0.59	D,II
BC3-1	57.64	15.11	45.86	39.03	0.46	C,III
BC3-2	58.28	10.27	45.92	43.80	0.49	C,III
BC3-3	55.89	9.16	48.99	41.85	0.46	D,III
BC4	55.69	2.91	43.31	53.79	0.55	D,II
BC5	65.02	1.83	43.94	54.23	0.55	D,II
BC6-1	64.11	2.75	42.17	55.08	0.57	D,II
BC6-2	66.21	2.04	40.55	57.41	0.59	D,II
BC6-3	64.20	2.43	40.91	56.66	0.58	D,II

Table 2-5: Geochemical parameters - surficial sediment samples in μg/g collected on November 14, 1994 (Cruise 32)

Station	Cr	Cu	Fe	Mn	Ni	Zn
2	6.1	4.3	0.24	1581	20.0	30.1
3	51.1	19.8	1.97	2542	30.5	145.5
4	114.0	44.6	4.28	4414	69.0	301.3
5	123.5	52.6	4.96	3996	83.3	365.1
6	116.0	44.8	4.69	2809	70.5	287.9
7	140.7	61.4	6.85	3636	109.9	489.3
8A	35.4	14.6	1.48	1455	21.6	95.2
9	131.8	62.5	5.73	3819	128.6	545.5
10	20.3	7.8	0.95	1450	19.4	63.3
11	10.6	4.6	0.42	606	9.1	32.4
12	28.1	8.7	1.12	1414	19.9	81.6
13	4.9	1.9	0.20	1052	6.5	19.7
14	122.8	46.8	4.83	4971	86.5	323.2
15	122.2	47.7	4.75	1710	81.8	317.3
16	80.5	32.7	3.06	1502	55.1	210.6
17	117.1	46.0	4.34	1182	77.3	302.9
18	122.0	49.6	4.35	2059	66.6	301.2
19	116.5	49.0	4.89	5314	80.4	369.8
20	119.0	51.4	4.78	4918	79.4	378.8
21B	11.7	5.1	0.51	1186	13.1	37.1
22	53.2	20.5	2.36	1263	37.2	149.9
23	65.5	29.0	2.32	1159	36.0	181.3
24	105.2	42.0	4.32	4507	72.5	309.8
25	134.0	66.3	5.47	4715	134.6	614.3
26	126.0	50.3	5.43	7587	84.7	378.9
27	145.5	57.7	6.09	7753	101.5	527.9
28	75.0	27.0	3.21	1988	53.2	239.7
30	111.9	41.9	5.39	3914	84.1	329.9
31	112.7	43.6	5.40	4153	84.0	347.7
32	108.1	45.1	5.54	6785	82.7	366.7
34	128.2	48.7	5.45	5717	91.5	376.6
40	123.9	49.5	5.04	2484	87.3	333.0
41	128.6	46.6	5.32	3717	91.8	331.0
43	121.8	47.3	5.24	4916	89.3	332.4
44	112.2	42.1	5.11	4436	86.8	330.2
51	41.6	14.6	1.67	2100	29.5	119.3
61	116.4	54.2	5.37	2733	88.9	365.7
64	111.1	50.1	5.15	2934	92.4	354.9
71	113.1	50.7	5.70	3445	98.1	368.7

Table 2-5: Continued

Station	Cr	Cu	Fe	Mn	Ni	Zn
87	120.7	49.2	5.09	5602	99.8	435.3
BC2	121.5	49.3	5.71	3370	91.5	385.4
BC3	114.0	45.9	4.67	4632	78.6	334.4
BC4	117.0	43.0	4.82	4275	82.0	321.0
BC5	131.6	55.6	4.92	1901	90.4	375.1

Table 2-6: Field descriptions - surficial sediment samples collected on April 26 & 27, 1995 (Cruise 33) [Note: Munsell colors and numerical designations from Rock-Color Chart (Rock-Color Chart Committee, 1984)]

Station number	Water depth (ft)	Description
2	6.8	No floc layer; dark yellowish brown (10 YR 4/2) muddy fine sand mottled with olive gray (5 Y 4/1) and grayish black? (N2); a few shell fragments and articulated *Rangia cuneata*, 2.5 cm in length; copepod?.
3	15.6	Floc layer, 2-3 cm thick, consisting of soft, gritty mud and grading from dark yellowish brown (10 YR 4/2) to olive gray (5 Y 4/1); no shells in floc layer; overlies dark gray (N3) sediment mottled with dark yellowish brown (10 YR 4/2) and olive gray (5 Y 4/1), firmer than floc layer; some disarticulated adult *Rangia* at top of mottled layer; worms; burrows; twigs; no odor.
4	12.7	Floc layer consisting of 2 cm of smooth, fluffy mud; overlies soft, smooth, cottage cheesy, dark gray to grayish black (N2.5) mud with dark yellowish brown (10 YR 4/2) burrows; some disarticulated *Rangia*, juvenile and adult; some copepods?; many burrows; lots of plant matter.
5	16	Very shelly, thin (<0.5 cm) floc layer, consisting of soupy, dark yellowish brown (10 YR 4/2) mud; overlies smooth, dark gray to grayish black (N2.5) mud mottled with olive gray (5 Y 4/1); very many disarticulated *Rangia* in floc layer; copepods?; worms; oxidized burrows.
6	15.6	Thick (3-4 cm) floc layer consisting of smooth, fluffy, dark yellowish brown (10 YR 4/2) mud grading to olive gray (5 Y 4/1); overlies smooth, grayish black (N2) mud; shell fragments in floc layer; a few/some disarticulated juvenile *Rangia* and *Macoma*; many burrows; approximately 28 m off station.
7	17.3	Thin (<1 cm), shelly floc layer consisting of soupy, dark yellowish brown (10 YR 4/2) mud; overlies soft, smooth, dark gray to grayish black (N2.5) mud, uniform in color; disarticulated *Rangia*, 1 cm in length, in floc layer; disarticulated *Macoma* at depth; some burrows; plant matter.

Table 2-6: Continued

Station number	Water depth (ft)	Description
8A	13.7	Floc layer, 1-2 cm thick, consisting of soft, gritty, dark yellowish brown (10 YR 4/2) fine sandy mud grading to olive gray (5 Y 4/1); overlies dark gray (N3) fine to medium sandy mud mottled with olive gray (5 Y 4/1) and dark yellowish brown (10 YR 4/2), sandier than floc layer; a few/some articulated and disarticulated adult *Rangia*; many worms; plant matter; no odor.
9	18.9	Thin (<1 cm), shelly floc layer consisting of slightly gritty, soupy, dark yellowish brown (10 YR 4/2) mud; overlies smooth (not gritty), lumpy, dark gray to grayish black (N2.5) mud mottled with dark yellowish brown (10 YR 4/2); many disarticulated *Rangia* and a few disarticulated *Macoma*; "bearded" shells.
10	15.6	Floc layer, 1-2 cm thick, consisting of gritty, dark yellowish brown (10 YR 4/2) medium sandy mud; overlies dark gray to grayish black (N2.5) sandy mud; some/many articulated and disarticulated *Rangia* at top of dark gray to grayish black layer; many worms; smells like decomposing organisms.
11	13	No floc layer; dark yellowish brown (10 YR 5/2) muddy medium sand; heavy minerals; description of first grab taken at this site, second and third grabs muddier than first.
12	11	Thin (1 cm) floc layer consisting of soft, soupy, gritty, dark yellowish brown (10 YR 4/2) fine sandy mud; overlies medium dark to dark gray (N3.5) fine sandy mud, uniform in texture; disarticulated adult *Rangia* at top of medium dark to dark gray layer; heavy minerals.
13	8.4	No floc layer; clean, well-sorted medium sand; some disarticulated adult *Rangia*; heavy minerals.
14	12.7	Floc layer, 1-2 cm thick, consisting of smooth, dark yellowish brown (10 YR 4/2) mud; overlies smooth, sticky, cohesive, dark gray (N3) mud; some articulated and disarticulated adult *Rangia*, not just on surface; some/many worms; big stick; no odor.

Table 2-6: Continued

Station number	Water depth (ft)	Description
15	11.4	Floc layer, 2 cm thick, consisting of soft, creamy, soupy, dark yellowish brown (10 YR 4/2) mud; overlies sticky, cottage cheesy, dark gray (N3) mud mottled with olive gray (5 Y 4/1), separates when touched; many articulated and disarticulated *Rangia*, 1-2.5 cm in length, in floc layer; many live and disarticulated *Rangia* below floc; a few disarticulated *Macoma*; many small, articulated shells; worm; copepods?; plant matter.
16	10.4	Floc layer, 2-3 cm thick, consisting of slightly gritty, soupy, dark yellowish brown (10 YR 4/2) mud; overlies slightly gritty, sticky, dark gray (N3) mud; no shells in floc layer; many *Rangia* at top of dark gray layer, larger *Rangia* (>2.5 cm) articulated, smaller *Rangia* disarticulated; pockets of shell fragments; worms; green copepods?; burrows, some oxidized; plant matter; wood fragments; no odor.
17	10	Floc layer, 2 cm thick, consisting of soupy, smooth, dark yellowish brown (10 YR 4/2) mud; overlies sticky, creamy, dark gray (N3) mud mottled with olive gray (5 Y 4/1); articulated and disarticulated *Rangia*, 1-2.5 cm in length, in floc layer; disarticulated *Rangia* at depth; no odor.
18	9.7	Floc layer, 2-3 cm thick, consisting of soupy, creamy, dark yellowish brown (10 YR 4/2) mud; overlies smooth, creamy, sticky, dark gray (N3) mud mottled with olive gray (5 Y 4/1); a few articulated *Rangia*, 1 cm in length, at top of mottled layer; some articulated and disarticulated *Rangia*, up to 2.5 cm in length, at depth; pockets of shell fragments at depth; worms; worm burrows; no odor.
19	17.3	Thin (1 cm) floc layer consisting of soft, smooth, dark yellowish brown (10 YR 4/2) mud with a cottage cheesy look; overlies smooth, grayish black? (N2) mud; no shells in floc layer; many disarticulated oyster shells and shell fragments in grayish black layer.
20	11	Surface layer, 2-3 cm thick, consisting of soft, smooth mud with a cottage cheesy look, grading from dark yellowish brown (10 YR 4/2) to olive gray (5 Y 4/1); overlies smooth, cohesive, dark gray (N3) mud mottled with dark yellowish brown (10 YR 4/2); no shells in floc layer; *Rangia* at top of mottled layer; *Macoma*; copepod?; worm.

Table 2-6: Continued

Station number	Water depth (ft)	Description
21B	13	No floc layer; well-sorted, dark yellowish brown (10 YR 4/2) muddy medium sand; a few articulated and disarticulated *Rangia*, 1-4 cm in length, copepod?; heavy minerals; no odor.
22	10.7	Floc layer, 1-2 cm thick, consisting of soupy, gritty, dark yellowish brown (10 YR 4/2) mud; overlies gritty, grayish black (N2) fine sandy mud; live and disarticulated adult *Rangia*; shell fragments at depth; worms.
23	11.4	Floc layer, 2-3 cm thick, consisting of smooth (not lumpy), slightly gritty, dark yellowish brown (10 YR 4/2) mud; overlies soft, smooth, sticky, dark gray (N3) mud, uniform in color; disarticulated adult and articulated *Rangia*, 1-2.5 cm in length; several pockets of small shell fragments; retrieved unbroken Coke bottle in first grab; sediment and trace metal samples from first grab; organics samples 23-1 and 23-2 from second and third grabs, respectively.
24	17.9	Thin (1 cm) floc layer consisting of soupy, gritty, dark yellowish brown (10 YR 4/2) mud grading to olive gray (5 Y 4/1); overlies grayish black (N2) fine to medium sandy mud, variably sandier and muddier; broken oyster shells and disarticulated *Rangia* at top of grayish black layer; copepod?; sediment and trace metals samples taken from each of three grabs; organics sample from third grab.
25	17.6	Thin (<0.5 cm), shelly floc layer consisting of smooth, soupy, dark yellowish brown (10 YR 4/2) mud grading to olive gray (5 Y 4/1); overlies creamy, smooth (not gritty), lumpy, dark gray to grayish black (N2.5) mud, variable in texture; many disarticulated *Rangia*, 1-2.5 cm in length, at top of dark gray to grayish black layer; a few/some disarticulated adult *Macoma*; burrows; sediment and trace metals samples taken from each of three grabs; organics samples from second and third grabs.
26	16	Floc layer, 2-3 cm thick, consisting of soft, smooth, fluffy, dark yellowish brown (10 YR 4/2) mud; overlies soft, smooth, dark gray to grayish black (N2.5) mud; some disarticulated *Rangia* at top of dark gray to grayish black layer; disarticulated *Macoma*, 1 cm in length; worms; many burrows; no odor.

Table 2-6: Continued

Station number	Water depth (ft)	Description
27	16	Floc layer, 2-3 cm thick, consisting of soft, soupy, dark yellowish brown (10 YR 4/2) mud; overlies stiff, smooth, cohesive mud, mottled dark gray (N3), olive gray (5 Y 4/1), and dark yellowish brown (10 YR 4/2); no shells in floc layer; some articulated and disarticulated adult *Rangia* at top of mottled layer; a few/some *Macoma*, <2.5 cm in length, at depth; a few worms.
28	18.2	Thin (0.5 cm) floc layer consisting of soupy, gritty, dark yellowish brown (10 YR 4/2) mud; overlies dark gray (N3) sandy mud or muddy sand, variably sandier and muddier; many articulated adult and juvenile *Rangia*, ranging from 2-4 cm in length, at top of dark gray layer; pockets of shell fragments; smells like decomposing organisms; sediment and trace metals samples taken from each of three grabs; organics sample from second grab.
30	17.3	Floc layer, 1-2 cm thick, consisting of soft, fluffy, dark yellowish brown (10 YR 4/2) mud; overlies smooth, dark gray to grayish black (N2.5) mud, uniform in texture; disarticulated *Rangia* at top of dark gray to grayish black layer; some oxidized burrows; no odor; sediment and trace metals samples taken from first grab; organics sample from second grab.
31	16.9	Floc layer, 1-2 cm thick, consisting of smooth, soupy, dark yellowish brown (10 YR 4/2) mud; overlies smooth (not gritty), lumpy, firm, cohesive, grayish black (N2) mud mottled with dark yellowish brown? (10 YR 4/2) around burrows; articulated *Rangia* at top of grayish black layer; disarticulated *Macoma* and oyster shells; pocket of shell fragments; no odor.
32	16.3	Floc layer, 1-2 cm thick, consisting of soft, smooth mud and grading from dark yellowish brown (10 YR 4/2) to olive gray (5 Y 4/1); overlies smooth, medium dark to dark gray (N3.5) mud mottled with dark yellowish brown (10 YR 4/2), neither soft nor firm; a few disarticulated adult *Rangia* in floc layer and at top of underlying layer; not many shells in grab; worms; many burrows; plant matter.

Table 2-6: Continued

Station number	Water depth (ft)	Description
34	18.6	Surface layer, 4 cm thick, consisting of soft, smooth, fluffy, gelatinous mud with a cottage cheesy look, grading from dark yellowish brown (10 YR 4/2) to olive gray (5 Y 4/1); overlies smooth, greenish black (5 GY 2/1) mud; grab soft and fluffy throughout (hard to distinguish between layers on basis of texture); no shells in floc layer; a few disarticulated *Rangia* in greenish black layer; streaks of decayed matter; no odor; sediment and trace metals samples taken from first grab; organics sample from second grab.
40	11.7	Thin (1 cm) floc layer consisting of soft, soupy, dark yellowish brown (10 YR 4/2) mud; overlies very sticky, dark gray (N3) mud mottled with olive gray (5 Y 4/1); very few disarticulated *Rangia*, 1-2.5 cm in length, in floc layer; disarticulated juvenile and articulated *Rangia* at top of mottled layer; disarticulated *Macoma*; worms; plant matter (twig); no odor.
41	13	Floc layer, 2 cm thick, consisting of soft, smooth, soupy, dark yellowish brown (10 YR 4/2) mud; overlies soft, smooth, creamy, dark gray (N3) mud, uniform in color (not mottled); articulated and a few disarticulated *Rangia* in dark gray layer; copepod?; plant matter; no odor.
43	12.7	Surface layer, 3-4 cm thick, consisting of soft, smooth, fluffy mud, grading from dark yellowish brown (10 YR 4/2) to olive gray (5 Y 4/1); overlies smooth (not gritty), lumpy, dark gray (N3) mud; some articulated and disarticulated *Rangia*, mostly adult, at top of dark gray layer; some disarticulated *Rangia*, 1 cm in length, at depth; plant matter; no odor.
44	14.3	Surface layer, 2-3 cm thick, consisting of soft, smooth, fluffy mud, grading from dark yellowish brown (10 YR 4/2) to olive gray (5 Y 4/1); overlies smooth, grayish black (N2) mud; very few disarticulated *Rangia*, 2.5-4 cm in length; no odor.
51	14.6	Thin (1 cm) floc layer consisting of soft, gritty, dark yellowish brown (10 YR 4/2) mud; overlies medium gray (N5) fine sandy mud mottled with dark yellowish brown (10 YR 4/2); a few oyster shells and some disarticulated *Rangia*, 1-4 cm in length; copepod?; lots of worms.

Table 2-6: Continued

Station number	Water depth (ft)	Description
61	20.2	Floc layer, 2 cm thick, consisting of soft, smooth, fluffy, dark yellowish brown (10 YR 4/2) mud; floc overlies smooth, medium dark to dark gray (N3.5) mud, grading into smooth, creamy, light to medium bluish gray (N5 B 6/1) mud near bottom, similar to fluid mud layer in texture; a few/some disarticulated *Rangia*, 1 cm in length, just below floc layer; no shells at depth.
64	20.9	Thin (1 cm) floc layer consisting of soft, smooth, slick, dark yellowish brown (10 YR 4/2) mud grading to olive gray (5 Y 4/1); overlies smooth, grayish black (N2) mud; no shells in floc layer; some articulated and disarticulated *Rangia* in grayish black layer, most of the disarticulated shells are adults; *Macoma*; worms; a few oxidized burrows; no odor.
71	17.9	Thin (<1 cm), shelly floc layer consisting of smooth, dark yellowish brown (10 YR 4/2) mud; overlies soft, smooth, grayish black (N2) mud; many disarticulated *Rangia* in floc layer; a few other unidentified shells, 1-2.5 cm in length; worms; copepods?.
87	17.6	Floc layer consisting of 1-2 cm of soupy, gritty, dark yellowish brown (10 YR 4/2) mud; overlies cohesive mud, mostly dark gray (N3) mottled with dark yellowish brown (10 YR 4/2) and grayish black (N2) around worms and shells, neither soft nor firm; many unbroken, disarticulated oyster shells, some with barnacles; many disarticulated *Rangia*; a few disarticulated *Macoma*, 2 cm in length; worm burrows.
BC1	15.6	Surface layer consisting of soft, smooth, fluffy mud grading from 0.5 cm of dark yellowish brown (10 YR 4/2) mud to 2.5 cm of olive gray (5 Y 4/1); overlies smooth, cohesive, medium dark gray (N4) and pale to grayish red (10 R 5/2) "fluid mud" with pockets of lumps that feel like wood fragments; no shells in floc layer; a few disarticulated adult *Rangia* in "fluid mud" layer.
BC2	16.9	Floc layer, 2-3 cm thick, consisting of soft, smooth, fluffy mud with a cottage cheesy look grading from dark yellowish brown (10 YR 4/2) to olive gray (5 Y 4/1); overlies soft, smooth, olive gray (5 Y 4/1) mud mottled with dark gray to grayish black (N2.5); many articulated and disarticulated *Rangia* at top of mottled layer, 2 cm in length; burrows; no odor.

Table 2-6: Continued

Station number	Water depth (ft)	Description
BC3	14.3	Thin (1 cm), shelly floc layer consisting of smooth, soupy, dark yellowish brown (10 YR 4/2) mud grading to olive gray (5 Y 4/1); overlies lumpy, creamy, pale to grayish red (10 R 5/2) "fluid mud" layer grading to medium gray (N5) mottled with dark gray (N3); disarticulated adult *Rangia*, 2.5-4 cm in length, in floc layer; description of first grab; third grab differs from first - it has shells throughout it; sediment and trace metals samples taken from each of three grabs; organics sample from second grab.
BC4	18.9	Shelly floc layer consisting of soupy, gritty, dark yellowish brown (10 YR 4/2) mud; overlies soft, smooth, dark gray (N3) mud; many disarticulated *Rangia* in floc layer; plant matter; no odor.
BC5	15.6	Floc layer consisting of smooth, fluffy mud grading from dark yellowish brown (10 YR 4/2) to olive gray (5 Y 4/1); overlies soft, smooth, medium dark to dark gray (N3.5) mud, uniform in color and texture; articulated and disarticulated *Rangia* just below floc layer; smells like decomposing organisms.
BC6	10.7	April 26, 1995 - Floc layer, 2 cm thick, consisting of soft, smooth, soupy, dark yellowish brown (10 YR 4/2) mud; overlies soft, creamy, sticky, medium dark to dark gray (N3.5) mud, uniform in texture; some articulated and disarticulated *Rangia*, 1 cm in length, in medium dark to dark gray layer; very few disarticulated *Macoma*; lots of worms; station off .2 on LORAN from GPS; no odor; sediment and trace metals samples taken from each of three grabs; organics sample from second grab.
BC6	11	April 27, 1995 - Floc layer, 2 cm thick, consisting of soft, smooth, soupy, dark yellowish brown (10 YR 4/2) mud; overlies very smooth, creamy, sticky, dark gray (N3) mud mottled with olive gray (5 Y 4/1), uniform in color and texture; single disarticulated *Rangia* in floc layer, 2.5 cm in length; very few disarticulated *Rangia* below floc layer; several organisms, about 2.5 cm long, with segmented legs - look like centipedes; no odor; sediment and trace metals samples taken from each of three grabs.

Table 2-7: Sedimentological parameters - surficial sediment samples collected on April 26-27, 1995 (Cruise 33)

Station	Water (%)	Sand (%)	Silt (%)	Clay (%)	Clay:mud	Pejrup's class
2	28.21	97.62	1.20	1.19	0.50	A,III
3	50.41	49.27	24.07	26.66	0.53	C,II
4	61.74	5.62	51.70	42.68	0.45	D,III
5	58.86	2.94	36.64	60.42	0.62	D,II
6	65.32	8.02	41.81	50.17	0.55	D,II
7	61.70	4.77	40.03	55.20	0.58	D,II
8A	38.16	86.04	8.52	5.43	0.39	B,III
9	60.64	5.56	43.37	51.08	0.54	D,II
10	28.92	82.86	7.30	9.80	0.57	B,II
11-1	28.56	94.93	2.20	2.87	0.57	A,II
11-2	29.67	86.98	5.60	7.42	0.57	B,II
11-3	33.63	88.34	5.17	6.49	0.56	B,II
12	29.32	89.65	5.46	4.89	0.47	B,III
13	24.90	98.37	0.64	0.83	0.56	A,II
14	65.23	2.04	45.82	52.14	0.53	D,II
15	60.00	3.27	44.63	52.10	0.54	D,II
16-1	48.84	39.16	30.86	29.98	0.49	C,III
16-2	40.28	73.63	13.72	12.64	0.48	B,III
16-3	43.58	57.79	22.45	19.76	0.47	B,III
17	60.36	4.84	47.69	47.47	.0.50	D,III
18	61.05	3.00	48.19	48.81	0.50	D,II
19	66.44	3.92	39.84	55.77	0.58	D,II
20	64.97	1.88	45.64	52.48	0.53	D,II

Table 2-7: Continued

Station	Water (%)	Sand (%)	Silt (%)	Clay (%)	Clay:mud	Pejrup's class
21B	30.37	92.62	3.84	3.54	0.48	A,III
22	48.24	63.65	15.14	16.38	0.52	B,II
23	48.43	43.87	34.99	21.13	0.38	C,III
24-1	39.39	71.41	12.57	16.02	0.56	B,II
24-2	48.17	49.63	20.15	30.22	0.60	C,II
24-3	35.02	72.25	12.12	15.63	0.56	B,II
25-1	62.87	2.59	42.80	54.61	0.56	D,II
25-2	62.44	2.69	41.00	56.31	0.58	D,II
25-3	61.57	2.50	41.72	55.78	0.57	D,II
26	65.77	1.13	37.72	61.15	0.62	D,II
27	64.49	2.28	43.79	53.93	0.55	D,II
28-1	38.71	64.66	15.43	19.92	0.56	B,II
28-2	39.75	67.99	13.46	18.55	0.58	B,II
28-3	45.11	59.20	18.28	22.52	0.55	B,II
30	63.28	0.63	46.72	52.64	0.53	D,II
31	60.30	2.39	45.63	51.98	0.53	D,II
32	63.10	0.69	47.40	51.91	0.52	D,II
34	65.70	0.94	44.56	54.50	0.55	D,II
40	63.36	0.73	42.45	56.82	0.57	D,II
41	66.56	0.27	45.62	54.11	0.54	D,II
43	66.47	0.65	42.78	56.57	0.57	D,II
44	64.93	1.00	42.96	56.05	0.57	D,II
51	42.41	85.60	6.49	7.91	0.55	B,II
61	62.60	1.15	43.96	54.90	0.56	D,II

Table 2-7: Continued

Station	Water (%)	Sand (%)	Silt (%)	Clay (%)	Clay:mud	Pejrup's class
64	60.83	0.70	52.17	47.14	0.47	D,III
71	60.89	0.71	47.83	51.46	0.52	D,II
87	61.99	4.33	42.76	52.91	0.55	D,II
BC1	63.16	6.58	44.59	48.82	0.52	D,II
BC2	68.87	1.40	39.26	59.34	0.60	D,II
BC3-1	49.57	4.52	57.85	37.63	0.39	D,III
BC3-2	55.41	11.38	45.26	43.36	0.49	C,III
BC3-3	56.29	10.32	49.74	39.94	0.45	C,III
BC4	60.40	2.11	43.48	54.41	0.56	D,II
BC5	63.94	2.57	44.72	52.71	0.54	D,II
BC6-1*	60.80	2.83	42.39	54.78	0.56	D,II
BC6-2*	62.36	2.85	42.88	54.26	0.56	D,II
BC6-3*	68.14					
BC6-1**	62.46	2.67	41.36	55.98	0.58	D,II
BC6-2**	64.67	2.40	39.71	57.89	0.59	D,II
BC6-3**	52.30	2.57	41.24	56.19	0.58	D,II

* collected 4/26/95

** collected 4/27/95

Table 2-8: Geochemical parameters - surficial sediment samples in μg/g collected on April 26 & 27, 1995 (Cruise 33)

Station	Cr	Cu	Fe	Mn	Ni	Zn
2	12.3	3.9	0.41	1777	20.9	41.7
3	69.4	27.0	2.69	2803	44.4	194.9
4	112.5	43.3	4.17	3117	60.8	290.4
5	133.0	51.7	5.04	4315	89.5	378.0
6	115.0	42.0	4.46	5197	74.7	309.8
7	123.3	47.4	4.69	2339	88.8	349.0
8A	37.1	12.0	1.46	930	24.9	87.5
9	128.5	68.2	5.10	4024	147.2	578.5
10	24.7	10.2	1.00	526	17.7	69.8
11	18.8	7.0	0.68	1058	15.2	46.4
12	71.0	26.5	2.52	1624	42.1	169.3
12	90.7	29.7	3.15	2013	54.8	188.3
12	72.4	18.9	2.80	685	34.7	102.9
12	44.8	16.6	1.49	737	34.9	123.3
12	19.1	9.3	0.71	289	24.9	79.8
12	20.5	7.3	0.75	445	14.2	54.3
13	7.6	3.3	0.29	1159	12.4	21.9
14	110.8	43.3	4.21	4869	73.1	298.7
15	112.6	43.8	4.17	1335	70.0	282.7
16	59.8	22.3	2.13	1078	33.6	152.0
17	117.5	44.6	3.91	1108	67.8	277.6
18	127.1	49.2	3.92	1112	68.3	282.9
19	130.0	52.7	4.68	3945	91.6	374.6
20	133.0	50.5	4.41	3791	85.2	355.7
21B	16.8	6.5	0.56	1495	15.8	44.5
22	46.5	20.0	1.98	1372	35.8	132.9
23	86.8	36.1	2.39	1122	47.5	214.2
24	51.8	17.2	1.96	1064	35.2	142.3
25	129.5	62.6	4.73	3627	130.5	530.9
26	129.2	46.5	4.56	4139	83.5	340.1
27	139.8	54.5	5.11	7612	102.0	462.6
28	58.2	22.3	2.22	1389	45.4	190.8
30	110.7	41.2	4.43	2669	76.0	288.8
31	112.4	41.9	4.44	2231	76.3	306.6
32	110.3	41.7	4.45	3668	78.0	317.3
34	123.0	47.9	4.62	5264	83.3	348.5
40	108.9	45.0	4.38	1979	71.0	296.4
41	113.9	43.7	4.57	3358	75.4	295.2
43	108.7	42.3	4.51	4380	76.4	296.2

Table 2-8: Continued

Station	Cr	Cu	Fe	Mn	Ni	Zn
44	106.4	42.1	4.57	4442	74.2	292.8
51	31.5	11.9	1.31	1977	22.1	90.6
61	114.7	48.6	4.65	3552	79.4	334.9
64	116.1	48.3	4.56	2246	88.4	323.0
71	115.7	54.9	4.70	3122	90.6	372.7
87	130.5	49.7	5.32	4921	103.6	483.8
BC1	116.2	44.0	4.25	3255	78.5	303.5
BC2	128.6	46.1	4.59	2067	87.8	339.9
BC3	90.0	31.4	3.25	1789	53.0	199.3
BC4	138.4	70.6	4.93	1841	130.8	455.8
BC4	127.4	62.7	4.83	2037	96.4	376.4
BC5	152.2	37.1	5.05	3225	88.4	284.8
BC5	119.0	38.6	4.49	3764	75.1	295.4
BC5	140.0	54.1	3.90	1671	90.5	458.5
BC6	153.7	63.6	4.36	1752	104.8	499.5
BC7	147.1	55.7	4.14	2983	71.9	331.1

Table 2-9: Sedimentological parameters - gravity cores collected on April 26-27, 1995 (Cruise 33)

Sampling interval (cm)	Water (%)	Sand (%)	Silt (%)	Clay (%)	Clay:mud	Pejrup's class
Core 12						
0-5	42.88	51.86	24.21	23.92	0.50	B,III
5-10	48.39	33.02	39.33	27.64	0.41	C,III
10-14	35.82	20.28	51.79	27.92	0.35	C,III
25-29	30.52	76.15	13.00	10.85	0.45	B,III
32-36	23.87	92.04	4.27	3.69	0.46	A,III
Core 25						
0-2.5	62.92	3.20	41.72	55.08	0.57	D,II
2.5-5	63.08	2.17	43.66	54.17	0.55	D,II
5-7.5	60.32	1.58	44.37	54.04	0.55	D,II
7.5-10	57.29	1.35	42.52	56.13	0.57	D,II
26-30	61.37	0.93	41.97	57.10	0.58	D,II
40-44	57.67	0.75	38.09	61.16	0.62	D,II
56-60	57.32	0.79	37.35	61.86	0.62	D,II
Core BC1						
0-2.5	61.18	6.08	46.65	47.17	0.50	D,II
2.5-5	60.88	10.92	43.13	45.95	0.52	C,II
5-7.5	57.55	5.16	43.96	50.88	0.54	D,II
7.5-10	54.71	1.06	40.51	58.44	0.59	D,II
16-20	57.99	4.66	40.41	54.93	0.58	D,II
32-36	53.77	4.22	36.09	59.69	0.62	D,II
52-56	62.07	2.36	38.31	59.33	0.61	D,II

Table 2-9: Continued

Sampling interval (cm)	Water (%)	Sand (%)	Silt (%)	Clay (%)	Clay:mud	Pejrup's class
Core BC2						
0-2.5	55.95	2.56	41.82	55.62	0.57	D,II
2.5-5	57.40	0.90	39.71	59.39	0.60	D,II
5-7.5	58.34	0.81	42.09	57.10	0.58	D,II
7.5-10	60.66	0.97	42.20	56.83	0.57	D,II
12-16	55.74	0.90	42.56	56.53	0.57	D,II
36-40	58.38	0.79	42.50	56.71	0.57	D,II
46-50	57.39	0.42	40.17	59.41	0.60	D,II
Core BC3						
0-2.5	63.36	9.63	46.65	43.72	0.48	D,III
2.5-5	58.52	14.37	45.70	39.93	0.47	C,III
5-7.5	55.01	10.24	51.29	38.47	0.43	C,III
7.5-10	52.91	6.66	49.30	44.04	0.47	D,III
10-14	52.89	12.45	50.85	36.70	0.42	C,III
18-22	51.78	12.81	49.50	37.70	0.43	C,III
40-44	55.02	3.52	41.82	54.66	0.57	D,II
Core BC4						
0-2.5	53.97	3.63	43.30	53.06	0.55	D,II
2.5-5	55.55	3.19	42.30	54.36	0.56	D,II
5-7.5	52.52	2.46	40.35	57.19	0.59	D,II
7.5-10	57.36	1.41	40.27	58.32	0.59	D,II
18-22	55.35	0.91	41.75	57.34	0.58	D,II
32-36	57.05	0.87	41.96	57.17	0.58	D,II
52-56	62.07	0.88	44.10	55.02	0.56	D,II

Table 2-9: Continued

Sampling interval (cm)	Water (%)	Sand (%)	Silt (%)	Clay (%)	Clay:mud	Pejrup's class
Core BC5						
0-3	68.62	2.28	46.59	51.14	0.52	D,II
3-5	63.11	1.04	45.91	53.05	0.54	D,II
5-7.5	64.24	0.86	41.43	57.72	0.58	D,II
7.5-10	63.57	1.26	41.70	57.04	0.58	D,II
18-22	63.55	1.28	46.19	52.54	0.53	D,II
28-32	57.74	1.26	43.70	55.04	0.56	D,II
46-50	54.25	0.77	41.01	58.22	0.59	D,II
66-70	56.02	1.00	38.59	60.41	0.61	D,II
Core BC6						
0-3	60.22	4.75	41.21	54.04	0.57	D,II
3-6	60.41	4.91	40.30	54.79	0.58	D,II
6-10	59.82	4.51	39.54	55.95	0.59	D,II
26-30	64.70	0.94	37.58	61.47	0.62	D,II
46-50	64.09	0.56	37.06	62.38	0.63	D,II
Core BC7						
0-2.5	66.35	2.01	49.87	48.13	0.49	D,III
2.5-5	65.94	3.56	49.72	46.71	0.48	D,III
5-7.5	65.16	4.25	50.24	45.51	0.48	D,III
7.5-10	59.88	3.24	56.71	40.05	0.41	D,III
26-30	65.21	3.40	49.10	47.50	0.49	D,III
56-60	66.97	1.88	51.25	46.87	0.48	D,III
75-79	51.85	14.90	43.77	41.33	0.49	C,III

Table 2-10: Geochemical parameters in μg/g - gravity cores collected April 27, 1995 (Cruise 33)

Station	Top	Bottom	Cr	Cu	Fe	Mn	Ni	Zn
12	0	5	71.0	26.5	2.52	1624	42.1	169.3
12	5	10	90.7	29.7	3.15	2013	54.8	188.3
12	10	14	72.4	18.9	2.80	685	34.7	102.9
12	25	29	44.8	16.6	1.49	737	34.9	123.3
12	32	36	19.1	9.3	0.71	289	24.9	79.8
25	0	2.5	146.4	62.9	5.11	5015	134.9	569.9
25	2.5	5	139.0	66.3	4.95	3100	143.0	617.6
25	5	7.5	133.3	71.3	4.88	2853	154.0	666.1
25	7.5	10	140.9	72.3	4.78	1951	140.0	580.0
25	26	30	111.5	58.9	4.57	3953	78.6	281.6
25	40	44	122.5	34.9	4.75	2133	60.1	165.3
25	56	60	121.9	24.7	4.62	1389	42.8	121.4
BC1	0	2.5	116.2	44.0	4.25	3255	78.5	303.5
BC1	2.5	5	118.3	42.7	4.29	3464	76.1	299.5
BC1	5	7.5	107.0	35.9	3.50	2500	58.2	231.5
BC1	7.5	10	116.1	32.9	3.59	2112	58.3	187.2
BC1	16	20	156.2	66.6	5.11	3155	155.6	719.7
BC1	32	36	125.2	30.1	4.60	1702	57.8	145.5
BC1	52	56	126.7	15.4	4.80	1409	49.7	113.8
BC2	0	2.5	128.6	46.1	4.59	2067	87.8	339.9
BC2	2.5	5	145.0	53.2	5.08	2274	100.2	350.0
BC2	5	7.5	119.8	52.6	4.46	2684	86.4	384.3
BC2	7.5	10	142.1	66.1	4.97	4869	147.0	364.8
BC2	12	16	132.5	75.9	4.81	2304	144.0	637.0
BC2	36	40	116.1	53.4	4.65	3310	74.1	606.9
BC2	46	50	109.1	41.9	4.59	2511	63.7	233.3
BC3	0	2.5	106.2	35.9	3.65	5277	65.8	268.9
BC3	2.5	5	115.8	34.7	3.63	2271	56.5	262.4
BC3	5	7.5	116.3	33.9	3.58	1423	55.8	233.4
BC3	7.5	10	128.3	33.1	3.71	1377	54.8	241.3
BC3	10	14	101.1	27.4	3.09	2357	58.4	191.1
BC3	18	22	116.5	32.2	3.47	1862	53.6	205.0

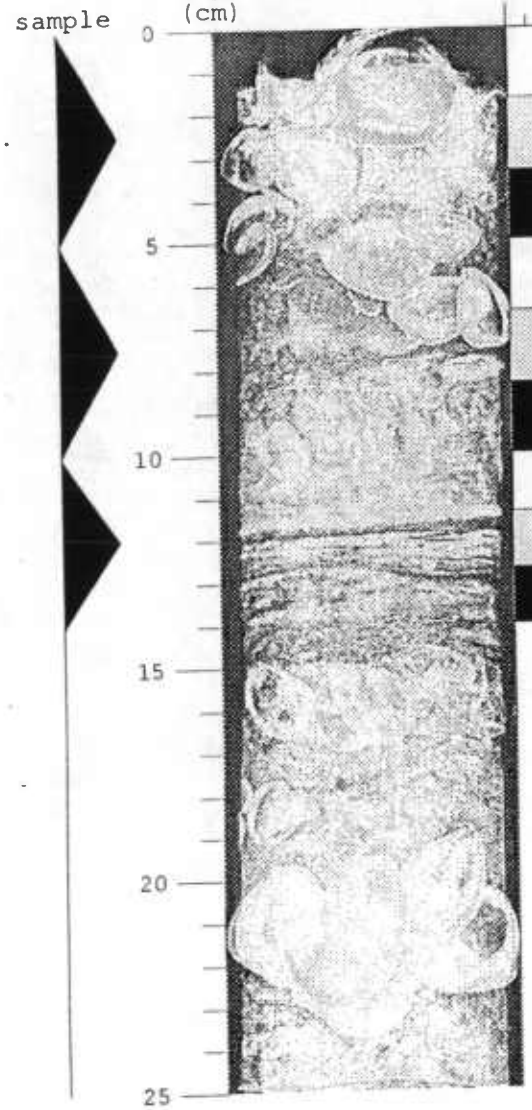
Table 2-10: Continued

Station	Top	Bottom	Cr	Cu	Fe	Mn	Ni	Zn
BC4	0	2.5	138.4	70.6	4.93	1841	130.8	455.8
BC4	2.5	5	127.4	62.7	4.83	2037	96.4	376.4
BC4	5	7.5	129.5	47.9	5.26	1966	78.2	227.8
BC4	7.5	10	117.7	42.7	5.48	2788	58.9	213.8
BC4	18	22	129.0	29.5	5.38	2089	55.1	138.6
BC4	32	36	130.0	22.0	5.41	1648	48.5	111.6
BC4	52	56	143.5	17.4	4.78	1574	48.5	116.8
BC5	0	3	152.2	37.1	5.05	3225	88.4	284.8
BC5	3	5	118.2	32.4	4.57	3068	65.4	270.5
BC5	5	7.5	140.3	40.3	4.89	3224	79.8	324.8
BC5	7.5	10	137.3	42.0	4.8	3215.9	77.2	347.6
BC5	18	22	146.9	72.5	5.07	2701	147.4	600.7
BC5	28	32	123.7	41.8	4.62	1704	43.9	208.5
BC5	46	50	131.0	27.3	4.69	1341	42.5	132.8
BC5	66	70	119.0	38.6	4.49	3764	75.1	295.4
BC6	0	3	153.7	63.6	4.36	1752	104.8	499.5
BC6	3	6	146.5	48.8	5.05	1847	57.5	209.8
BC6	6	10	135.8	15.4	4.95	1681	27.8	117.8
BC6	26	30	134.8	15.9	4.72	1973	25.4	120.7
BC6	46	50	136.4	53.4	4.56	1674	90.7	354.8
BC7	0	2.5	147.1	55.7	4.14	2983	71.9	331.1
BC7	2.5	5	157.1	56.9	4.12	2100	69.5	335.8
BC7	5	7.5	142.3	51.5	4.11	2370	66.3	293.4
BC7	7.5	10	124.7	50.6	3.62	1215	65.5	262.6
BC7	26	30	176.5	81.5	4.23	992	83.1	419.5
BC7	56	60	188.2	73.7	4.47	831	140.0	568.1
BC7	75	79	92.7	32.6	3.36	605	35.0	187.4

APPENDIX

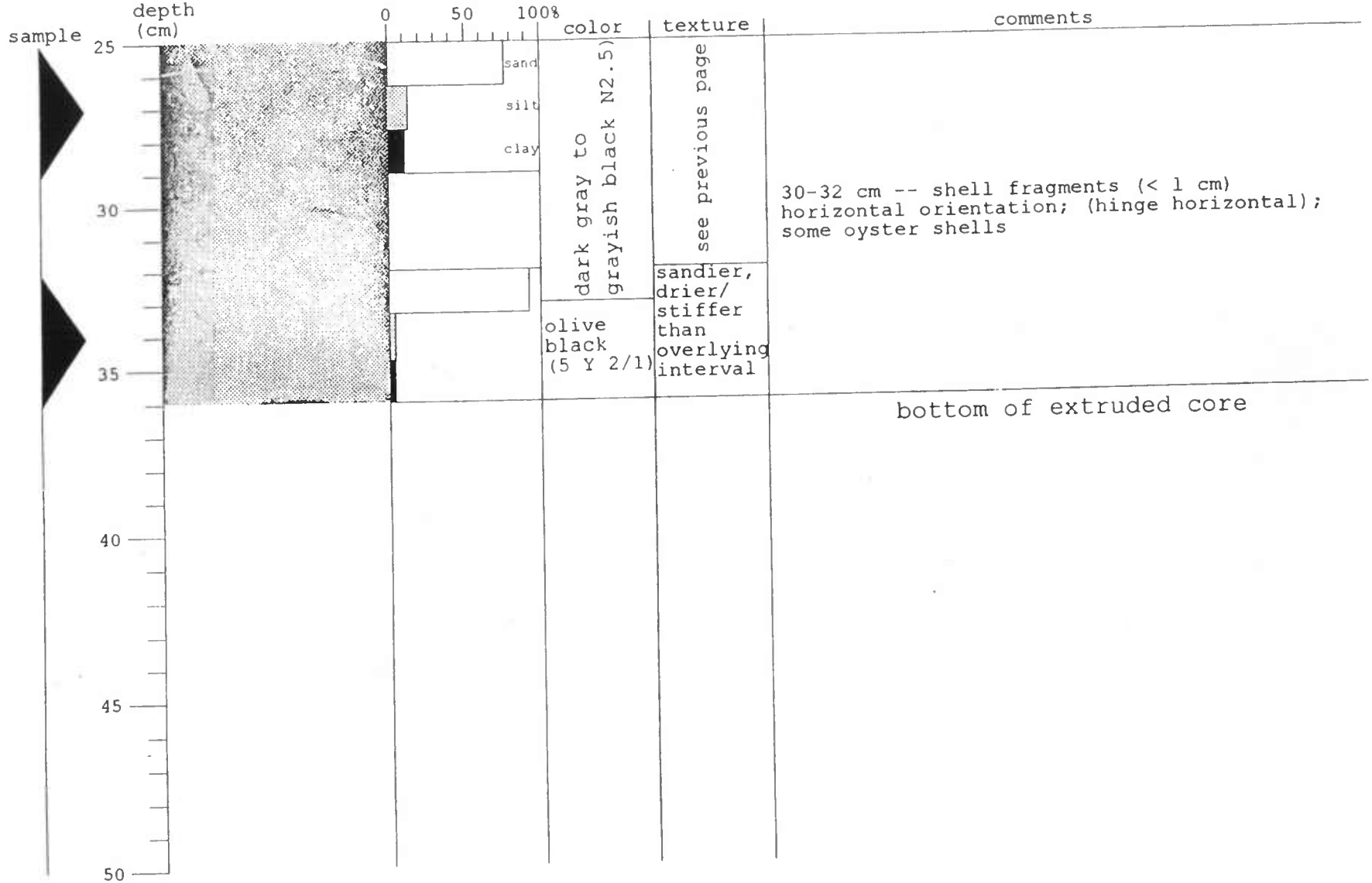
Visual and radiographic observations of gravity cores collected on April 27, 1995 (Cruise 33).

HART-MILLER ISLAND - 14th Year
Core 12 April 27, 1995

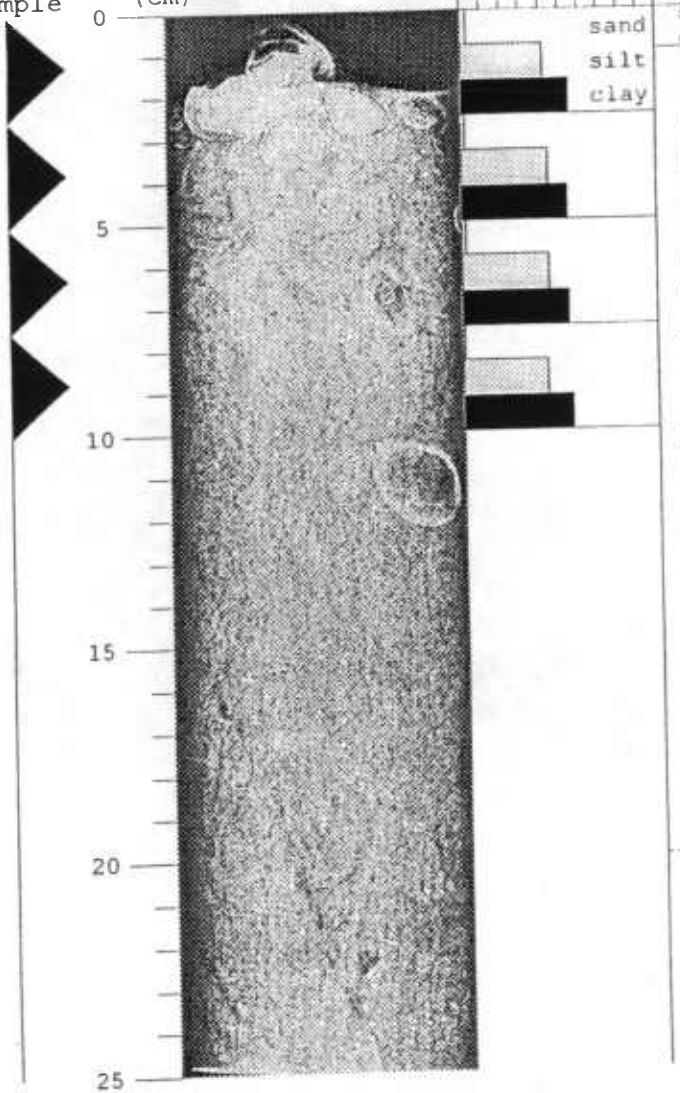


depth (cm)	0 50 100%	color	texture	comments
0	sand	see comments	gritty, very fine to fine sandy mud, dry, cohesive, variably muddier and sandier	0-2 cm -- dark yellowish brown (10 YR 4/2)
	silt	grayish black (N2)		top 5 cm -- articulated adult Rangia cuneata filled with sediment, 4.5 cm long; many other R. cuneata, mostly disarticuated - range in size from ~ 1-4.5 cm
	clay			5-10 cm -- fewer R. cuneata - mostly disarticulated, 1.5 - 2.5 cm long
10		light olive gray (5 Y 5/2)	see comments	10-14 cm -- very slightly gritty mud, lumpy, very stiff 14 cm -- marked increase in sandiness
15		dark gray to grayish black (N2.5)	see comments	14-32 cm -- very stiff sandy mud or muddy sand 14-18 cm -- R. cuneata - mostly articulated, ~ 2 cm long
20				22 cm -- another shell layer - R. cuneata, mostly articulated - densly packed; all ~ 3 cm long; single articulated Macoma, 2.5 cm long; sediment inside/around shells has higher water content
25				

HART-MILLER ISLAND - 14th Year
Core 12 April 27, 1995

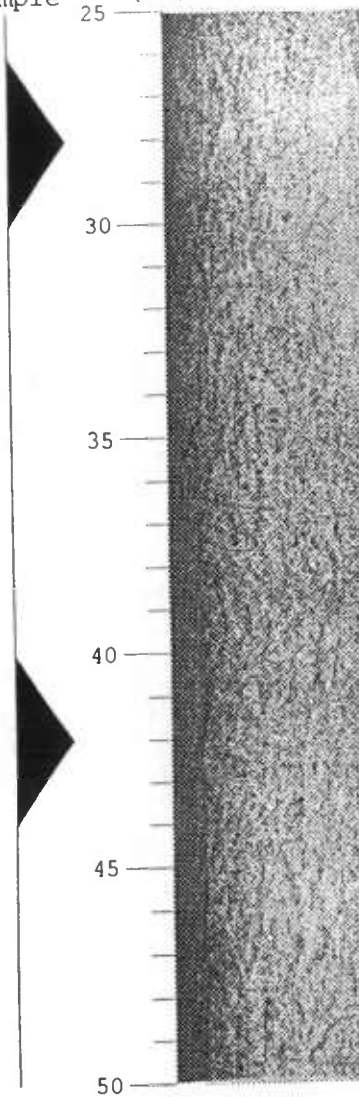


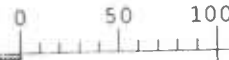
HART-MILLER ISLAND - 14th Year
Core 25 April 27, 1995



sample	color	texture	comments
	see comments	soft, slightly gritty mud	<1 cm - dark yellowish brown (10 YR 4/2) 0-2 cm -- Rangia cuneata - mostly disarticulated, varying from 1-2.5 cm in length (approx. 8 shells in all)
		soft mud, almost no grit	0-50 cm -- strongly bioturbated (from xeroradiograph)
	mottled dark grey (N3) and olive gray (5 Y 4/1) with some dark yellowish brown (10 YR 4/2) mottling at top (upper 5 cm)	soft, lumpy mud, almost no grit, variably softer and firmer (or wetter/drier) - gives impression of lumpiness = may be burrowed vs. nonburrowed sediment	8-10 cm -- disarticulated Macoma - 2 halves of same individual; 2 cm long 13 cm -- disarticulated Macoma - 2 halves of same individual; 2.5 cm long 19 cm -- piece of slag approximately 0.7 x 0.4 x 0.4 cm long
	see next page		

HART-MILLER ISLAND - 14th Year
Core 25 April 27, 1995

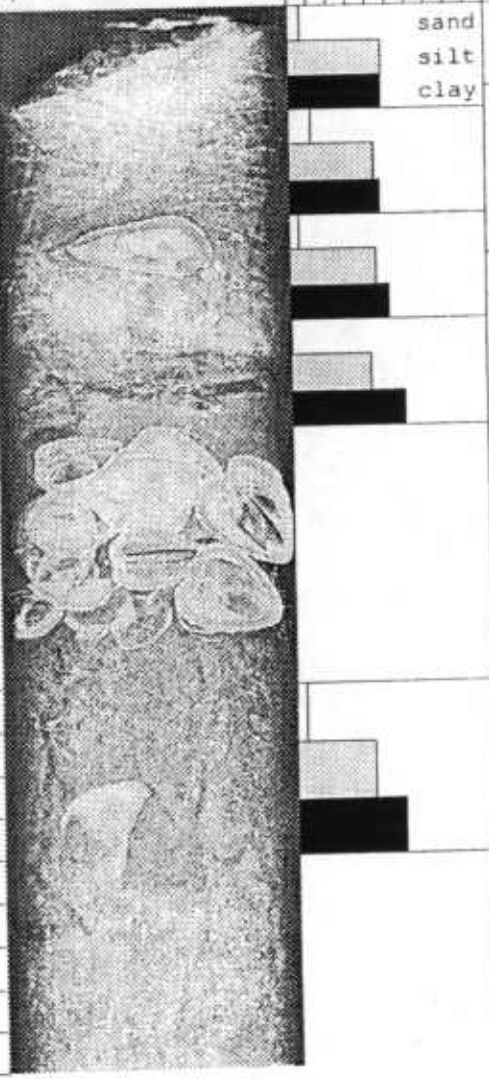




color	texture	comments
grayish black (N2) with some black (N1) speckles between 29-33 cm	see previous page	25-28 cm -- major burrow along side of core (right side of xeroradiograph)
dark gray (N3) with light olive gray (5 Y 5/2) mottling - vermiform	see comments	35 cm -- slight increase in firmness 35-67 cm -- smooth mud; less lumpy than 5-35 cm interval, somewhat stiffer; gradual increase in firmness to bottom 46-52 cm -- dark gray to grayish black (N2.5) with light olive gray (5 Y 5/2) mottling 52-67 cm -- dark gray (N3) with light olive gray (5 Y 5/2) mottling - vermiform; more light olive gray mottling here than 35 - 46 cm 56-60 cm -- additional sediment sample 67 cm -- bottom of extruded core
see comments		

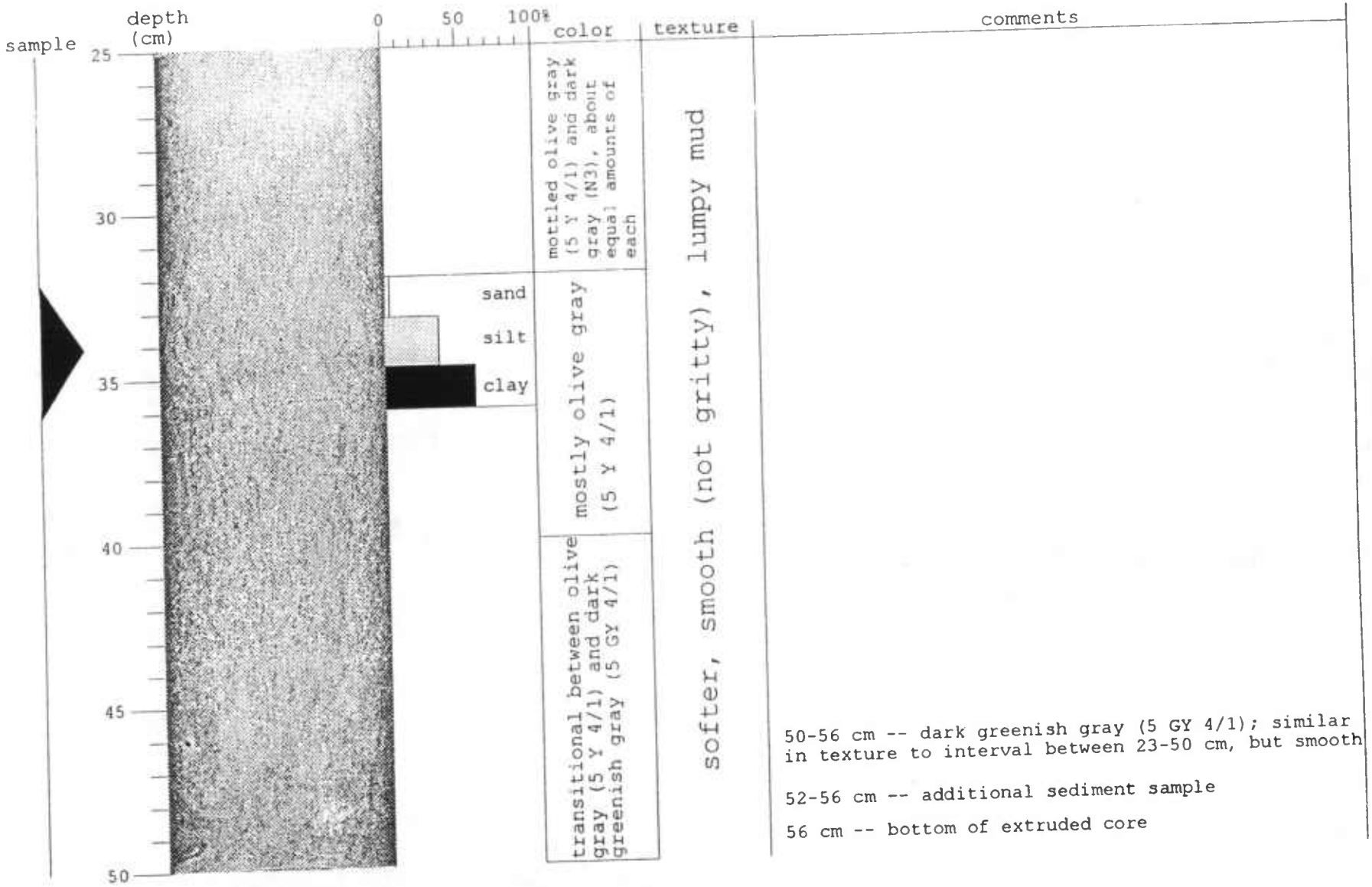
sand
silt
clay

HART-MILLER ISLAND - 14th Year
Core BC1 April 27, 1995

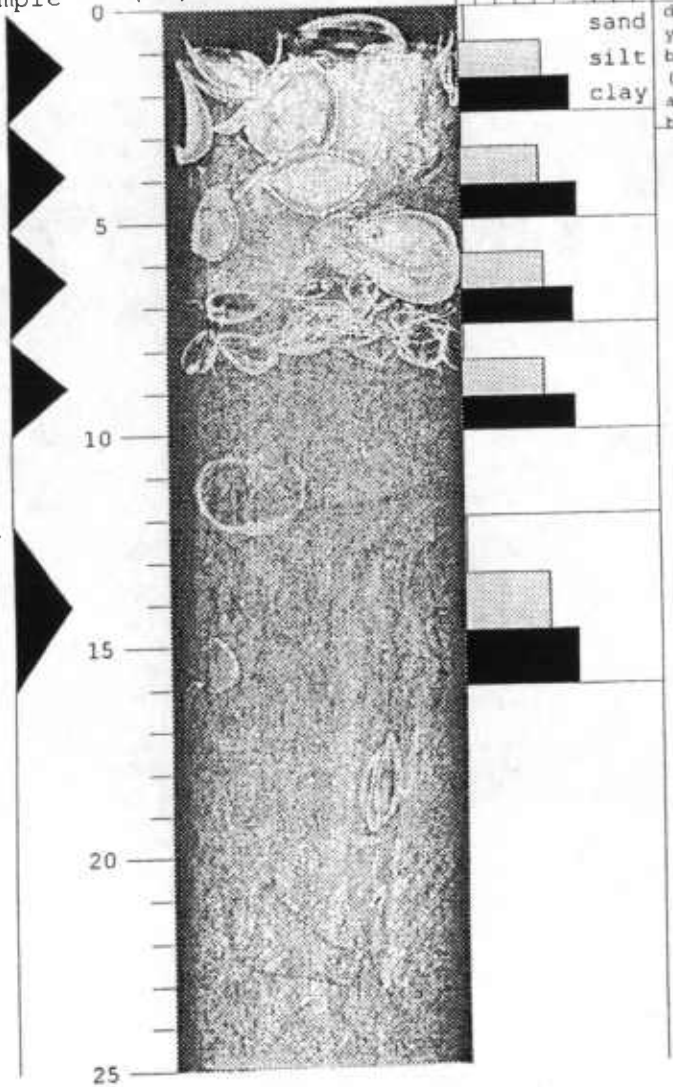


color	texture	comments
dark yellowish brown (10 YR 4/2)	soft mud	2-6 cm -- mottled dark yellowish brown (10 YR 4/2) and dark gray to grayish black (N2.5)
see comments	soft, slightly gritty, lumpy mud	5-7.5 cm -- Rangia cuneata - shell half, ~3.5 cm long 6-7 cm -- pale red (10 R 6/2)
see comments	smooth mud - firmer than above	11-16 cm -- prominent shell layer - R. cuneata, mostly articulated, vary in size from 1-3 cm below 16 cm -- heavily bioturbated (from xeroradiograph)
mostly dark gray (N3), except darker around shells	stiffer, lumpy mud - very slightly gritty	16-20 cm -- plant matter, worm
see next page	see next page	

HART-MILLER ISLAND - 14th Year
Core BC1 April 27, 1995

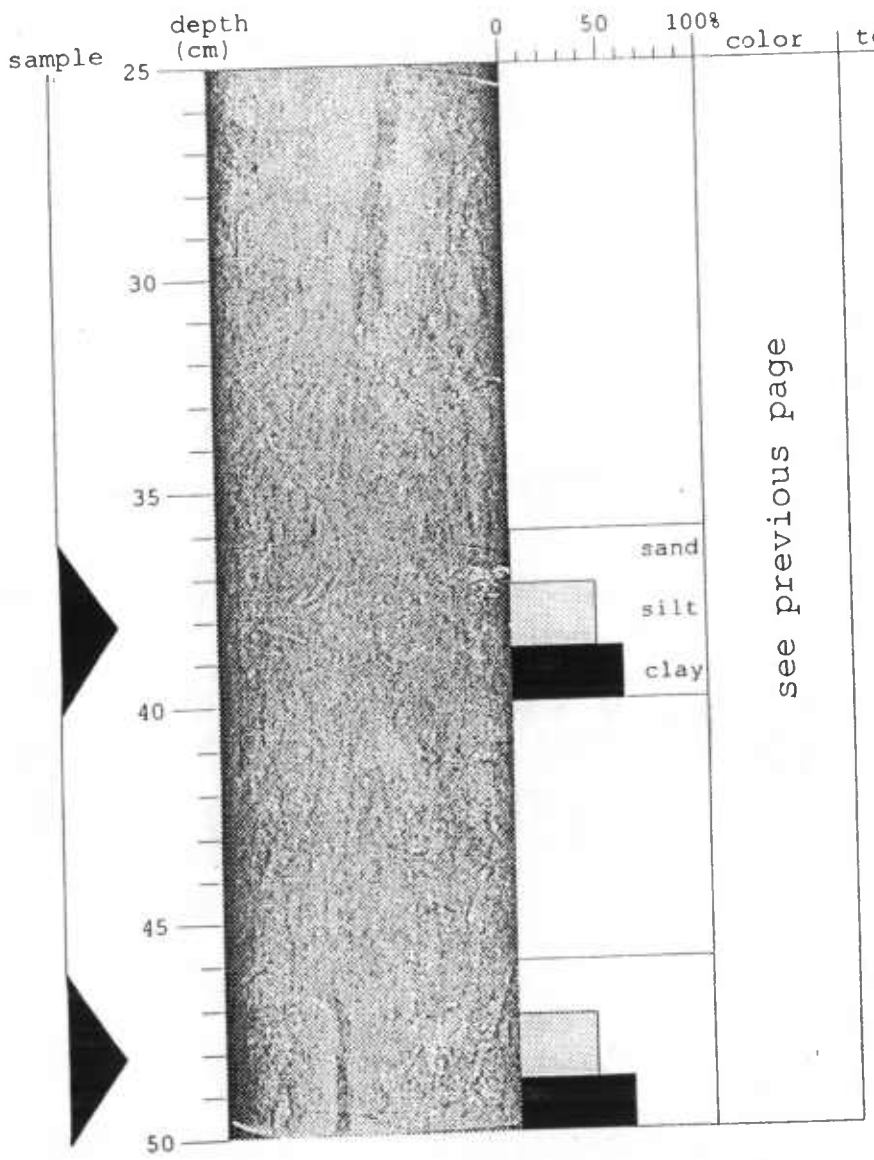


HART-MILLER ISLAND - 14th Year
Core BC2 April 27, 1995



color	texture	comments
dark yellowish brown (10 YR 4/2) and grayish black (N2)	stiff, dry, mud	0-4/5 cm -- dried out between collection and extrusion
		0-7 cm -- fairly dense layer of Rangia cuneata, mostly disarticulated, varying in size from 1.5-3.0 cm
	smooth mud (not gritty)	2.5-5.0 cm -- plant matter (root?)
		5-7.5 cm -- smooth (no grit), wetter (due to Macoma), slick mud
	see comments	5-7.5 cm -- articulated Macoma, ~2 cm long, disarticulated and articulated R. cuneata
olive gray (5 Y 4/1) veriform mottling - medium dark gray (N4) and dark gray (N3), (see comments) dark gray to grayish black (N2.5)	smooth, somewhat stiffer mud than 5-7.5 cm interval	7-9 cm -- dense layer of smaller R. cuneata (~1.5 cm) (more densely packed than 0-7 cm interval)
		10-12 cm -- disarticulated Macoma 2.5 cm long
		10-20 cm -- mostly olive gray
lumpy mud, no grit, somewhat firmer (stiffer) than above, variably softer/firmer - though variations slight; variably lumpier and smoother		18-20 cm -- Macoma - disarticulated halves of same individual, 2.5 cm long
		below 20 cm -- mostly darker gray (N3 or N4)

HART-MILLER ISLAND - 14th Year
Core BC2 April 27, 1995



color

see previous page

texture

see previous page

comments

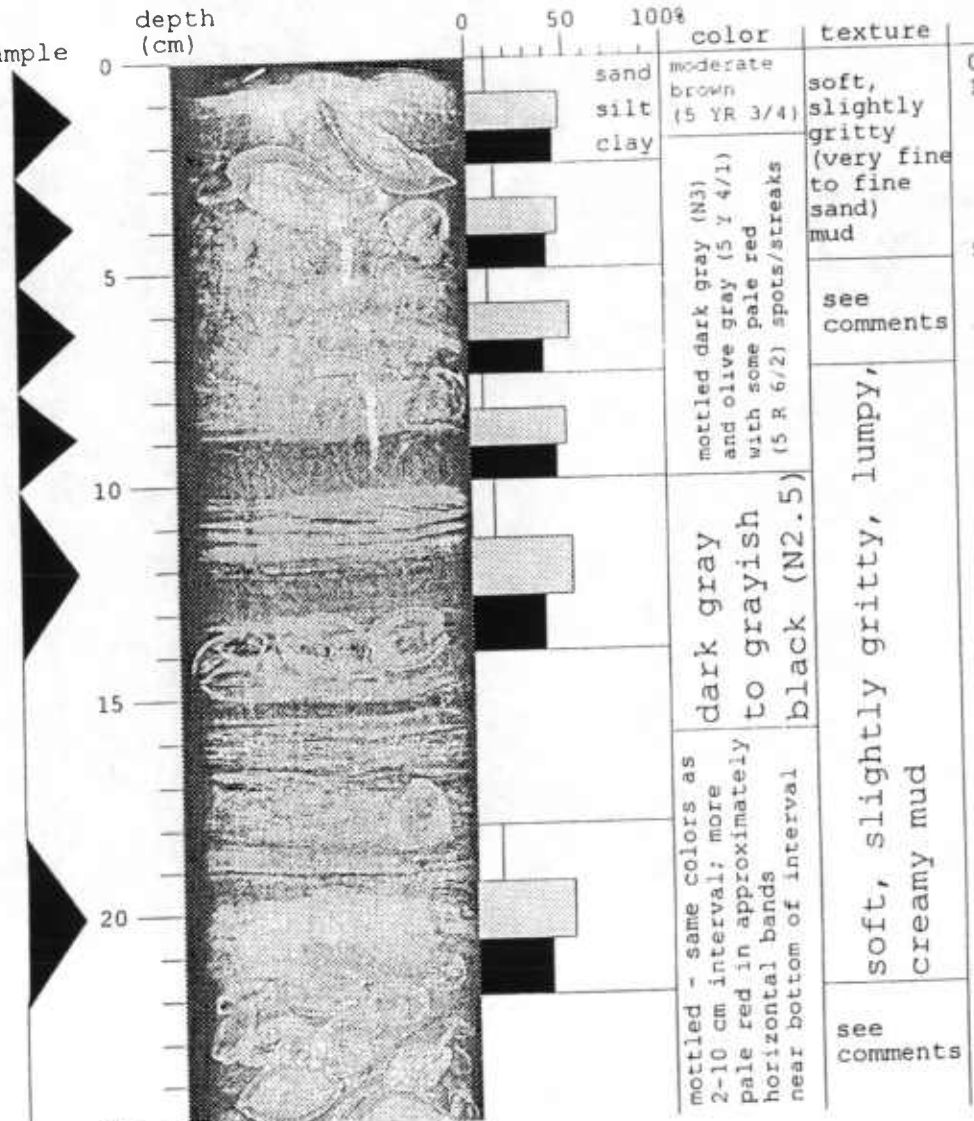
~45 cm -- twig

50-52 cm -- irregular boundaries ~ 2 cm wide band top goes from 50-52 cm

below ~54 cm -- stiffer, smoother (less lumpy) mud

56 cm -- bottom of extruded core

HART-MILLER ISLAND - 14th Year
Core BC3 April 27, 1995



0-5 cm -- Rangia cuneata - disarticulated adult, 1.5 - 4 cm long

5-7.5 cm -- soft, slightly gritty, lumpy mud

7.5-10 cm -- layer of R. cuneata - disarticulated - 2 cm long - articulated 1.5 cm long

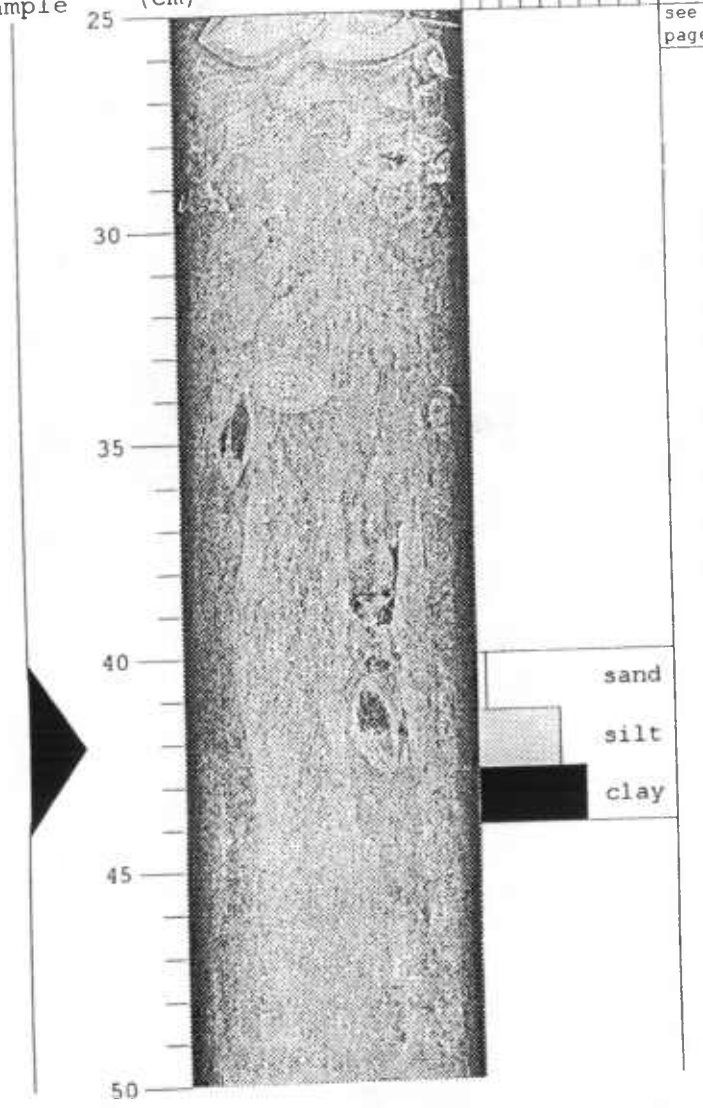
15 cm -- gouged split core with end of ballpoint pen

16-~17.5 cm -- shell bed mostly disarticulated R. cuneata - ~1-1.5 cm long

below 22 cm -- marked increase in firmness; smooth (not gritty) mud, sticky, stiffer with depth

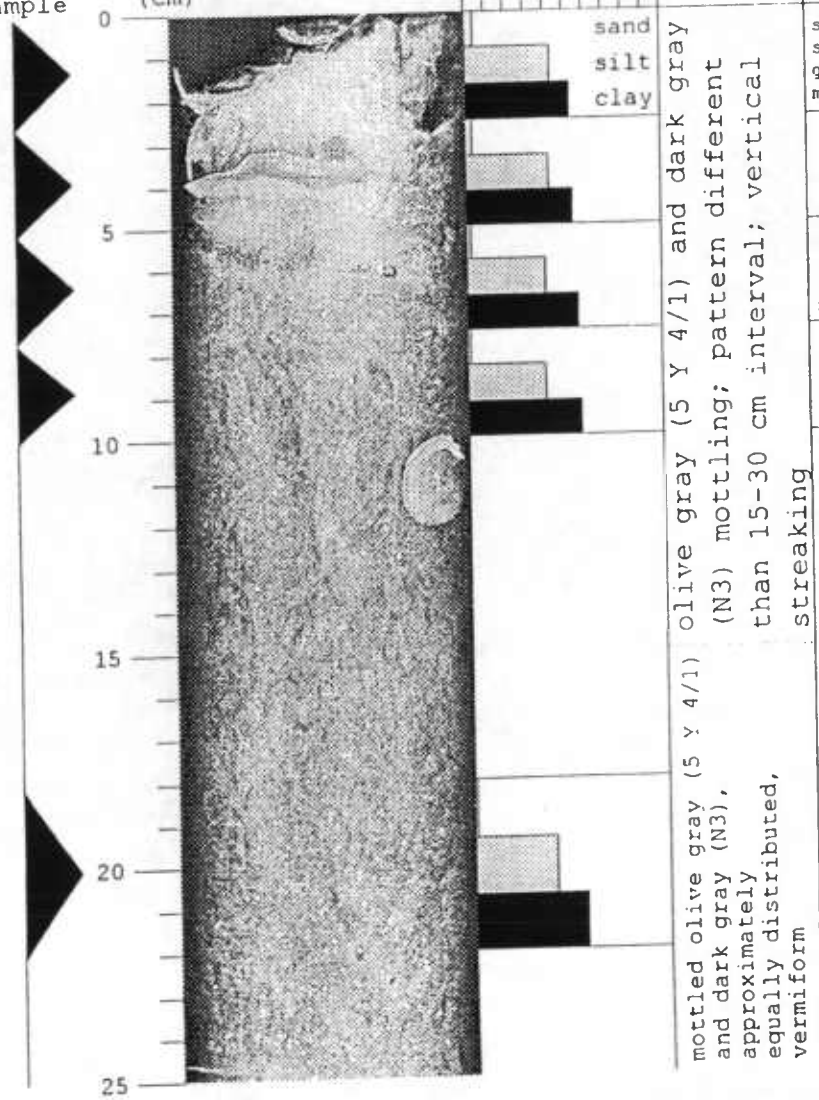
23-28 cm -- shell bed; Rangia cuneata - disarticulated and articulated, approximately 1.5 cm long

HART-MILLER ISLAND - 14th Year
Core BC3 April 27, 1995



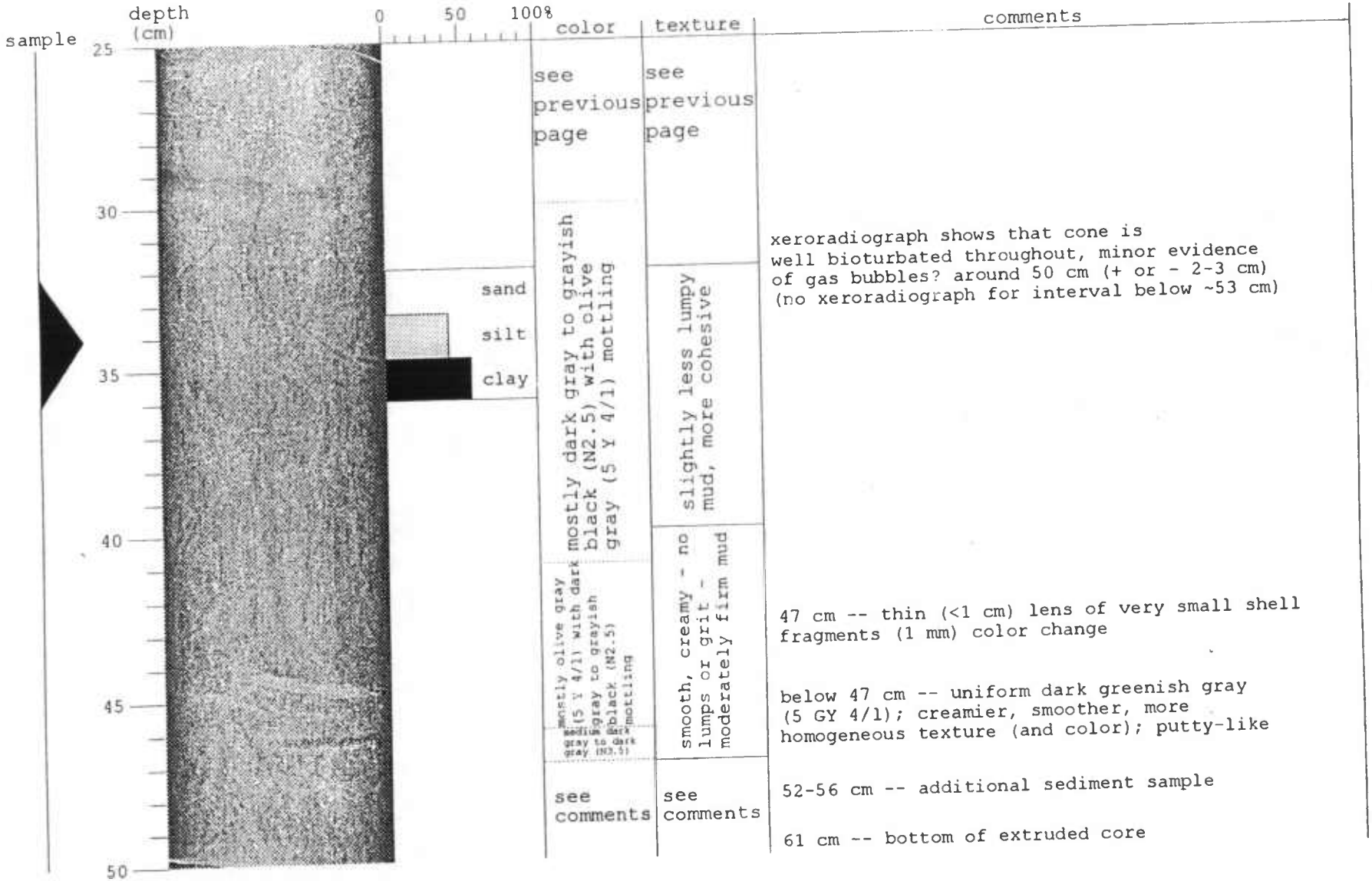
color	texture	comments
see previous page		below 26 cm --uniform color/pattern and texture
uniformly mottled dark gray (N3) and olive gray (5 Y 4/1)	smooth (not gritty) mud, sticky, stiffer with depth	~35 cm -- articulated R. cuneata, ~ 2 cm long ~36 cm -- Macoma 44 cm -- articulated Macoma, 3 cm long 58 cm -- bottom of extruded core

HART-MILLER ISLAND - 14th Year
Core BC4 April 27, 1995

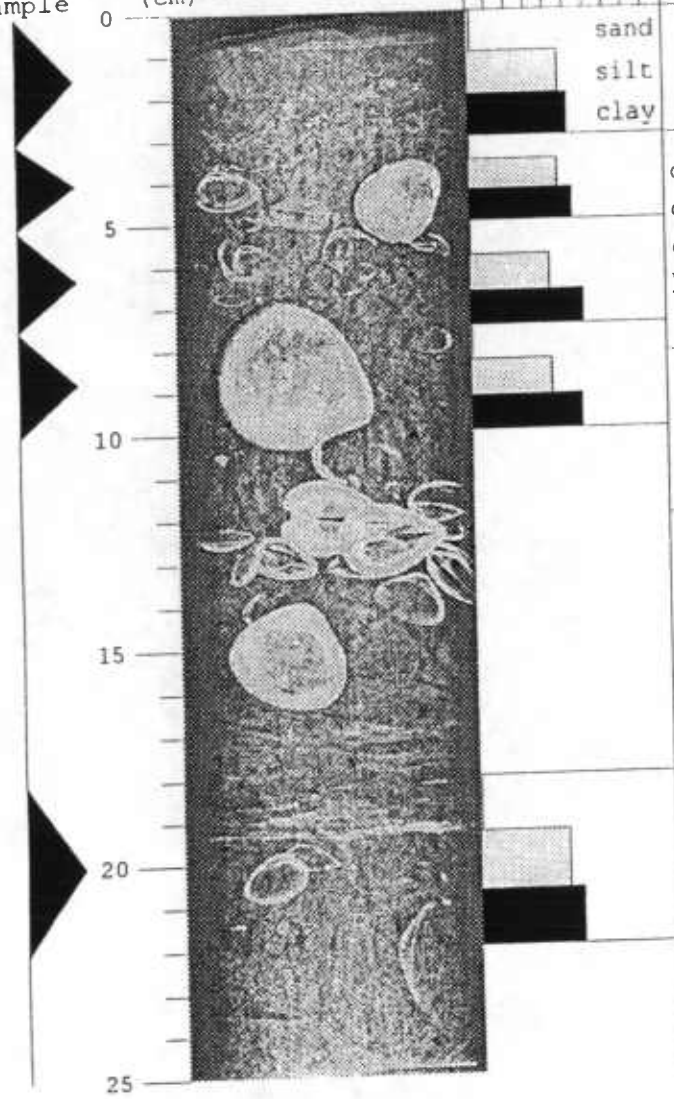


color	texture	comments
olive gray (5 Y 4/1) and dark gray (N3) mottling; pattern different than 15-30 cm interval; vertical streaking	soft, lumpy, slightly gritty mud	3 cm of compaction at time of extrusion firmer with depth to dark greenish gray layer - latter is softer, creamier, smoother to slice
	soft, lumpy mud	top ~2.5 cm slumped upon extrusion 0-2.5 cm -- Rangia cuneata, disarticulated shell half; 2 cm - worn ("old") - hole in it; no periostracum on oldest part of shell
	soft, lumpy, slightly gritty mud	2.5-~5 cm -- broken oyster shell half, 4 x 3 cm; disarticulated halves of Macoma, 2 cm, same individual; R. cuneata shell halves, 1.5 cm long and 2 cm long; another broken oyster shell fragment, ~1.5 cm sq.
	see comments	7.5-10 cm -- soft, creamier, slightly firmer, smoother (less lumpy) mud, very slightly gritty ~ 10 cm -- Macoma, disarticulated halves - same individual; ~2 cm long
mottled olive gray (5 Y 4/1) and dark gray (N3), approximately equally distributed, vermiform	see comments	10-32 cm -- very lumpy, very slightly gritty, mud - firmer than above, but not stiff; increasingly stiff, but almost imperceptibly, with depth

HART-MILLER ISLAND - 14th Year
Core BC4 April 27, 1995

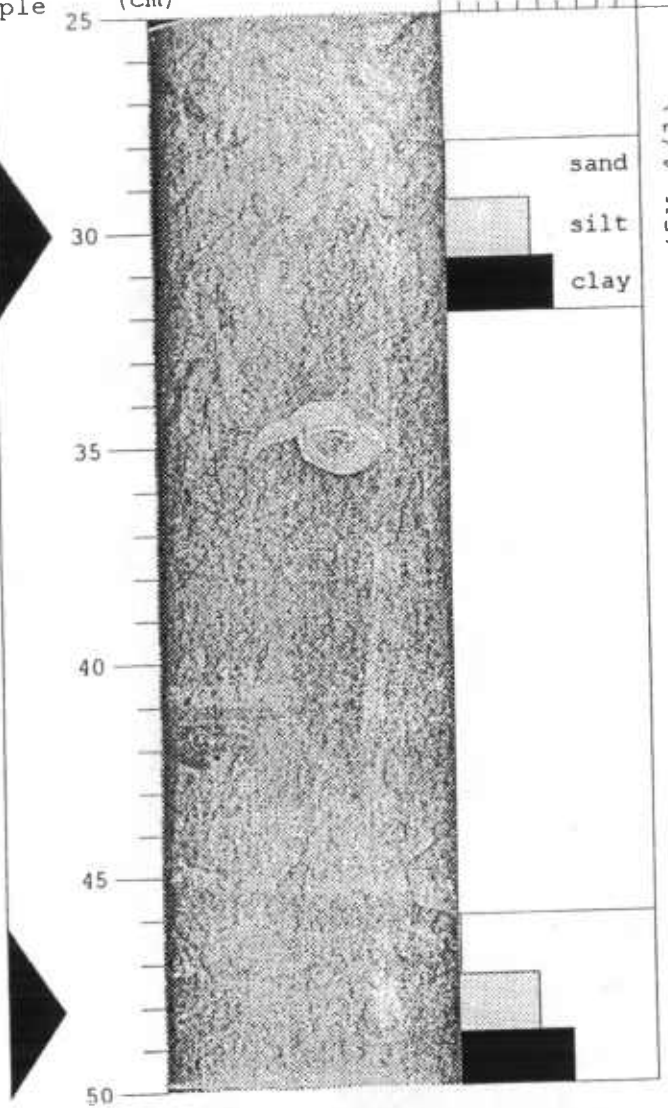


HART-MILLER ISLAND - 14th Year
Core BC5 April 27, 1995



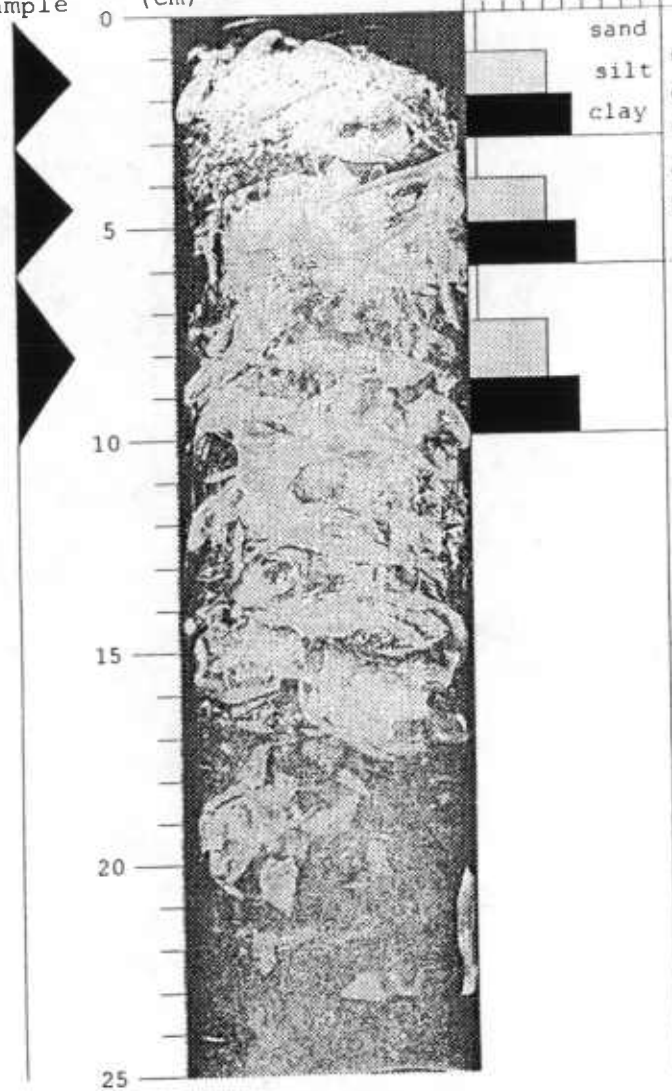
color	texture	comments
		core liners joined at 3 cm below sediment/water interface; cut off top 3 cm and bagged before core extruded, photographed, described
dark gray to grayish black (N2.5)	soft, smooth mud	top few mm dark yellowish with brown (10 YR 4/2)
		3-5 cm -- articulated Rangia cuneata, 2.5 cm long; disarticulated halves of same R. cuneata, 1.5 cm long
	soft, lumpy, slightly gritty mud	7.5-10 cm -- articulated R. cuneata, 4 cm long
dark gray to grayish black (N2.5) with black (N1) around large shell		~12-14 cm -- shell layer, mostly articulated R. cuneata; 2 sizes - 3 cm and 2 cm
olive gray (5 Y 4/1)		14-16 cm -- articulated R. cuneata - 3 cm long
	mud creamier, smoother, somewhat firmer	
mostly grayish black (N2)	slightly gritty, somewhat lumpy, slick mud	22 cm -- a few small R. cuneata, 1-1.5 cm long
		23 cm -- disarticulated Macoma half, 2.5 cm long
see next page	see next page	

HART-MILLER ISLAND - 14th Year
Core BC5 April 27, 1995



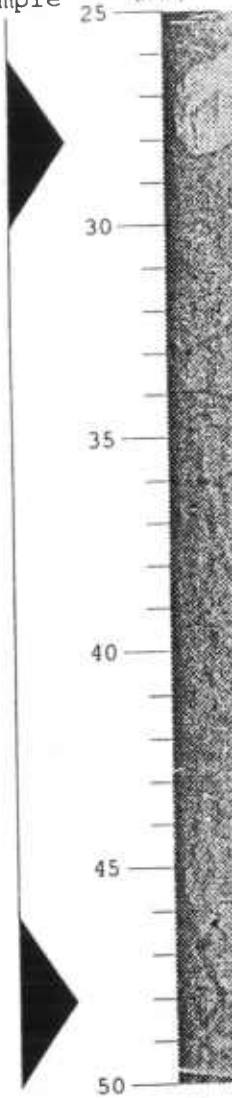
color	texture	comments
mottled dark gray (N3) and olive gray (5Y 4/1), varying from more olive gray above ~35 cm to more dark gray below	smooth, slightly gritty mud	27 cm -- slight increase in firmness
	stiff, lumpy, slightly gritty mud	34 cm -- oyster, 4.5 cm along longest axis; looks like ~3 smaller shells welded together, each ~2.5 cm long
		50-64 cm -- stiff, lumpy mud - cohesive
		below 60 cm -- mottled dark gray (N3) and dark yellowish brown (10 YR 4/2); mottling "larger scale" = pattern different from finer mottling in overlying interval
	stiff, lumpy mud	~64 cm -- increase in stiffness
		66-70 cm -- additional sediment sample
		76 cm -- bottom of extruded core

HART-MILLER ISLAND - 14th Year
Core BC6 April 27, 1995



color	texture	comments
dark gray to grayish black (N2.5)	slightly gritty mud	0--15 cm -- oyster shells galore (see x-ray) 0-3 cm -- disarticulated Rangia cuneata, 3.5 cm long; 2 halves, same individual
mostly olive gray (5 Y 4/1)		
dark greenish gray (5 GY 4/1); uniform color and texture	see comments	below 15 cm --smooth (no grit or lumps), slick, creamy, very cohesive mud - putty like; stuck together after slicing with osmotic knife - separated with plastic knives along cut (can see evidence in photo) occasional oyster shells scattered in core (not all intervals where single oyster shells were encountered are noted) increasing firmness with depth

HART-MILLER ISLAND - 14th Year
Core BC6 April 27, 1995



color: dark greenish gray (5 GY 4/1); uniform and color and texture

texture: see previous page

comments:

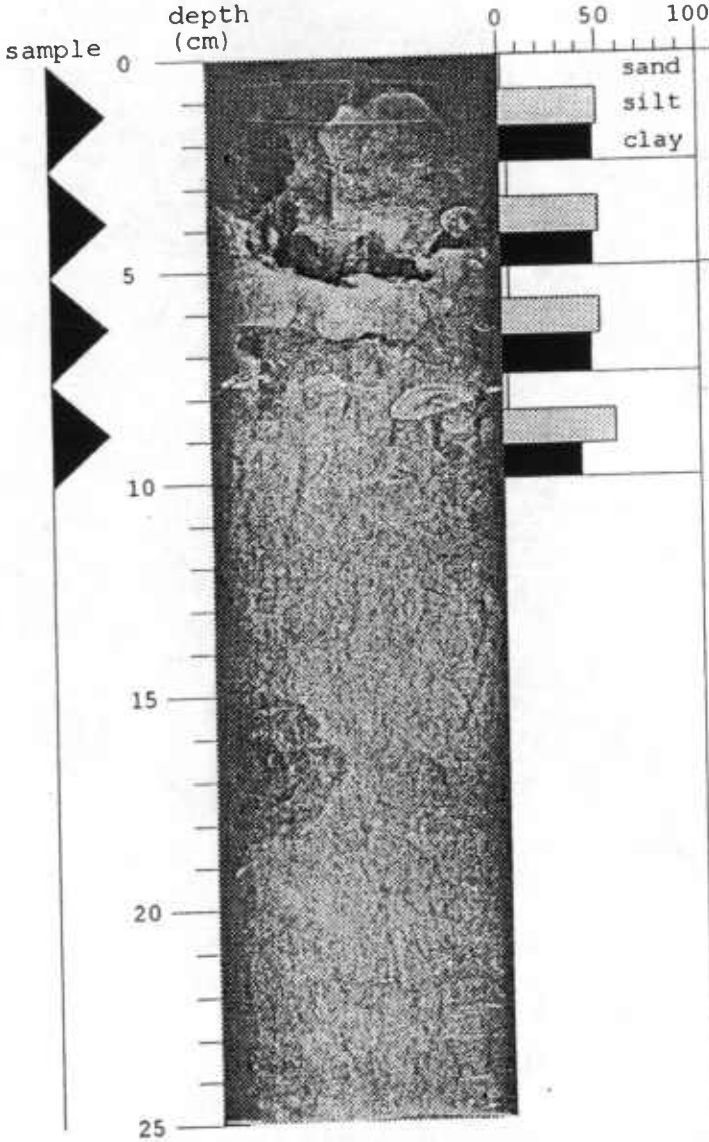
~30 cm -- change in bioturbation pattern

~38 cm -- slight increase in firmness

60 cm -- oyster shells

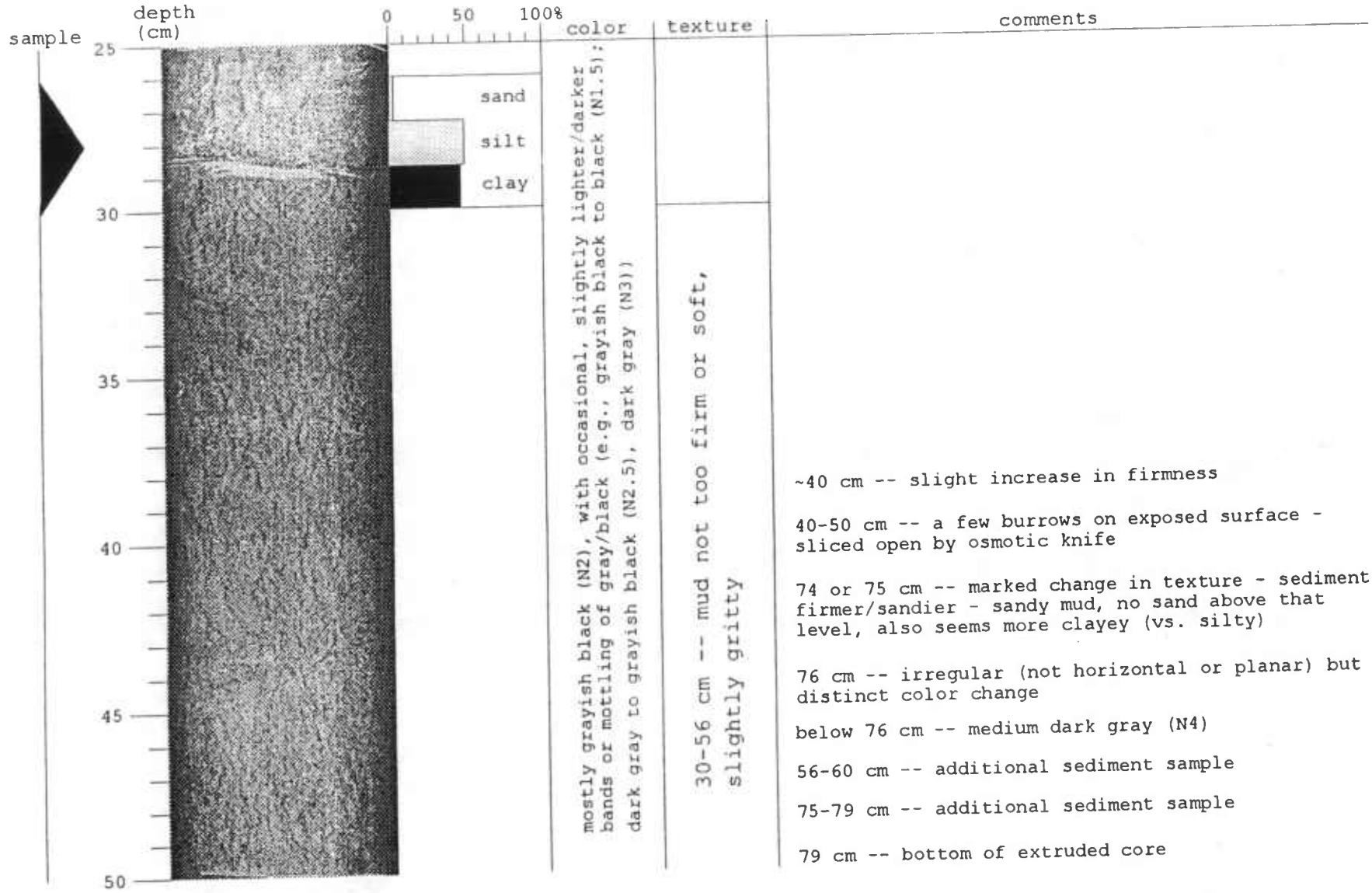
62 cm -- bottom of extruded core

HART-MILLER ISLAND - 14th Year
Core BC7 April 27, 1995



color	texture	comments
dark yellowish brown (10 YR 4/2)	soft, smooth mud (no grit or lumps)	top 5 cm may have dried out before extrusion, judging from the color of sediment (exposed to air) 2.5-5 cm -- few very small, broken shell fragments on order of ~5 mm along longest axis
dark gray (N3)		5-7.5 cm -- juvenile Rangia cuneata?, 1 cm long 7.5 10 cm -- R. cuneata half - 2 cm long core increasingly firm with depth
mostly grayish black (N2), with occasional, slightly lighter/darker bands or mottling of gray/black (e.g., grayish black to black (N1.5), dark gray to grayish black (N2.5), dark gray (N3))	soft, slightly gritty, very lumpy mud	heavily bioturbated below ~8 cm, few shells 15 cm -- increawse in firmness; texture change
	smoother, creanier, less lumpy, firmer mud	~16-20 cm -- mass of peaty material - obvious in xeroradiograph (left side); browner, drier than surrounding sediment, rough in texture, breaks up easily ~20 cm -- softer again, more watery feeling, mushier
	see comments	

HART-MILLER ISLAND - 14th Year
Core BC7 April 27, 1995



CHAPTER 2: BENTHIC COMMUNITY STUDIES (PROJECT III)

By

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INTRODUCTION

This report contains the data collected under the Year 14 Exterior Monitoring Program (Project III) for the Hart-Miller Island Confined Disposal Facility (HMI). A series of three cruises were conducted aboard the University of Maryland research vessels *R/V Orion* and *R/V Aquarius* on November 14, 1994, April 10,1995 and August 7, 1995.

All of the stations illustrated in Figure 3-1 (Chesapeake Biological Lab - Station Designations) were reached on each of the three cruises. The five stations with the HM prefix (HM 7, HM9, HM16, HM22, and HM26) are benthic infaunal reference sites and have been sampled since the inception of the project. The eight stations prefixed with S (S1-S8) and positioned around the perimeter of the island represent the nearfield experimental infaunal stations. Four additional infaunal stations (G5, G25, G84, and HM12) were added over the course of Year 9 in response to findings of the sedimentary group from MGS that elevated zinc (Zn) levels were present in the sediments. Station G84 was dropped after April 1994 because it no longer had elevated levels of Zn. This station was also dropped from sedimentary sampling by MGS. The four stations with the R-prefix (R2-R5) are epifaunal sampling sites and consist of various piers/pilings at four locations around the island and at a reference piling (station) located to the southwest of the facility.

METHODS AND MATERIALS

The benthic infaunal samples (HM, S, and G - Figure 3-1) were obtained with a 0.05 m^2 Ponar grab. Three replicate samples were obtained at each station. These samples were individually washed on a 0.7-mm mesh screen. Samples were preserved in a solution of 10% formalin/seawater with rose bengal stain. The samples were rinsed back at the laboratory on a 0.5-mm sieve and stored in 70% ethyl alcohol until the organisms could be picked, sorted and identified. Qualitative epibenthic samples (R – Figure 3-1) were obtained by scraping, with a specially designed aluminum piling sampler, from the concrete or wood pilings located at fishing piers around the perimeter of the island and within approximately 50 feet of the dike. The metal pole supporting a navigational beacon at the Pleasure Island Channel served as a Reference site (R5). Two samples were collected at each piling, one sample was taken at about 1m (3 ft.) below the surface and a second at 2-3 m (6-10 ft.) below the water surface.

Individual specimens in the samples were identified to the lowest taxonomic unit possible. The following sheets present the actual number of individuals recorded for each of the three replicate samples at the quantitative reference (HM7, HM9, HM16, HM22, and HM26) nearfield (S1-S8), and Zn enriched (HM12, G5, and G25) stations. Colonial forms and qualitative epibenthic samples (R2-R5) were classified to three densities, very abundant (1), abundant or common (2), and present (3). These qualitative designations are recorded on the data sheets for the four epibenthic stations.

Additional ecological data on the sheets include information regarding the time of sampling, depth recorded (from the ships fathometer), tidal state (E = ebb, F = flood, H = high slack, L = low slack) and weather conditions (Table 3-1). Both temperature and salinity were measured on the surface and the bottom with Hydrolab's Surveyor 3 system and are presented in Table 3-2 for the various stations on the different sampling dates. Table 3-2 also lists the State of Maryland designations for each of the sampling stations.

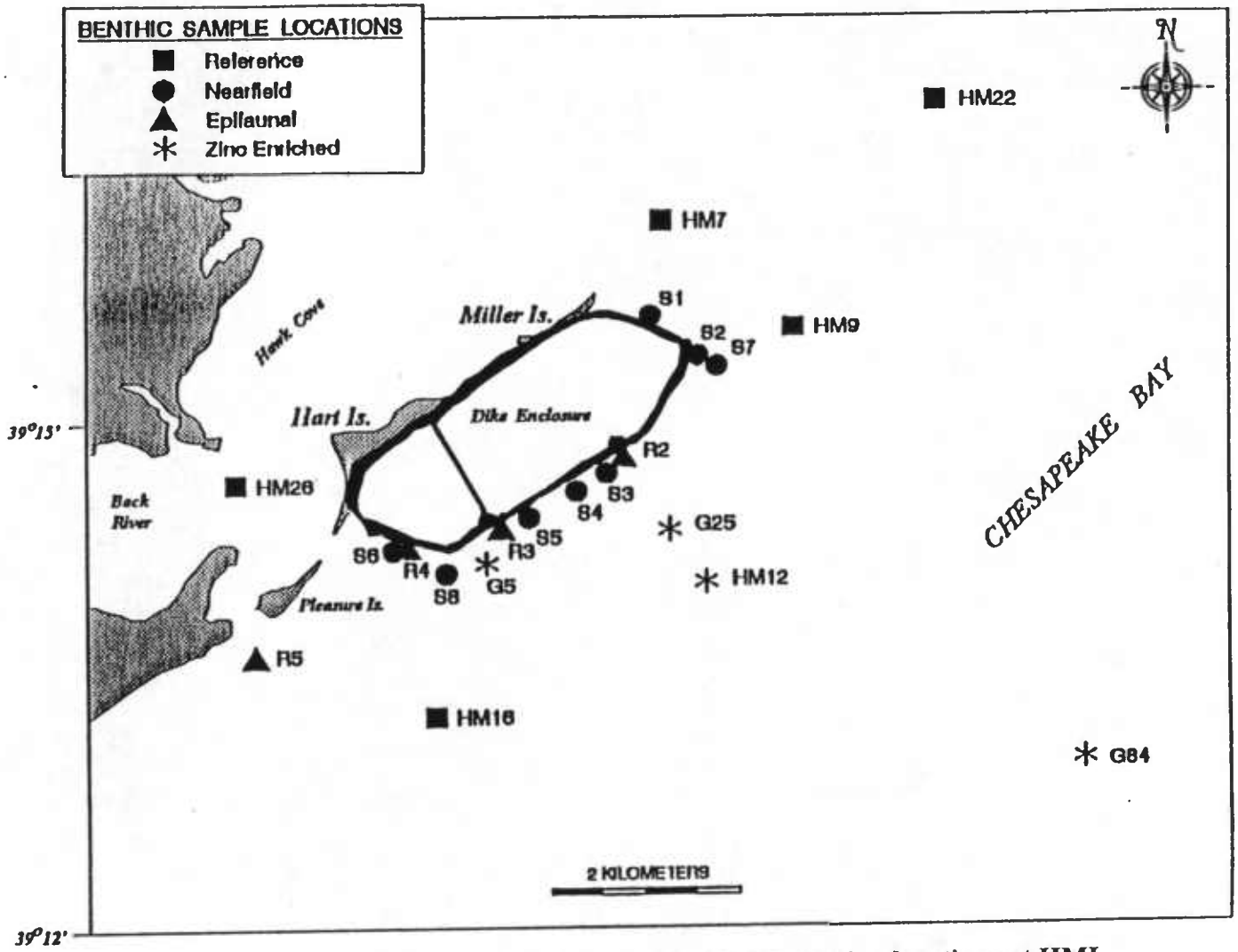

Figure 3-1: Benthic infaunal and epifaunal sampling station locations at HMI. University of Maryland, Chesapeake Biological Laboratory designations.

Table 3-1: Weather codes for benthic data sheets – This is a one digit numeric value describing weather conditions at the time of sample collection.

0 – clear (no clouds)

1 – partly cloudy

2 – continuous layers of clouds

3 – blowing snow, sandstorm or dust storm

4 – fog, haze, or thick dust

5 – drizzle

6 – rain

7 – snow, or rain and snow mixed

8 – showers

9 – thunderstorms

- blank, not recorded

Table 3-2: Salinity (in parts per thousand-ppt), temperature (°C), and depth (ft.) for the benthic sampling stations on the 3 collection dates during Year 14 Benthic studies at HMI.

CBL	STATE	NOVEMBER 94			APRIL 95			AUGUST 95		
STA. ID	STA. #	DEPTH	TEMP.	SAL.	DEPTH	TEMP.	SAL.	DEPTH	TEMP.	SAL.
R2	X1F4813	0	12.73	7.2	0	11.29	4.8	0	26.23	5.4
R2	X1F4813	**NR	NR	NR	11	11.13	5.1	NR	NR	NR
R3	X1F4514	NR	NR	NR	0	11.25	4.9	0	26.50	5.4
R3	X1F4514	NR	NR	NR	10	11.04	5.2	NR	NR	NR
R4	XIF4518	NR	NR	NR	0	11.17	5.0	NR	NR	NR
R4	XIF4518	NR	NR	NR	8	11.15	5.1	NR	NR	NR
R5	XIF3638	0	13.10	7.7	0	11.57	5.6	0	25.93	5.4
R5	XIF3638	NR	NR	NR	4	11.61	5.7	NR	NR	NR
S1	XIF5710	0	12.48	6.2	0	11.34	4.5	0	26.50	5.5
S1	XIF5710	6	12.21	6.5	7	11.35	4.5	6	26.51	5.6
S2	XIF5406	0	12.43	6.4	0	11.27	4.4	0	26.38	5.5
S2	XIF5406	13	12.11	7.5	13	11.14	4.8	12	26.52	5.6
S3	XIF4811	0	12.16	7.2	0	11.17	4.8	0	26.41	5.5
S3	XIF4811	15	11.98	7.4	16	NR	4.9	14	26.43	5.6
S4	XIF4715	0	12.46	7.3	0	11.00	4.8	0	26.44	5.6
S4	XIF4715	15	11.87	7.5	15	10.64	5.2	13	26.44	5.6
S5	XIF4420	0	12.17	7.6	0	10.80	4.9	0	26.33	5.4
S5	XIF4420	19	12.08	7.6	NR	NR	NR	18	26.06	5.5
S6	XIF4327	0	12.35	8.1	0	11.66	5.2	0	25.64	4.9
S6	XIF4327	10	12.02	8.0	11	10.88	5.7	9	25.14	5.2
S7	XIG5405	0	12.54	6.4	0	11.26	4.4	0	26.66	5.9
S7	XIG5405	12	12.14	7.0	NR	NR	NR	14	26.67	5.9
S8	XIF4124	0	12.32	7.5	0	10.66	5.1	0	26.35	5.4
S8	XIF4124	15	12.06	7.8	13	10.58	5.3	12	26.35	5.5
HM7	XIF6388	0	12.53	6.3	0	11.20	4.4	0	26.35	5.8
HM7	XIF6388	12	12.30	7.4	13	11.21	4.5	11	26.38	5.8
HM9	XIF5297	0	13.04	7.0	0	11.16	4.5	0	26.88	5.7
HM9	XIF5297	18	12.32	7.3	18	10.92	4.9	16	26.88	6.0
HM12	XIF5805	0	12.65	7.8	0	11.08	4.6	0	26.98	5.3
HM12	XIF5805	17	12.47	7.9	18	10.52	5.0	15	27.22	5.7
HM16	XIF3325	0	12.36	7.8	0	10.65	5.5	0	27.06	5.9
HM16	XIF3325	18	12.56	9.7	18	10.50	5.7	NR	NR	NR
HM22	XIG7689	0	13.61	6.5	0	11.70	4.2	0	26.52	5.4
HM22	XIG7689	13	12.42	6.9	13	11.53	4.3	12	26.54	5.7
HM26	XIF5145	0	12.87	7.9	0	13.18	5.0	0	25.79	5.1
HM26	XIF5145	19	12.20	8.0	18	11.27	5.3	16	25.79	5.1
G5	XIF4221	0	12.18	7.5	0	10.77	4.9	0	26.35	5.5
G5	XIF4221	15	12.06	7.6	NR	NR	NR	13	26.31	5.5
G25	XIF4405	0	12.38	7.2	0	11.06	4.4	0	26.82	5.9
G25	XIF4405	17	12.06	7.5	NR	NR	NR	15	26.85	6.0

**NR=NOT RECORDED

TABLE 3-3: HMI Dataset: Year 14—Nov 94, Apr 95, Aug 95

DATE	STATION	METHOD	Taxon	Replicate	Number of Individuals
94-11-14	S1	64	Micrura leidyi	1	5
94-11-14	S1	64	Micrura leidyi	2	9
94-11-14	S1	64	Micrura leidyi	3	0
94-11-14	S1	64	Scolecolepides viridis	1	13
94-11-14	S1	64	Scolecolepides viridis	2	4
94-11-14	S1	64	Scolecolepides viridis	3	3
94-11-14	S1	64	Streblospio benedicti	1	2
94-11-14	S1	64	Streblospio benedicti	2	1
94-11-14	S1	64	Streblospio benedicti	3	0
94-11-14	S1	64	Congeria leucophaeta	1	0
94-11-14	S1	64	Congeria leucophaeta	2	0
94-11-14	S1	64	Congeria leucophaeta	3	1
94-11-14	S1	64	Macoma balthica	1	0
94-11-14	S1	64	Macoma balthica	2	0
94-11-14	S1	64	Macoma balthica	3	2
94-11-14	S1	64	Rangia cuneata	1	11
94-11-14	S1	64	Rangia cuneata	2	7
94-11-14	S1	64	Rangia cuneata	3	4
94-11-14	S1	64	Cyathura polita	1	0
94-11-14	S1	64	Cyathura polita	2	1
94-11-14	S1	64	Cyathura polita	3	1
94-11-14	S1	64	Leptocheirus plumulosus	1	3
94-11-14	S1	64	Leptocheirus plumulosus	2	2
94-11-14	S1	64	Leptocheirus plumulosus	3	1
94-11-14	S1	64	Corophium lacustre	1	1
94-11-14	S1	64	Corophium lacustre	2	0
94-11-14	S1	64	Corophium lacustre	3	0
94-11-14	S1	64	Chiridotea almyra	1	1
94-11-14	S1	64	Chiridotea almyra	2	3
94-11-14	S1	64	Chiridotea almyra	3	0
94-11-14	S1	64	Monoculodes edwardsi	1	2
94-11-14	S1	64	Monoculodes edwardsi	2	1
94-11-14	S1	64	Monoculodes edwardsi	3	0
94-11-14	S2	64	Heteromastus filiformis	1	2
94-11-14	S2	64	Heteromastus filiformis	2	0

94-11-14	S2	64	Heteromastus filiformis	3	0
94-11-14	S2	64	Nereis succinea	1	0
94-11-14	S2	64	Nereis succinea	2	5
94-11-14	S2	64	Nereis succinea	3	20
94-11-14	S2	64	Polydora ligni	1	2
94-11-14	S2	64	Polydora ligni	2	150
94-11-14	S2	64	Polydora ligni	3	31
94-11-14	S2	64	Scolecolepides viridis	1	62
94-11-14	S2	64	Scolecolepides viridis	2	0
94-11-14	S2	64	Scolecolepides viridis	3	0
94-11-14	S2	64	Streblospio benedicti	1	34
94-11-14	S2	64	Streblospio benedicti	2	0
94-11-14	S2	64	Streblospio benedicti	3	60
94-11-14	S2	64	Tubificoides sp.	1	62
94-11-14	S2	64	Tubificoides sp.	2	0
94-11-14	S2	64	Tubificoides sp.	3	30
94-11-14	S2	64	Congeria leucophaeta	1	0
94-11-14	S2	64	Congeria leucophaeta	2	4
94-11-14	S2	64	Congeria leucophaeta	3	12
94-11-14	S2	64	Macoma balthica	1	6
94-11-14	S2	64	Macoma balthica	2	0
94-11-14	S2	64	Macoma balthica	3	0
94-11-14	S2	64	Rangia cuneata	1	13
94-11-14	S2	64	Rangia cuneata	2	0
94-11-14	S2	64	Rangia cuneata	3	2
94-11-14	S2	64	Balanus improvisus	1	0
94-11-14	S2	64	Balanus improvisus	2	22
94-11-14	S2	64	Balanus improvisus	3	49
94-11-14	S2	64	Balanus subalbidus	1	0
94-11-14	S2	64	Balanus subalbidus	2	0
94-11-14	S2	64	Balanus subalbidus	3	9
94-11-14	S2	64	Cyathura polita	1	13
94-11-14	S2	64	Cyathura polita	2	0
94-11-14	S2	64	Cyathura polita	3	1
94-11-14	S2	64	Cassidinidea lunifrons	1	0
94-11-14	S2	64	Cassidinidea lunifrons	2	1
94-11-14	S2	64	Cassidinidea lunifrons	3	0
94-11-14	S2	64	Leptocheirus plumulosus	1	11
94-11-14	S2	64	Leptocheirus plumulosus	2	0
94-11-14	S2	64	Leptocheirus	3	1

			plumulosus		
94-11-14	S2	64	Corophium lacustre	1	9
94-11-14	S2	64	Corophium lacustre	2	47
94-11-14	S2	64	Corophium lacustre	3	27
94-11-14	S2	64	Melita nitida	1	0
94-11-14	S2	64	Melita nitida	2	1
94-11-14	S2	64	Melita nitida	3	12
94-11-14	S2	64	Chiridotea almyra	1	0
94-11-14	S2	64	Chiridotea almyra	2	0
94-11-14	S2	64	Chiridotea almyra	3	3
94-11-14	S2	64	Rhithropanopeus harrisii	1	2
94-11-14	S2	64	Rhithropanopeus harrisii	2	1
94-11-14	S2	64	Rhithropanopeus harrisii	3	4
94-11-14	S2	64	Garvela franciscana	1	0
94-11-14	S2	64	Garvela franciscana	2	1
94-11-14	S2	64	Garvela franciscana	3	0
94-11-14	S2	64	Stylochus ellipticus	1	0
94-11-14	S2	64	Stylochus ellipticus	2	4
94-11-14	S2	64	Stylochus ellipticus	3	0
94-11-14	S2	64	Membranipora tenuis	1	12
94-11-14	S2	64	Membranipora tenuis	2	60
94-11-14	S2	64	Membranipora tenuis	3	95
94-11-14	S2	64	Victorella pavida	1	0
94-11-14	S2	64	Victorella pavida	2	3
94-11-14	S2	64	Victorella pavida	3	0
94-11-14	S3	64	Micrura leidyi	1	3
94-11-14	S3	64	Micrura leidyi	2	2
94-11-14	S3	64	Micrura leidyi	3	1
94-11-14	S3	64	Heteromastus filiformis	1	4
94-11-14	S3	64	Heteromastus filiformis	2	0
94-11-14	S3	64	Heteromastus filiformis	3	0
94-11-14	S3	64	Eteone heteropoda	1	1
94-11-14	S3	64	Eteone heteropoda	2	1
94-11-14	S3	64	Eteone heteropoda	3	2
94-11-14	S3	64	Scolecolepides viridis	1	27
94-11-14	S3	64	Scolecolepides viridis	2	27
94-11-14	S3	64	Scolecolepides viridis	3	42
94-11-14	S3	64	Streblospio benedicti	1	61
94-11-14	S3	64	Streblospio benedicti	2	5

94-11-14	S3	64	Streblospio benedicti	3	6
94-11-14	S3	64	Tubificoides sp.	1	162
94-11-14	S3	64	Tubificoides sp.	2	38
94-11-14	S3	64	Tubificoides sp.	3	69
94-11-14	S3	64	Macoma balthica	1	2
94-11-14	S3	64	Macoma balthica	2	0
94-11-14	S3	64	Macoma balthica	3	5
94-11-14	S3	64	Macoma mitchelli	1	3
94-11-14	S3	64	Macoma mitchelli	2	2
94-11-14	S3	64	Macoma mitchelli	3	3
94-11-14	S3	64	Rangia cuneata	1	4
94-11-14	S3	64	Rangia cuneata	2	6
94-11-14	S3	64	Rangia cuneata	3	5
94-11-14	S3	64	Cyathura polita	1	17
94-11-14	S3	64	Cyathura polita	2	20
94-11-14	S3	64	Cyathura polita	3	13
94-11-14	S3	64	Edotea triloba	1	0
94-11-14	S3	64	Edotea triloba	2	1
94-11-14	S3	64	Edotea triloba	3	0
94-11-14	S3	64	Leptocheirus plumulosus	1	91
94-11-14	S3	64	Leptocheirus plumulosus	2	47
94-11-14	S3	64	Leptocheirus plumulosus	3	59
94-11-14	S3	64	Corophium lacustre	1	3
94-11-14	S3	64	Corophium lacustre	2	0
94-11-14	S3	64	Corophium lacustre	3	2
94-11-14	S3	64	Melita nitida	1	5
94-11-14	S3	64	Melita nitida	2	1
94-11-14	S3	64	Melita nitida	3	3
94-11-14	S3	64	Chironomidae	1	1
94-11-14	S3	64	Chironomidae	2	9
94-11-14	S3	64	Chironomidae	3	1
94-11-14	S4	64	Micrura leidyi	1	1
94-11-14	S4	64	Micrura leidyi	2	1
94-11-14	S4	64	Micrura leidyi	3	2
94-11-14	S4	64	Heteromastus filiformis	1	0
94-11-14	S4	64	Heteromastus filiformis	2	3
94-11-14	S4	64	Heteromastus filiformis	3	1
94-11-14	S4	64	Scolecolepides viridis	1	20
94-11-14	S4	64	Scolecolepides viridis	2	54

94-11-14	S4	64	Scolecolepides viridis	3	39
94-11-14	S4	64	Streblospio benedicti	1	2
94-11-14	S4	64	Streblospio benedicti	2	15
94-11-14	S4	64	Streblospio benedicti	3	1
94-11-14	S4	64	Tubificoides sp.	1	18
94-11-14	S4	64	Tubificoides sp.	2	45
94-11-14	S4	64	Tubificoides sp.	3	6
94-11-14	S4	64	Macoma balthica	1	1
94-11-14	S4	64	Macoma balthica	2	2
94-11-14	S4	64	Macoma balthica	3	0
94-11-14	S4	64	Macoma mitchelli	1	0
94-11-14	S4	64	Macoma mitchelli	2	2
94-11-14	S4	64	Macoma mitchelli	3	0
94-11-14	S4	64	Rangia cuneata	1	1
94-11-14	S4	64	Rangia cuneata	2	2
94-11-14	S4	64	Rangia cuneata	3	0
94-11-14	S4	64	Cyathura polita	1	15
94-11-14	S4	64	Cyathura polita	2	22
94-11-14	S4	64	Cyathura polita	3	12
94-11-14	S4	64	Leptocheirus plumulosus	1	60
94-11-14	S4	64	Leptocheirus plumulosus	2	86
94-11-14	S4	64	Leptocheirus plumulosus	3	73
94-11-14	S4	64	Melita nitida	1	0
94-11-14	S4	64	Melita nitida	2	0
94-11-14	S4	64	Melita nitida	3	2
94-11-14	S4	64	Chironomidae	1	1
94-11-14	S4	64	Chironomidae	2	0
94-11-14	S4	64	Chironomidae	3	0
94-11-14	S4	64	Membranipora tenuis	1	3
94-11-14	S4	64	Membranipora tenuis	2	9
94-11-14	S4	64	Membranipora tenuis	3	20
94-11-14	S5	64	Micrura leidyi	1	3
94-11-14	S5	64	Micrura leidyi	2	1
94-11-14	S5	64	Micrura leidyi	3	2
94-11-14	S5	64	Nereis succinea	1	0
94-11-14	S5	64	Nereis succinea	2	0
94-11-14	S5	64	Nereis succinea	3	1
94-11-14	S5	64	Polydora ligni	1	0
94-11-14	S5	64	Polydora ligni	2	2

94-11-14	S5	64	Polydora ligni	3	4
94-11-14	S5	64	Scolecolepides viridis	1	0
94-11-14	S5	64	Scolecolepides viridis	2	3
94-11-14	S5	64	Scolecolepides viridis	3	1
94-11-14	S5	64	Streblospio benedicti	1	1
94-11-14	S5	64	Streblospio benedicti	2	34
94-11-14	S5	64	Streblospio benedicti	3	4
94-11-14	S5	64	Tubificoides sp.	1	78
94-11-14	S5	64	Tubificoides sp.	2	159
94-11-14	S5	64	Tubificoides sp.	3	44
94-11-14	S5	64	Congeria leucophaeta	1	0
94-11-14	S5	64	Congeria leucophaeta	2	0
94-11-14	S5	64	Congeria leucophaeta	3	3
94-11-14	S5	64	Macoma balthica	1	8
94-11-14	S5	64	Macoma balthica	2	0
94-11-14	S5	64	Macoma balthica	3	0
94-11-14	S5	64	Macoma mitchelli	1	2
94-11-14	S5	64	Macoma mitchelli	2	3
94-11-14	S5	64	Macoma mitchelli	3	1
94-11-14	S5	64	Rangia cuneata	1	1
94-11-14	S5	64	Rangia cuneata	2	0
94-11-14	S5	64	Rangia cuneata	3	8
94-11-14	S5	64	Cyathura polita	1	12
94-11-14	S5	64	Cyathura polita	2	22
94-11-14	S5	64	Cyathura polita	3	7
94-11-14	S5	64	Edotea triloba	1	1
94-11-14	S5	64	Edotea triloba	2	1
94-11-14	S5	64	Edotea triloba	3	0
94-11-14	S5	64	Leptocheirus plumulosus	1	67
94-11-14	S5	64	Leptocheirus plumulosus	2	202
94-11-14	S5	64	Leptocheirus plumulosus	3	84
94-11-14	S5	64	Corophium lacustre	1	0
94-11-14	S5	64	Corophium lacustre	2	5
94-11-14	S5	64	Corophium lacustre	3	28
94-11-14	S5	64	Gammarus tigrinus	1	0
94-11-14	S5	64	Gammarus tigrinus	2	0
94-11-14	S5	64	Gammarus tigrinus	3	1
94-11-14	S5	64	Melita nitida	1	2
94-11-14	S5	64	Melita nitida	2	25

94-11-14	S5	64	Melita nitida	3	14
94-11-14	S5	64	Monoculodes edwardsi	1	0
94-11-14	S5	64	Monoculodes edwardsi	2	1
94-11-14	S5	64	Monoculodes edwardsi	3	1
94-11-14	S5	64	Chironomidae	1	9
94-11-14	S5	64	Chironomidae	2	17
94-11-14	S5	64	Chironomidae	3	5
94-11-14	S5	64	Rhithropanopeus harrisii	1	0
94-11-14	S5	64	Rhithropanopeus harrisii	2	0
94-11-14	S5	64	Rhithropanopeus harrisii	3	1
94-11-14	S5	64	Membranipora tenuis	1	1
94-11-14	S5	64	Membranipora tenuis	2	1
94-11-14	S5	64	Membranipora tenuis	3	0
94-11-14	S6	64	Micrura leidyi	1	0
94-11-14	S6	64	Micrura leidyi	2	0
94-11-14	S6	64	Micrura leidyi	3	1
94-11-14	S6	64	Heteromastus filiformis	1	4
94-11-14	S6	64	Heteromastus filiformis	2	6
94-11-14	S6	64	Heteromastus filiformis	3	4
94-11-14	S6	64	Nereis succinea	1	0
94-11-14	S6	64	Nereis succinea	2	0
94-11-14	S6	64	Nereis succinea	3	2
94-11-14	S6	64	Eteone heteropoda	1	1
94-11-14	S6	64	Eteone heteropoda	2	1
94-11-14	S6	64	Eteone heteropoda	3	1
94-11-14	S6	64	Polydora ligni	1	0
94-11-14	S6	64	Polydora ligni	2	0
94-11-14	S6	64	Polydora ligni	3	4
94-11-14	S6	64	Scolecolepides viridis	1	8
94-11-14	S6	64	Scolecolepides viridis	2	15
94-11-14	S6	64	Scolecolepides viridis	3	13
94-11-14	S6	64	Streblospio benedicti	1	14
94-11-14	S6	64	Streblospio benedicti	2	33
94-11-14	S6	64	Streblospio benedicti	3	37
94-11-14	S6	64	Tubificoides sp.	1	35
94-11-14	S6	64	Tubificoides sp.	2	22
94-11-14	S6	64	Tubificoides sp.	3	74
94-11-14	S6	64	Congeria leucophaeta	1	0
94-11-14	S6	64	Congeria leucophaeta	2	0

94-11-14	S6	64	Congeria leucophaeta	3	1
94-11-14	S6	64	Macoma balthica	1	12
94-11-14	S6	64	Macoma balthica	2	8
94-11-14	S6	64	Macoma balthica	3	8
94-11-14	S6	64	Macoma mitchelli	1	0
94-11-14	S6	64	Macoma mitchelli	2	6
94-11-14	S6	64	Macoma mitchelli	3	5
94-11-14	S6	64	Rangia cuneata	1	15
94-11-14	S6	64	Rangia cuneata	2	14
94-11-14	S6	64	Rangia cuneata	3	13
94-11-14	S6	64	Cyathura polita	1	5
94-11-14	S6	64	Cyathura polita	2	8
94-11-14	S6	64	Cyathura polita	3	5
94-11-14	S6	64	Edotea triloba	1	4
94-11-14	S6	64	Edotea triloba	2	8
94-11-14	S6	64	Edotea triloba	3	9
94-11-14	S6	64	Leptocheirus plumulosus	1	26
94-11-14	S6	64	Leptocheirus plumulosus	2	17
94-11-14	S6	64	Leptocheirus plumulosus	3	12
94-11-14	S6	64	Corophium lacustre	1	2
94-11-14	S6	64	Corophium lacustre	2	3
94-11-14	S6	64	Corophium lacustre	3	5
94-11-14	S6	64	Membranipora tenuis	1	2
94-11-14	S6	64	Membranipora tenuis	2	0
94-11-14	S6	64	Membranipora tenuis	3	3
94-11-14	S7	64	Nereis succinea	1	6
94-11-14	S7	64	Nereis succinea	2	1
94-11-14	S7	64	Nereis succinea	3	0
94-11-14	S7	64	Polydora ligni	1	7
94-11-14	S7	64	Polydora ligni	2	3
94-11-14	S7	64	Polydora ligni	3	13
94-11-14	S7	64	Scolecolepides viridis	1	5
94-11-14	S7	64	Scolecolepides viridis	2	6
94-11-14	S7	64	Scolecolepides viridis	3	11
94-11-14	S7	64	Streblospio benedicti	1	8
94-11-14	S7	64	Streblospio benedicti	2	18
94-11-14	S7	64	Streblospio benedicti	3	8
94-11-14	S7	64	Tubificoides sp.	1	15
94-11-14	S7	64	Tubificoides sp.	2	12

94-11-14	S7	64	Tubificoides sp.	3	14
94-11-14	S7	64	Congeria leucophaeta	1	3
94-11-14	S7	64	Congeria leucophaeta	2	2
94-11-14	S7	64	Congeria leucophaeta	3	6
94-11-14	S7	64	Macoma mitchelli	1	1
94-11-14	S7	64	Macoma mitchelli	2	0
94-11-14	S7	64	Macoma mitchelli	3	0
94-11-14	S7	64	Rangia cuneata	1	2
94-11-14	S7	64	Rangia cuneata	2	0
94-11-14	S7	64	Rangia cuneata	3	0
94-11-14	S7	64	Mya arenaria	1	1
94-11-14	S7	64	Mya arenaria	2	0
94-11-14	S7	64	Mya arenaria	3	0
94-11-14	S7	64	Balanus improvisus	1	8
94-11-14	S7	64	Balanus improvisus	2	0
94-11-14	S7	64	Balanus improvisus	3	6
94-11-14	S7	64	Balanus subalbidus	1	2
94-11-14	S7	64	Balanus subalbidus	2	0
94-11-14	S7	64	Balanus subalbidus	3	0
94-11-14	S7	64	Cyathura polita	1	2
94-11-14	S7	64	Cyathura polita	2	0
94-11-14	S7	64	Cyathura polita	3	1
94-11-14	S7	64	Cassidinidea lunifrons	1	0
94-11-14	S7	64	Cassidinidea lunifrons	2	0
94-11-14	S7	64	Cassidinidea lunifrons	3	1
94-11-14	S7	64	Corophium lacustre	1	8
94-11-14	S7	64	Corophium lacustre	2	37
94-11-14	S7	64	Corophium lacustre	3	20
94-11-14	S7	64	Gammarus tigrinus	1	0
94-11-14	S7	64	Gammarus tigrinus	2	1
94-11-14	S7	64	Gammarus tigrinus	3	0
94-11-14	S7	64	Melita nitida	1	2
94-11-14	S7	64	Melita nitida	2	0
94-11-14	S7	64	Melita nitida	3	0
94-11-14	S7	64	Chiridotea almyra	1	2
94-11-14	S7	64	Chiridotea almyra	2	1
94-11-14	S7	64	Chiridotea almyra	3	0
94-11-14	S7	64	Rhithropanopeus harrisii	1	0
94-11-14	S7	64	Rhithropanopeus harrisii	2	1
94-11-14	S7	64	Rhithropanopeus	3	2

			harrisii		
94-11-14	S7	64	Membranipora tenuis	1	51
94-11-14	S7	64	Membranipora tenuis	2	71
94-11-14	S7	64	Membranipora tenuis	3	35
94-11-14	S8	64	Micrura leidyi	1	3
94-11-14	S8	64	Micrura leidyi	2	2
94-11-14	S8	64	Micrura leidyi	3	2
94-11-14	S8	64	Heteromastus filiformis	1	3
94-11-14	S8	64	Heteromastus filiformis	2	0
94-11-14	S8	64	Heteromastus filiformis	3	0
94-11-14	S8	64	Nereis succinea	1	0
94-11-14	S8	64	Nereis succinea	2	1
94-11-14	S8	64	Nereis succinea	3	0
94-11-14	S8	64	Scolecolepides viridis	1	41
94-11-14	S8	64	Scolecolepides viridis	2	35
94-11-14	S8	64	Scolecolepides viridis	3	27
94-11-14	S8	64	Streblospio benedicti	1	58
94-11-14	S8	64	Streblospio benedicti	2	81
94-11-14	S8	64	Streblospio benedicti	3	7
94-11-14	S8	64	Tubificoides sp.	1	284
94-11-14	S8	64	Tubificoides sp.	2	313
94-11-14	S8	64	Tubificoides sp.	3	56
94-11-14	S8	64	Macoma balthica	1	1
94-11-14	S8	64	Macoma balthica	2	4
94-11-14	S8	64	Macoma balthica	3	2
94-11-14	S8	64	Macoma mitchelli	1	3
94-11-14	S8	64	Macoma mitchelli	2	5
94-11-14	S8	64	Macoma mitchelli	3	5
94-11-14	S8	64	Rangia cuneata	1	4
94-11-14	S8	64	Rangia cuneata	2	7
94-11-14	S8	64	Rangia cuneata	3	6
94-11-14	S8	64	Cyathura polita	1	18
94-11-14	S8	64	Cyathura polita	2	16
94-11-14	S8	64	Cyathura polita	3	20
94-11-14	S8	64	Leptocheirus plumulosus	1	281
94-11-14	S8	64	Leptocheirus plumulosus	2	387
94-11-14	S8	64	Leptocheirus plumulosus	3	265
94-11-14	S8	64	Corophium lacustre	1	1
94-11-14	S8	64	Corophium lacustre	2	3

94-11-14	S8	64	Corophium lacustre	3	0
94-11-14	S8	64	Melita nitida	1	16
94-11-14	S8	64	Melita nitida	2	28
94-11-14	S8	64	Melita nitida	3	19
94-11-14	S8	64	Chiridotea almyra	1	1
94-11-14	S8	64	Chiridotea almyra	2	0
94-11-14	S8	64	Chiridotea almyra	3	0
94-11-14	S8	64	Chironomidae	1	5
94-11-14	S8	64	Chironomidae	2	6
94-11-14	S8	64	Chironomidae	3	5
94-11-14	HM7	64	Heteromastus filiformis	1	0
94-11-14	HM7	64	Heteromastus filiformis	2	0
94-11-14	HM7	64	Heteromastus filiformis	3	1
94-11-14	HM7	64	Eteone heteropoda	1	1
94-11-14	HM7	64	Eteone heteropoda	2	0
94-11-14	HM7	64	Eteone heteropoda	3	0
94-11-14	HM7	64	Scolecolepides viridis	1	11
94-11-14	HM7	64	Scolecolepides viridis	2	18
94-11-14	HM7	64	Scolecolepides viridis	3	20
94-11-14	HM7	64	Streblospio benedicti	1	12
94-11-14	HM7	64	Streblospio benedicti	2	16
94-11-14	HM7	64	Streblospio benedicti	3	15
94-11-14	HM7	64	Tubificoides sp.	1	34
94-11-14	HM7	64	Tubificoides sp.	2	22
94-11-14	HM7	64	Tubificoides sp.	3	25
94-11-14	HM7	64	Macoma balthica	1	2
94-11-14	HM7	64	Macoma balthica	2	0
94-11-14	HM7	64	Macoma balthica	3	0
94-11-14	HM7	64	Macoma mitchelli	1	1
94-11-14	HM7	64	Macoma mitchelli	2	0
94-11-14	HM7	64	Macoma mitchelli	3	1
94-11-14	HM7	64	Rangia cuneata	1	1
94-11-14	HM7	64	Rangia cuneata	2	11
94-11-14	HM7	64	Rangia cuneata	3	5
94-11-14	HM7	64	Cyathura polita	1	5
94-11-14	HM7	64	Cyathura polita	2	13
94-11-14	HM7	64	Cyathura polita	3	12
94-11-14	HM7	64	Leptocheirus plumulosus	1	161
94-11-14	HM7	64	Leptocheirus plumulosus	2	135
94-11-14	HM7	64	Leptocheirus	3	163

			plumulosus		
94-11-14	HM7	64	Melita nitida	1	7
94-11-14	HM7	64	Melita nitida	2	11
94-11-14	HM7	64	Melita nitida	3	11
94-11-14	HM7	64	Monoculodes edwardsi	1	0
94-11-14	HM7	64	Monoculodes edwardsi	2	1
94-11-14	HM7	64	Monoculodes edwardsi	3	0
94-11-14	HM7	64	Chironomidae	1	13
94-11-14	HM7	64	Chironomidae	2	5
94-11-14	HM7	64	Chironomidae	3	5
94-11-14	HM9	64	Micrura leidyi	1	2
94-11-14	HM9	64	Micrura leidyi	2	1
94-11-14	HM9	64	Micrura leidyi	3	0
94-11-14	HM9	64	Heteromastus filiformis	1	12
94-11-14	HM9	64	Heteromastus filiformis	2	6
94-11-14	HM9	64	Heteromastus filiformis	3	1
94-11-14	HM9	64	Nereis succinea	1	1
94-11-14	HM9	64	Nereis succinea	2	0
94-11-14	HM9	64	Nereis succinea	3	5
94-11-14	HM9	64	Eteone heteropoda	1	0
94-11-14	HM9	64	Eteone heteropoda	2	1
94-11-14	HM9	64	Eteone heteropoda	3	0
94-11-14	HM9	64	Polydora ligni	1	5
94-11-14	HM9	64	Polydora ligni	2	2
94-11-14	HM9	64	Polydora ligni	3	11
94-11-14	HM9	64	Scolecolepides viridis	1	24
94-11-14	HM9	64	Scolecolepides viridis	2	16
94-11-14	HM9	64	Scolecolepides viridis	3	6
94-11-14	HM9	64	Streblospio benedicti	1	45
94-11-14	HM9	64	Streblospio benedicti	2	19
94-11-14	HM9	64	Streblospio benedicti	3	13
94-11-14	HM9	64	Tubificoides sp.	1	61
94-11-14	HM9	64	Tubificoides sp.	2	18
94-11-14	HM9	64	Tubificoides sp.	3	24
94-11-14	HM9	64	Congeria leucophaeta	1	0
94-11-14	HM9	64	Congeria leucophaeta	2	0
94-11-14	HM9	64	Congeria leucophaeta	3	2
94-11-14	HM9	64	Macoma balthica	1	2
94-11-14	HM9	64	Macoma balthica	2	0
94-11-14	HM9	64	Macoma balthica	3	4
94-11-14	HM9	64	Rangia cuneata	1	10
94-11-14	HM9	64	Rangia cuneata	2	2

94-11-14	HM9	64	Rangia cuneata	3	9
94-11-14	HM9	64	Balanus improvisus	1	0
94-11-14	HM9	64	Balanus improvisus	2	0
94-11-14	HM9	64	Balanus improvisus	3	5
94-11-14	HM9	64	Cyathura polita	1	8
94-11-14	HM9	64	Cyathura polita	2	5
94-11-14	HM9	64	Cyathura polita	3	4
94-11-14	HM9	64	Leptocheirus plumulosus	1	69
94-11-14	HM9	64	Leptocheirus plumulosus	2	11
94-11-14	HM9	64	Leptocheirus plumulosus	3	7
94-11-14	HM9	64	Corophium lacustre	1	13
94-11-14	HM9	64	Corophium lacustre	2	4
94-11-14	HM9	64	Corophium lacustre	3	2
94-11-14	HM9	64	Melita nitida	1	2
94-11-14	HM9	64	Melita nitida	2	0
94-11-14	HM9	64	Melita nitida	3	0
94-11-14	HM9	64	Rhithropanopeus harrisii	1	0
94-11-14	HM9	64	Rhithropanopeus harrisii	2	0
94-11-14	HM9	64	Rhithropanopeus harrisii	3	4
94-11-14	HM9	64	Membranipora tenuis	1	19
94-11-14	HM9	64	Membranipora tenuis	2	12
94-11-14	HM9	64	Membranipora tenuis	3	22
94-11-14	HM12	64	Micrura leidyi	1	3
94-11-14	HM12	64	Micrura leidyi	2	1
94-11-14	HM12	64	Micrura leidyi	3	4
94-11-14	HM12	64	Heteromastus filiformis	1	10
94-11-14	HM12	64	Heteromastus filiformis	2	7
94-11-14	HM12	64	Heteromastus filiformis	3	2
94-11-14	HM12	64	Nereis succinea	1	0
94-11-14	HM12	64	Nereis succinea	2	1
94-11-14	HM12	64	Nereis succinea	3	0
94-11-14	HM12	64	Eteone heteropoda	1	0
94-11-14	HM12	64	Eteone heteropoda	2	1
94-11-14	HM12	64	Eteone heteropoda	3	3
94-11-14	HM12	64	Polydora ligni	1	0
94-11-14	HM12	64	Polydora ligni	2	3
94-11-14	HM12	64	Polydora ligni	3	0

94-11-14	HM12	64	Scolecolepides viridis	1	23
94-11-14	HM12	64	Scolecolepides viridis	2	5
94-11-14	HM12	64	Scolecolepides viridis	3	12
94-11-14	HM12	64	Streblospio benedicti	1	17
94-11-14	HM12	64	Streblospio benedicti	2	13
94-11-14	HM12	64	Streblospio benedicti	3	14
94-11-14	HM12	64	Tubificoides sp.	1	19
94-11-14	HM12	64	Tubificoides sp.	2	32
94-11-14	HM12	64	Tubificoides sp.	3	23
94-11-14	HM12	64	Congeria leucophaeta	1	1
94-11-14	HM12	64	Congeria leucophaeta	2	0
94-11-14	HM12	64	Congeria leucophaeta	3	0
94-11-14	HM12	64	Macoma balthica	1	2
94-11-14	HM12	64	Macoma balthica	2	5
94-11-14	HM12	64	Macoma balthica	3	3
94-11-14	HM12	64	Macoma mitchelli	1	3
94-11-14	HM12	64	Macoma mitchelli	2	1
94-11-14	HM12	64	Macoma mitchelli	3	2
94-11-14	HM12	64	Rangia cuneata	1	5
94-11-14	HM12	64	Rangia cuneata	2	9
94-11-14	HM12	64	Rangia cuneata	3	3
94-11-14	HM12	64	Balanus improvisus	1	0
94-11-14	HM12	64	Balanus improvisus	2	1
94-11-14	HM12	64	Balanus improvisus	3	0
94-11-14	HM12	64	Cyathura polita	1	10
94-11-14	HM12	64	Cyathura polita	2	7
94-11-14	HM12	64	Cyathura polita	3	14
94-11-14	HM12	64	Leptocheirus plumulosus	1	54
94-11-14	HM12	64	Leptocheirus plumulosus	2	15
94-11-14	HM12	64	Leptocheirus plumulosus	3	66
94-11-14	HM12	64	Corophium lacustre	1	1
94-11-14	HM12	64	Corophium lacustre	2	3
94-11-14	HM12	64	Corophium lacustre	3	0
94-11-14	HM12	64	Melita nitida	1	0
94-11-14	HM12	64	Melita nitida	2	0
94-11-14	HM12	64	Melita nitida	3	4
94-11-14	HM12	64	Chironomidae	1	0
94-11-14	HM12	64	Chironomidae	2	0
94-11-14	HM12	64	Chironomidae	3	1

94-11-14	HM12	64	Membranipora tenuis	1	0
94-11-14	HM12	64	Membranipora tenuis	2	0
94-11-14	HM12	64	Membranipora tenuis	3	1
94-11-14	HM16	64	Micrura leidyi	1	1
94-11-14	HM16	64	Micrura leidyi	2	0
94-11-14	HM16	64	Micrura leidyi	3	0
94-11-14	HM16	64	Heteromastus filiformis	1	6
94-11-14	HM16	64	Heteromastus filiformis	2	0
94-11-14	HM16	64	Heteromastus filiformis	3	3
94-11-14	HM16	64	Nereis succinea	1	1
94-11-14	HM16	64	Nereis succinea	2	0
94-11-14	HM16	64	Nereis succinea	3	0
94-11-14	HM16	64	Scolecolepides viridis	1	14
94-11-14	HM16	64	Scolecolepides viridis	2	13
94-11-14	HM16	64	Scolecolepides viridis	3	1
94-11-14	HM16	64	Streblospio benedicti	1	9
94-11-14	HM16	64	Streblospio benedicti	2	1
94-11-14	HM16	64	Streblospio benedicti	3	6
94-11-14	HM16	64	Tubificoides sp.	1	55
94-11-14	HM16	64	Tubificoides sp.	2	29
94-11-14	HM16	64	Tubificoides sp.	3	27
94-11-14	HM16	64	Macoma balthica	1	2
94-11-14	HM16	64	Macoma balthica	2	0
94-11-14	HM16	64	Macoma balthica	3	1
94-11-14	HM16	64	Macoma mitchelli	1	3
94-11-14	HM16	64	Macoma mitchelli	2	3
94-11-14	HM16	64	Macoma mitchelli	3	2
94-11-14	HM16	64	Rangia cuneata	1	1
94-11-14	HM16	64	Rangia cuneata	2	2
94-11-14	HM16	64	Rangia cuneata	3	0
94-11-14	HM16	64	Cyathura polita	1	28
94-11-14	HM16	64	Cyathura polita	2	16
94-11-14	HM16	64	Cyathura polita	3	4
94-11-14	HM16	64	Leptocheirus plumulosus	1	222
94-11-14	HM16	64	Leptocheirus plumulosus	2	216
94-11-14	HM16	64	Leptocheirus plumulosus	3	119
94-11-14	HM16	64	Corophium lacustre	1	2
94-11-14	HM16	64	Corophium lacustre	2	0
94-11-14	HM16	64	Corophium lacustre	3	0

94-11-14	HM16	64	Melita nitida	1	10
94-11-14	HM16	64	Melita nitida	2	10
94-11-14	HM16	64	Melita nitida	3	4
94-11-14	HM16	64	Monoculodes edwardsi	1	1
94-11-14	HM16	64	Monoculodes edwardsi	2	0
94-11-14	HM16	64	Monoculodes edwardsi	3	0
94-11-14	HM16	64	Chironomidae	1	0
94-11-14	HM16	64	Chironomidae	2	1
94-11-14	HM16	64	Chironomidae	3	1
94-11-14	HM16	64	Membranipora tenuis	1	0
94-11-14	HM16	64	Membranipora tenuis	2	0
94-11-14	HM16	64	Membranipora tenuis	3	19
94-11-14	HM22	64	Micrura leidyi	1	1
94-11-14	HM22	64	Micrura leidyi	2	2
94-11-14	HM22	64	Micrura leidyi	3	1
94-11-14	HM22	64	Heteromastus filiformis	1	1
94-11-14	HM22	64	Heteromastus filiformis	2	0
94-11-14	HM22	64	Heteromastus filiformis	3	2
94-11-14	HM22	64	Polydora ligni	1	0
94-11-14	HM22	64	Polydora ligni	2	0
94-11-14	HM22	64	Polydora ligni	3	2
94-11-14	HM22	64	Scolecolepides viridis	1	31
94-11-14	HM22	64	Scolecolepides viridis	2	4
94-11-14	HM22	64	Scolecolepides viridis	3	13
94-11-14	HM22	64	Streblospio benedicti	1	4
94-11-14	HM22	64	Streblospio benedicti	2	4
94-11-14	HM22	64	Streblospio benedicti	3	4
94-11-14	HM22	64	Tubificoides sp.	1	52
94-11-14	HM22	64	Tubificoides sp.	2	27
94-11-14	HM22	64	Tubificoides sp.	3	14
94-11-14	HM22	64	Macoma balthica	1	0
94-11-14	HM22	64	Macoma balthica	2	0
94-11-14	HM22	64	Macoma balthica	3	1
94-11-14	HM22	64	Rangia cuneata	1	4
94-11-14	HM22	64	Rangia cuneata	2	6
94-11-14	HM22	64	Rangia cuneata	3	10
94-11-14	HM22	64	Cyathura polita	1	8
94-11-14	HM22	64	Cyathura polita	2	9
94-11-14	HM22	64	Cyathura polita	3	5
94-11-14	HM22	64	Leptocheirus plumulosus	1	42

94-11-14	HM22	64	Leptocheirus plumulosus	2	26
94-11-14	HM22	64	Leptocheirus plumulosus	3	15
94-11-14	HM22	64	Melita nitida	1	0
94-11-14	HM22	64	Melita nitida	2	1
94-11-14	HM22	64	Melita nitida	3	0
94-11-14	HM22	64	Chironomidae	1	1
94-11-14	HM22	64	Chironomidae	2	5
94-11-14	HM22	64	Chironomidae	3	4
94-11-14	HM26	64	Micrura leidyi	1	0
94-11-14	HM26	64	Micrura leidyi	2	1
94-11-14	HM26	64	Micrura leidyi	3	0
94-11-14	HM26	64	Heteromastus filiformis	1	3
94-11-14	HM26	64	Heteromastus filiformis	2	3
94-11-14	HM26	64	Heteromastus filiformis	3	4
94-11-14	HM26	64	Nereis succinea	1	0
94-11-14	HM26	64	Nereis succinea	2	1
94-11-14	HM26	64	Nereis succinea	3	0
94-11-14	HM26	64	Eteone heteropoda	1	4
94-11-14	HM26	64	Eteone heteropoda	2	1
94-11-14	HM26	64	Eteone heteropoda	3	1
94-11-14	HM26	64	Polydora ligni	1	1
94-11-14	HM26	64	Polydora ligni	2	0
94-11-14	HM26	64	Polydora ligni	3	0
94-11-14	HM26	64	Streblospio benedicti	1	28
94-11-14	HM26	64	Streblospio benedicti	2	29
94-11-14	HM26	64	Streblospio benedicti	3	52
94-11-14	HM26	64	Tubificoides sp.	1	608
94-11-14	HM26	64	Tubificoides sp.	2	380
94-11-14	HM26	64	Tubificoides sp.	3	354
94-11-14	HM26	64	Macoma balthica	1	5
94-11-14	HM26	64	Macoma balthica	2	2
94-11-14	HM26	64	Macoma balthica	3	1
94-11-14	HM26	64	Macoma mitchelli	1	1
94-11-14	HM26	64	Macoma mitchelli	2	3
94-11-14	HM26	64	Macoma mitchelli	3	2
94-11-14	HM26	64	Rangia cuneata	1	5
94-11-14	HM26	64	Rangia cuneata	2	11
94-11-14	HM26	64	Rangia cuneata	3	3
94-11-14	HM26	64	Cyathura polita	1	2
94-11-14	HM26	64	Cyathura polita	2	3

94-11-14	HM26	64	Cyathura polita	3	35
94-11-14	HM26	64	Leptocheirus plumulosus	1	86
94-11-14	HM26	64	Leptocheirus plumulosus	2	124
94-11-14	HM26	64	Leptocheirus plumulosus	3	145
94-11-14	HM26	64	Corophium lacustre	1	0
94-11-14	HM26	64	Corophium lacustre	2	2
94-11-14	HM26	64	Corophium lacustre	3	1
94-11-14	HM26	64	Melita nitida	1	4
94-11-14	HM26	64	Melita nitida	2	1
94-11-14	HM26	64	Melita nitida	3	3
94-11-14	HN26	64	Chironomidae	1	30
94-11-14	HN26	64	Chironomidae	2	23
94-11-14	HN26	64	Chironomidae	3	8
94-11-14	HN26	64	Membranipora tenuis	1	0
94-11-14	HN26	64	Membranipora tenuis	2	0
94-11-14	HN26	64	Membranipora tenuis	3	1
94-11-14	G5	64	Micrura leidyi	1	2
94-11-14	G5	64	Micrura leidyi	2	1
94-11-14	G5	64	Micrura leidyi	3	1
94-11-14	G5	64	Heteromastus filiformis	1	1
94-11-14	G5	64	Heteromastus filiformis	2	1
94-11-14	G5	64	Heteromastus filiformis	3	0
94-11-14	G5	64	Scolecolepides viridis	1	43
94-11-14	G5	64	Scolecolepides viridis	2	59
94-11-14	G5	64	Scolecolepides viridis	3	197
94-11-14	G5	64	Streblospio benedicti	1	1
94-11-14	G5	64	Streblospio benedicti	2	3
94-11-14	G5	64	Streblospio benedicti	3	0
94-11-14	G5	64	Tubificoides sp.	1	16
94-11-14	G5	64	Tubificoides sp.	2	0
94-11-14	G5	64	Tubificoides sp.	3	11
94-11-14	G5	64	Congeria leucophaeta	1	0
94-11-14	G5	64	Congeria leucophaeta	2	1
94-11-14	G5	64	Congeria leucophaeta	3	0
94-11-14	G5	64	Macoma balthica	1	4
94-11-14	G5	64	Macoma balthica	2	2
94-11-14	G5	64	Macoma balthica	3	0
94-11-14	G5	64	Macoma mitchelli	1	2
94-11-14	G5	64	Macoma mitchelli	2	3

94-11-14	G5	64	Macoma mitchelli	3	3
94-11-14	G5	64	Rangia cuneata	1	1
94-11-14	G5	64	Rangia cuneata	2	6
94-11-14	G5	64	Rangia cuneata	3	12
94-11-14	G5	64	Cyathura polita	1	13
94-11-14	G5	64	Cyathura polita	2	23
94-11-14	G5	64	Cyathura polita	3	20
94-11-14	G5	64	Edotea triloba	1	0
94-11-14	G5	64	Edotea triloba	2	2
94-11-14	G5	64	Edotea triloba	3	3
94-11-14	G5	64	Leptocheirus plumulosus	1	55
94-11-14	G5	64	Leptocheirus plumulosus	2	204
94-11-14	G5	64	Leptocheirus plumulosus	3	157
94-11-14	G5	64	Corophium lacustre	1	0
94-11-14	G5	64	Corophium lacustre	2	3
94-11-14	G5	64	Corophium lacustre	3	1
94-11-14	G5	64	Melita nitida	1	3
94-11-14	G5	64	Melita nitida	2	11
94-11-14	G5	64	Melita nitida	3	19
94-11-14	G5	64	Chiridotea almyra	1	1
94-11-14	G5	64	Chiridotea almyra	2	0
94-11-14	G5	64	Chiridotea almyra	3	0
94-11-14	G5	64	Chironomidae	1	1
94-11-14	G5	64	Chironomidae	2	8
94-11-14	G5	64	Chironomidae	3	3
94-11-14	G25	64	Micrura leidyi	1	2
94-11-14	G25	64	Micrura leidyi	2	1
94-11-14	G25	64	Micrura leidyi	3	2
94-11-14	G25	64	Heteromastus filiformis	1	2
94-11-14	G25	64	Heteromastus filiformis	2	1
94-11-14	G25	64	Heteromastus filiformis	3	1
94-11-14	G25	64	Nereis succinea	1	11
94-11-14	G25	64	Nereis succinea	2	1
94-11-14	G25	64	Nereis succinea	3	1
94-11-14	G25	64	Eteone heteropoda	1	0
94-11-14	G25	64	Eteone heteropoda	2	1
94-11-14	G25	64	Eteone heteropoda	3	0
94-11-14	G25	64	Polydora ligni	1	55
94-11-14	G25	64	Polydora ligni	2	2

94-11-14	G25	64	Polydora ligni	3	1
94-11-14	G25	64	Scolecolepides viridis	1	23
94-11-14	G25	64	Scolecolepides viridis	2	17
94-11-14	G25	64	Scolecolepides viridis	3	25
94-11-14	G25	64	Streblospio benedicti	1	5
94-11-14	G25	64	Streblospio benedicti	2	1
94-11-14	G25	64	Streblospio benedicti	3	2
94-11-14	G25	64	Tubificoides sp.	1	26
94-11-14	G25	64	Tubificoides sp.	2	13
94-11-14	G25	64	Tubificoides sp.	3	40
94-11-14	G25	64	Congeria leucophaeta	1	5
94-11-14	G25	64	Congeria leucophaeta	2	0
94-11-14	G25	64	Congeria leucophaeta	3	1
94-11-14	G25	64	Macoma balthica	1	0
94-11-14	G25	64	Macoma balthica	2	9
94-11-14	G25	64	Macoma balthica	3	5
94-11-14	G25	64	Macoma mitchelli	1	0
94-11-14	G25	64	Macoma mitchelli	2	3
94-11-14	G25	64	Macoma mitchelli	3	0
94-11-14	G25	64	Rangia cuneata	1	9
94-11-14	G25	64	Rangia cuneata	2	4
94-11-14	G25	64	Rangia cuneata	3	0
94-11-14	G25	64	Mya arenaria	1	1
94-11-14	G25	64	Mya arenaria	2	0
94-11-14	G25	64	Mya arenaria	3	0
94-11-14	G25	64	Balanus improvisus	1	2
94-11-14	G25	64	Balanus improvisus	2	0
94-11-14	G25	64	Balanus improvisus	3	0
94-11-14	G25	64	Cyathura polita	1	30
94-11-14	G25	64	Cyathura polita	2	18
94-11-14	G25	64	Cyathura polita	3	19
94-11-14	G25	64	Edotea triloba	1	2
94-11-14	G25	64	Edotea triloba	2	1
94-11-14	G25	64	Edotea triloba	3	3
94-11-14	G25	64	Leptocheirus plumulosus	1	22
94-11-14	G25	64	Leptocheirus plumulosus	2	29
94-11-14	G25	64	Leptocheirus plumulosus	3	18
94-11-14	G25	64	Corophium lacustre	1	45
94-11-14	G25	64	Corophium lacustre	2	5

94-11-14	G25	64	Corophium lacustre	3	1
94-11-14	G25	64	Melita nitida	1	5
94-11-14	G25	64	Melita nitida	2	1
94-11-14	G25	64	Melita nitida	3	0
94-11-14	G25	64	Monoculodes edwardsi	1	1
94-11-14	G25	64	Monoculodes edwardsi	2	0
94-11-14	G25	64	Monoculodes edwardsi	3	1
94-11-14	G25	64	Chironomidae	1	4
94-11-14	G25	64	Chironomidae	2	4
94-11-14	G25	64	Chironomidae	3	2
94-11-14	G25	64	Rhithropanopeus harrisii	1	2
94-11-14	G25	64	Rhithropanopeus harrisii	2	0
94-11-14	G25	64	Rhithropanopeus harrisii	3	0
94-11-14	G25	64	Membranipora tenuis	1	41
94-11-14	G25	64	Membranipora tenuis	2	16
94-11-14	G25	64	Membranipora tenuis	3	39
94-11-14	R2-TOP	154	Nereis succinea	1	3
94-11-14	R2-TOP	154	Polydora ligni	1	2
94-11-14	R2-TOP	154	Congeria leucophaeta	1	3
94-11-14	R2-TOP	154	Corophium lacustre	1	1
94-11-14	R2-TOP	154	Cordylophora caspia	1	3
94-11-14	R2-TOP	154	Membranipora tenuis	1	3
94-11-14	R2-TOP	154	Victorella pavida	1	1
94-11-14	R2-BOTTOM	154	Nereis succinea	1	3
94-11-14	R2-BOTTOM	154	Polydora ligni	1	2
94-11-14	R2-BOTTOM	154	Congeria leucophaeta	1	3
94-11-14	R2-BOTTOM	154	Balanus improvisus	1	3
94-11-14	R2-BOTTOM	154	Balanus subalbidus	1	3
94-11-14	R2-BOTTOM	154	Corophium lacustre	1	1
94-11-14	R2-BOTTOM	154	Garvela franciscana	1	3
94-11-14	R2-BOTTOM	154	Membranipora tenuis	1	2
94-11-14	R2-BOTTOM	154	Victorella pavida	1	1
94-11-14	R3-TOP	154	Nereis succinea	1	3
94-11-14	R3-TOP	154	Polydora ligni	1	2
94-11-14	R3-TOP	154	Congeria leucophaeta	1	3
94-11-14	R3-TOP	154	Balanus improvisus	1	3
94-11-14	R3-TOP	154	Balanus subalbidus	1	3
94-11-14	R3-TOP	154	Corophium lacustre	1	1
94-11-14	R3-TOP	154	Cordylophora caspia	1	2

94-11-14	R3-TOP	154	Membranipora tenuis	1	2
94-11-14	R3-TOP	154	Victorella pavida	1	2
94-11-14	R3-BOTTOM	154	Nereis succinea	1	3
94-11-14	R3-BOTTOM	154	Polydora ligni	1	2
94-11-14	R3-BOTTOM	154	Congeria leucophaeta	1	3
94-11-14	R3-BOTTOM	154	Balanus improvisus	1	3
94-11-14	R3-BOTTOM	154	Balanus subalbidus	1	3
94-11-14	R3-BOTTOM	154	Corophium lacustre	1	1
94-11-14	R3-BOTTOM	154	Cordylophora caspia	1	2
94-11-14	R3-BOTTOM	154	Membranipora tenuis	1	3
94-11-14	R3-BOTTOM	154	Victorella pavida	1	1
94-11-14	R4-TOP	154	Nereis succinea	1	3
94-11-14	R4-TOP	154	Polydora ligni	1	2
94-11-14	R4-TOP	154	Balanus improvisus	1	2
94-11-14	R4-TOP	154	Balanus subalbidus	1	2
94-11-14	R4-TOP	154	Corophium lacustre	1	1
94-11-14	R4-TOP	154	Chironomidae	1	3
94-11-14	R4-TOP	154	Cordylophora caspia	1	2
94-11-14	R4-TOP	154	Membranipora tenuis	1	2
94-11-14	R4-TOP	154	Victorella pavida	1	1
94-11-14	R4-BOTTOM	154	Nereis succinea	1	3
94-11-14	R4-BOTTOM	154	Polydora ligni	1	2
94-11-14	R4-BOTTOM	154	Congeria leucophaeta	1	3
94-11-14	R4-BOTTOM	154	Balanus improvisus	1	3
94-11-14	R4-BOTTOM	154	Balanus subalbidus	1	2
94-11-14	R4-BOTTOM	154	Corophium lacustre	1	2
94-11-14	R4-BOTTOM	154	Cordylophora caspia	1	2
94-11-14	R4-BOTTOM	154	Garvela franciscana	1	3
94-11-14	R4-BOTTOM	154	Stylochus ellipticus	1	3
94-11-14	R4-BOTTOM	154	Membranipora tenuis	1	3
94-11-14	R4-BOTTOM	154	Victorella pavida	1	1
94-11-14	R5-TOP	154	Polydora ligni	1	2
94-11-14	R5-TOP	154	Congeria leucophaeta	1	3
94-11-14	R5-TOP	154	Balanus improvisus	1	2
94-11-14	R5-TOP	154	Balanus subalbidus	1	2
94-11-14	R5-TOP	154	Corophium lacustre	1	1
94-11-14	R5-TOP	154	Chironomidae	1	3
94-11-14	R5-TOP	154	Cordylophora caspia	1	2
94-11-14	R5-TOP	154	Victorella pavida	1	1
94-11-14	R5-BOTTOM	154	Nereis succinea	1	3
94-11-14	R5-BOTTOM	154	Polydora ligni	1	2
94-11-14	R5-BOTTOM	154	Balanus improvisus	1	3

94-11-14	R5-BOTTOM	154	Balanus subalbidus	1	2
94-11-14	R5-BOTTOM	154	Corophium lacustre	1	1
94-11-14	R5-BOTTOM	154	Rhithropanopeus harrisii	1	3
94-11-14	R5-BOTTOM	154	Cordylophora caspia	1	2
94-11-14	R5-BOTTOM	154	Garvela franciscana	1	1
94-11-14	R5-BOTTOM	154	Membranipora tenuis	1	2
94-11-14	R5-BOTTOM	154	Victorella pavida	1	2
95-04-10	S1	64	Heteromastus filiformis	1	0
95-04-10	S1	64	Heteromastus filiformis	2	1
95-04-10	S1	64	Heteromastus filiformis	3	0
95-04-10	S1	64	Scolecolepides viridis	1	385
95-04-10	S1	64	Scolecolepides viridis	2	290
95-04-10	S1	64	Scolecolepides viridis	3	350
95-04-10	S1	64	Streblospio benedicti	1	0
95-04-10	S1	64	Streblospio benedicti	2	0
95-04-10	S1	64	Streblospio benedicti	3	1
95-04-10	S1	64	Tubificoides sp.	1	0
95-04-10	S1	64	Tubificoides sp.	2	0
95-04-10	S1	64	Tubificoides sp.	3	1
95-04-10	S1	64	Macoma balthica	1	12
95-04-10	S1	64	Macoma balthica	2	1
95-04-10	S1	64	Macoma balthica	3	1
95-04-10	S1	64	Rangia cuneata	1	20
95-04-10	S1	64	Rangia cuneata	2	12
95-04-10	S1	64	Rangia cuneata	3	21
95-04-10	S1	64	Cyathura polita	1	1
95-04-10	S1	64	Cyathura polita	2	3
95-04-10	S1	64	Cyathura polita	3	1
95-04-10	S1	64	Leptocheirus plumulosus	1	42
95-04-10	S1	64	Leptocheirus plumulosus	2	19
95-04-10	S1	64	Leptocheirus plumulosus	3	29
95-04-10	S1	64	Corophium lacustre	1	2
95-04-10	S1	64	Corophium lacustre	2	6
95-04-10	S1	64	Corophium lacustre	3	0
95-04-10	S1	64	Gammarus tigrinus	1	1
95-04-10	S1	64	Gammarus tigrinus	2	4
95-04-10	S1	64	Gammarus tigrinus	3	0
95-04-10	S1	64	Monoculodes edwardsi	1	5

95-04-10	S1	64	Monoculodes edwardsi	2	3
95-04-10	S1	64	Monoculodes edwardsi	3	3
95-04-10	S1	64	Chironomidae	1	0
95-04-10	S1	64	Chironomidae	2	0
95-04-10	S1	64	Chironomidae	3	1
95-04-10	S2	64	Heteromastus filiformis	1	3
95-04-10	S2	64	Heteromastus filiformis	2	1
95-04-10	S2	64	Heteromastus filiformis	3	5
95-04-10	S2	64	Nereis succinea	1	0
95-04-10	S2	64	Nereis succinea	2	5
95-04-10	S2	64	Nereis succinea	3	0
95-04-10	S2	64	Polydora ligni	1	0
95-04-10	S2	64	Polydora ligni	2	10
95-04-10	S2	64	Polydora ligni	3	0
95-04-10	S2	64	Scolecolepides viridis	1	192
95-04-10	S2	64	Scolecolepides viridis	2	130
95-04-10	S2	64	Scolecolepides viridis	3	148
95-04-10	S2	64	Streblospio benedicti	1	0
95-04-10	S2	64	Streblospio benedicti	2	1
95-04-10	S2	64	Streblospio benedicti	3	0
95-04-10	S2	64	Tubificoides sp.	1	8
95-04-10	S2	64	Tubificoides sp.	2	12
95-04-10	S2	64	Tubificoides sp.	3	0
95-04-10	S2	64	Congeria leucophaeta	1	0
95-04-10	S2	64	Congeria leucophaeta	2	4
95-04-10	S2	64	Congeria leucophaeta	3	0
95-04-10	S2	64	Macoma balthica	1	33
95-04-10	S2	64	Macoma balthica	2	9
95-04-10	S2	64	Macoma balthica	3	26
95-04-10	S2	64	Rangia cuneata	1	12
95-04-10	S2	64	Rangia cuneata	2	5
95-04-10	S2	64	Rangia cuneata	3	5
95-04-10	S2	64	Mya arenaria	1	0
95-04-10	S2	64	Mya arenaria	2	1
95-04-10	S2	64	Mya arenaria	3	0
95-04-10	S2	64	Balanus improvisus	1	2
95-04-10	S2	64	Balanus improvisus	2	27
95-04-10	S2	64	Balanus improvisus	3	0
95-04-10	S2	64	Cyathura polita	1	4
95-04-10	S2	64	Cyathura polita	2	11
95-04-10	S2	64	Cyathura polita	3	4
95-04-10	S2	64	Leptocheirus	1	58

			plumulosus		
95-04-10	S2	64	Leptocheirus plumulosus	2	9
95-04-10	S2	64	Leptocheirus plumulosus	3	73
95-04-10	S2	64	Corophium lacustre	1	4
95-04-10	S2	64	Corophium lacustre	2	93
95-04-10	S2	64	Corophium lacustre	3	0
95-04-10	S2	64	Gammarus tigrinus	1	3
95-04-10	S2	64	Gammarus tigrinus	2	7
95-04-10	S2	64	Gammarus tigrinus	3	0
95-04-10	S2	64	Melita nitida	1	0
95-04-10	S2	64	Melita nitida	2	4
95-04-10	S2	64	Melita nitida	3	0
95-04-10	S2	64	Chiridotea almyra	1	0
95-04-10	S2	64	Chiridotea almyra	2	1
95-04-10	S2	64	Chiridotea almyra	3	0
95-04-10	S2	64	Chironomidae	1	0
95-04-10	S2	64	Chironomidae	2	3
95-04-10	S2	64	Chironomidae	3	0
95-04-10	S2	64	Rhithropanopeus harrisii	1	0
95-04-10	S2	64	Rhithropanopeus harrisii	2	4
95-04-10	S2	64	Rhithropanopeus harrisii	3	0
95-04-10	S2	64	Membranipora tenuis	1	14
95-04-10	S2	64	Membranipora tenuis	2	72
95-04-10	S2	64	Membranipora tenuis	3	1
95-04-10	S3	64	Micrura leidyi	1	0
95-04-10	S3	64	Micrura leidyi	2	1
95-04-10	S3	64	Micrura leidyi	3	3
95-04-10	S3	64	Heteromastus filiformis	1	0
95-04-10	S3	64	Heteromastus filiformis	2	1
95-04-10	S3	64	Heteromastus filiformis	3	3
95-04-10	S3	64	Nereis succinea	1	0
95-04-10	S3	64	Nereis succinea	2	0
95-04-10	S3	64	Nereis succinea	3	2
95-04-10	S3	64	Eteone heteropoda	1	0
95-04-10	S3	64	Eteone heteropoda	2	2
95-04-10	S3	64	Eteone heteropoda	3	2
95-04-10	S3	64	Scolecolepides viridis	1	260

95-04-10	S3	64	Scolecolepides viridis	2	65
95-04-10	S3	64	Scolecolepides viridis	3	151
95-04-10	S3	64	Streblospio benedicti	1	3
95-04-10	S3	64	Streblospio benedicti	2	0
95-04-10	S3	64	Streblospio benedicti	3	9
95-04-10	S3	64	Tubificoides sp.	1	87
95-04-10	S3	64	Tubificoides sp.	2	64
95-04-10	S3	64	Tubificoides sp.	3	143
95-04-10	S3	64	Macoma balthica	1	187
95-04-10	S3	64	Macoma balthica	2	132
95-04-10	S3	64	Macoma balthica	3	258
95-04-10	S3	64	Macoma mitchelli	1	3
95-04-10	S3	64	Macoma mitchelli	2	3
95-04-10	S3	64	Macoma mitchelli	3	3
95-04-10	S3	64	Rangia cuneata	1	21
95-04-10	S3	64	Rangia cuneata	2	3
95-04-10	S3	64	Rangia cuneata	3	45
95-04-10	S3	64	Cyathura polita	1	14
95-04-10	S3	64	Cyathura polita	2	7
95-04-10	S3	64	Cyathura polita	3	22
95-04-10	S3	64	Edotea triloba	1	1
95-04-10	S3	64	Edotea triloba	2	2
95-04-10	S3	64	Edotea triloba	3	0
95-04-10	S3	64	Leptocheirus plumulosus	1	130
95-04-10	S3	64	Leptocheirus plumulosus	2	121
95-04-10	S3	64	Leptocheirus plumulosus	3	114
95-04-10	S3	64	Corophium lacustre	1	0
95-04-10	S3	64	Corophium lacustre	2	0
95-04-10	S3	64	Corophium lacustre	3	2
95-04-10	S3	64	Melita nitida	1	2
95-04-10	S3	64	Melita nitida	2	4
95-04-10	S3	64	Melita nitida	3	0
95-04-10	S3	64	Chironomidae	1	4
95-04-10	S3	64	Chironomidae	2	6
95-04-10	S3	64	Chironomidae	3	4
95-04-10	S3	64	Membranipora tenuis	1	1
95-04-10	S3	64	Membranipora tenuis	2	0
95-04-10	S3	64	Membranipora tenuis	3	3
95-04-10	S4	64	Micrura leidyi	1	3

95-04-10	S4	64	Micrura leidyi	2	2
95-04-10	S4	64	Micrura leidyi	3	2
95-04-10	S4	64	Heteromastus filiformis	1	1
95-04-10	S4	64	Heteromastus filiformis	2	0
95-04-10	S4	64	Heteromastus filiformis	3	0
95-04-10	S4	64	Nereis succinea	1	2
95-04-10	S4	64	Nereis succinea	2	0
95-04-10	S4	64	Nereis succinea	3	5
95-04-10	S4	64	Eteone heteropoda	1	0
95-04-10	S4	64	Eteone heteropoda	2	1
95-04-10	S4	64	Eteone heteropoda	3	0
95-04-10	S4	64	Scolecolepides viridis	1	49
95-04-10	S4	64	Scolecolepides viridis	2	15
95-04-10	S4	64	Scolecolepides viridis	3	37
95-04-10	S4	64	Tubificoides sp.	1	45
95-04-10	S4	64	Tubificoides sp.	2	19
95-04-10	S4	64	Tubificoides sp.	3	0
95-04-10	S4	64	Macoma balthica	1	0
95-04-10	S4	64	Macoma balthica	2	64
95-04-10	S4	64	Macoma balthica	3	22
95-04-10	S4	64	Macoma mitchelli	1	73
95-04-10	S4	64	Macoma mitchelli	2	2
95-04-10	S4	64	Macoma mitchelli	3	1
95-04-10	S4	64	Rangia cuneata	1	2
95-04-10	S4	64	Rangia cuneata	2	0
95-04-10	S4	64	Rangia cuneata	3	2
95-04-10	S4	64	Balanus improvisus	1	1
95-04-10	S4	64	Balanus improvisus	2	0
95-04-10	S4	64	Balanus improvisus	3	1
95-04-10	S4	64	Cyathura polita	1	8
95-04-10	S4	64	Cyathura polita	2	15
95-04-10	S4	64	Cyathura polita	3	9
95-04-10	S4	64	Leptocheirus plumulosus	1	117
95-04-10	S4	64	Leptocheirus plumulosus	2	105
95-04-10	S4	64	Leptocheirus plumulosus	3	96
95-04-10	S4	64	Corophium lacustre	1	1
95-04-10	S4	64	Corophium lacustre	2	1
95-04-10	S4	64	Corophium lacustre	3	2
95-04-10	S4	64	Melita nitida	1	3

95-04-10	S4	64	Melita nitida	2	3
95-04-10	S4	64	Melita nitida	3	0
95-04-10	S4	64	Chironomidae	1	3
95-04-10	S4	64	Chironomidae	2	2
95-04-10	S4	64	Chironomidae	3	4
95-04-10	S4	64	Membranipora tenuis	1	0
95-04-10	S4	64	Membranipora tenuis	2	3
95-04-10	S4	64	Membranipora tenuis	3	13
95-04-10	S5	64	Micrura leidyi	1	0
95-04-10	S5	64	Micrura leidyi	2	3
95-04-10	S5	64	Micrura leidyi	3	5
95-04-10	S5	64	Heteromastus filiformis	1	3
95-04-10	S5	64	Heteromastus filiformis	2	0
95-04-10	S5	64	Heteromastus filiformis	3	4
95-04-10	S5	64	Scolecolepides viridis	1	10
95-04-10	S5	64	Scolecolepides viridis	2	6
95-04-10	S5	64	Scolecolepides viridis	3	17
95-04-10	S5	64	Streblospio benedicti	1	2
95-04-10	S5	64	Streblospio benedicti	2	0
95-04-10	S5	64	Streblospio benedicti	3	15
95-04-10	S5	64	Tubificoides sp.	1	25
95-04-10	S5	64	Tubificoides sp.	2	16
95-04-10	S5	64	Tubificoides sp.	3	78
95-04-10	S5	64	Macoma balthica	1	77
95-04-10	S5	64	Macoma balthica	2	99
95-04-10	S5	64	Macoma balthica	3	86
95-04-10	S5	64	Macoma mitchelli	1	2
95-04-10	S5	64	Macoma mitchelli	2	0
95-04-10	S5	64	Macoma mitchelli	3	2
95-04-10	S5	64	Rangia cuneata	1	0
95-04-10	S5	64	Rangia cuneata	2	2
95-04-10	S5	64	Rangia cuneata	3	8
95-04-10	S5	64	Cyathura polita	1	17
95-04-10	S5	64	Cyathura polita	2	15
95-04-10	S5	64	Cyathura polita	3	16
95-04-10	S5	64	Edotea triloba	1	1
95-04-10	S5	64	Edotea triloba	2	0
95-04-10	S5	64	Edotea triloba	3	0
95-04-10	S5	64	Leptocheirus plumulosus	1	98
95-04-10	S5	64	Leptocheirus plumulosus	2	185

95-04-10	S5	64	Leptocheirus plumulosus	3	136
95-04-10	S5	64	Corophium lacustre	1	1
95-04-10	S5	64	Corophium lacustre	2	1
95-04-10	S5	64	Corophium lacustre	3	1
95-04-10	S5	64	Melita nitida	1	4
95-04-10	S5	64	Melita nitida	2	2
95-04-10	S5	64	Melita nitida	3	5
95-04-10	S5	64	Monoculodes edwardsi	1	0
95-04-10	S5	64	Monoculodes edwardsi	2	1
95-04-10	S5	64	Monoculodes edwardsi	3	0
95-04-10	S5	64	Chironomidae	1	0
95-04-10	S5	64	Chironomidae	2	8
95-04-10	S5	64	Chironomidae	3	14
95-04-10	S5	64	Membranipora tenuis	1	1
95-04-10	S5	64	Membranipora tenuis	2	0
95-04-10	S5	64	Membranipora tenuis	3	0
95-04-10	S6	64	Heteromastus filiformis	1	4
95-04-10	S6	64	Heteromastus filiformis	2	4
95-04-10	S6	64	Heteromastus filiformis	3	1
95-04-10	S6	64	Eteone heteropoda	1	0
95-04-10	S6	64	Eteone heteropoda	2	0
95-04-10	S6	64	Eteone heteropoda	3	1
95-04-10	S6	64	Scolecolepides viridis	1	86
95-04-10	S6	64	Scolecolepides viridis	2	59
95-04-10	S6	64	Scolecolepides viridis	3	88
95-04-10	S6	64	Streblospio benedicti	1	4
95-04-10	S6	64	Streblospio benedicti	2	5
95-04-10	S6	64	Streblospio benedicti	3	2
95-04-10	S6	64	Tubificoides sp.	1	18
95-04-10	S6	64	Tubificoides sp.	2	10
95-04-10	S6	64	Tubificoides sp.	3	22
95-04-10	S6	64	Macoma balthica	1	133
95-04-10	S6	64	Macoma balthica	2	138
95-04-10	S6	64	Macoma balthica	3	146
95-04-10	S6	64	Macoma mitchelli	1	6
95-04-10	S6	64	Macoma mitchelli	2	4
95-04-10	S6	64	Macoma mitchelli	3	4
95-04-10	S6	64	Rangia cuneata	1	4
95-04-10	S6	64	Rangia cuneata	2	1
95-04-10	S6	64	Rangia cuneata	3	1
95-04-10	S6	64	Mya arenaria	1	1

95-04-10	S6	64	Mya arenaria	2	0
95-04-10	S6	64	Mya arenaria	3	0
95-04-10	S6	64	Cyathura polita	1	13
95-04-10	S6	64	Cyathura polita	2	11
95-04-10	S6	64	Cyathura polita	3	15
95-04-10	S6	64	Edotea triloba	1	4
95-04-10	S6	64	Edotea triloba	2	5
95-04-10	S6	64	Edotea triloba	3	2
95-04-10	S6	64	Leptocheirus plumulosus	1	97
95-04-10	S6	64	Leptocheirus plumulosus	2	106
95-04-10	S6	64	Leptocheirus plumulosus	3	74
95-04-10	S6	64	Corophium lacustre	1	0
95-04-10	S6	64	Corophium lacustre	2	1
95-04-10	S6	64	Corophium lacustre	3	0
95-04-10	S6	64	Melita nitida	1	0
95-04-10	S6	64	Melita nitida	2	3
95-04-10	S6	64	Melita nitida	3	3
95-04-10	S6	64	Monoculodes edwardsi	1	0
95-04-10	S6	64	Monoculodes edwardsi	2	0
95-04-10	S6	64	Monoculodes edwardsi	3	1
95-04-10	S6	64	Chironomidae	1	6
95-04-10	S6	64	Chironomidae	2	8
95-04-10	S6	64	Chironomidae	3	5
95-04-10	S6	64	Membranipora tenuis	1	7
95-04-10	S6	64	Membranipora tenuis	2	1
95-04-10	S6	64	Membranipora tenuis	3	1
95-04-10	S7	64	Micrura leidyi	1	0
95-04-10	S7	64	Micrura leidyi	2	1
95-04-10	S7	64	Micrura leidyi	3	0
95-04-10	S7	64	Heteromastus filiformis	1	7
95-04-10	S7	64	Heteromastus filiformis	2	1
95-04-10	S7	64	Heteromastus filiformis	3	3
95-04-10	S7	64	Nereis succinea	1	1
95-04-10	S7	64	Nereis succinea	2	0
95-04-10	S7	64	Nereis succinea	3	23
95-04-10	S7	64	Polydora ligni	1	0
95-04-10	S7	64	Polydora ligni	2	0
95-04-10	S7	64	Polydora ligni	3	8
95-04-10	S7	64	Scolecolepides viridis	1	246

95-04-10	S7	64	Scolecolepides viridis	2	90
95-04-10	S7	64	Scolecolepides viridis	3	114
95-04-10	S7	64	Streblospio benedicti	1	6
95-04-10	S7	64	Streblospio benedicti	2	0
95-04-10	S7	64	Streblospio benedicti	3	5
95-04-10	S7	64	Tubificoides sp.	1	32
95-04-10	S7	64	Tubificoides sp.	2	16
95-04-10	S7	64	Tubificoides sp.	3	6
95-04-10	S7	64	Congeria leucophaeta	1	0
95-04-10	S7	64	Congeria leucophaeta	2	0
95-04-10	S7	64	Congeria leucophaeta	3	1
95-04-10	S7	64	Macoma balthica	1	53
95-04-10	S7	64	Macoma balthica	2	29
95-04-10	S7	64	Macoma balthica	3	5
95-04-10	S7	64	Macoma mitchelli	1	1
95-04-10	S7	64	Macoma mitchelli	2	0
95-04-10	S7	64	Macoma mitchelli	3	1
95-04-10	S7	64	Rangia cuneata	1	51
95-04-10	S7	64	Rangia cuneata	2	22
95-04-10	S7	64	Rangia cuneata	3	3
95-04-10	S7	64	Mya arenaria	1	0
95-04-10	S7	64	Mya arenaria	2	1
95-04-10	S7	64	Mya arenaria	3	1
95-04-10	S7	64	Balanus improvisus	1	0
95-04-10	S7	64	Balanus improvisus	2	1
95-04-10	S7	64	Balanus improvisus	3	39
95-04-10	S7	64	Cyathura polita	1	14
95-04-10	S7	64	Cyathura polita	2	1
95-04-10	S7	64	Cyathura polita	3	11
95-04-10	S7	64	Edotea triloba	1	6
95-04-10	S7	64	Edotea triloba	2	0
95-04-10	S7	64	Edotea triloba	3	0
95-04-10	S7	64	Leptocheirus plumulosus	1	35
95-04-10	S7	64	Leptocheirus plumulosus	2	29
95-04-10	S7	64	Leptocheirus plumulosus	3	6
95-04-10	S7	64	Corophium lacustre	1	1
95-04-10	S7	64	Corophium lacustre	2	8
95-04-10	S7	64	Corophium lacustre	3	116
95-04-10	S7	64	Gammarus tigrinus	1	0

95-04-10	S7	64	Gammarus tigrinus	2	0
95-04-10	S7	64	Gammarus tigrinus	3	33
95-04-10	S7	64	Melita nitida	1	0
95-04-10	S7	64	Melita nitida	2	1
95-04-10	S7	64	Melita nitida	3	14
95-04-10	S7	64	Monoculodes edwardsi	1	0
95-04-10	S7	64	Monoculodes edwardsi	2	1
95-04-10	S7	64	Monoculodes edwardsi	3	0
95-04-10	S7	64	Chironomidae	1	0
95-04-10	S7	64	Chironomidae	2	0
95-04-10	S7	64	Chironomidae	3	1
95-04-10	S7	64	Rhithropanopeus harrisii	1	3
95-04-10	S7	64	Rhithropanopeus harrisii	2	0
95-04-10	S7	64	Rhithropanopeus harrisii	3	4
95-04-10	S7	64	Membranipora tenuis	1	20
95-04-10	S7	64	Membranipora tenuis	2	21
95-04-10	S7	64	Membranipora tenuis	3	116
95-04-10	S8	64	Micrura leidyi	1	2
95-04-10	S8	64	Micrura leidyi	2	0
95-04-10	S8	64	Micrura leidyi	3	1
95-04-10	S8	64	Heteromastus filiformis	1	2
95-04-10	S8	64	Heteromastus filiformis	2	0
95-04-10	S8	64	Heteromastus filiformis	3	4
95-04-10	S8	64	Nereis succinea	1	0
95-04-10	S8	64	Nereis succinea	2	1
95-04-10	S8	64	Nereis succinea	3	0
95-04-10	S8	64	Scolecolepides viridis	1	25
95-04-10	S8	64	Scolecolepides viridis	2	13
95-04-10	S8	64	Scolecolepides viridis	3	12
95-04-10	S8	64	Streblospio benedicti	1	3
95-04-10	S8	64	Streblospio benedicti	2	1
95-04-10	S8	64	Streblospio benedicti	3	0
95-04-10	S8	64	Tubificoides sp.	1	42
95-04-10	S8	64	Tubificoides sp.	2	34
95-04-10	S8	64	Tubificoides sp.	3	34
95-04-10	S8	64	Macoma balthica	1	51
95-04-10	S8	64	Macoma balthica	2	64
95-04-10	S8	64	Macoma balthica	3	126
95-04-10	S8	64	Macoma mitchelli	1	2

95-04-10	S8	64	Macoma mitchelli	2	0
95-04-10	S8	64	Macoma mitchelli	3	5
95-04-10	S8	64	Rangia cuneata	1	1
95-04-10	S8	64	Rangia cuneata	2	0
95-04-10	S8	64	Rangia cuneata	3	17
95-04-10	S8	64	Cyathura polita	1	17
95-04-10	S8	64	Cyathura polita	2	14
95-04-10	S8	64	Cyathura polita	3	17
95-04-10	S8	64	Leptocheirus plumulosus	1	114
95-04-10	S8	64	Leptocheirus plumulosus	2	103
95-04-10	S8	64	Leptocheirus plumulosus	3	113
95-04-10	S8	64	Melita nitida	1	4
95-04-10	S8	64	Melita nitida	2	3
95-04-10	S8	64	Melita nitida	3	8
95-04-10	S8	64	Chironomidae	1	2
95-04-10	S8	64	Chironomidae	2	5
95-04-10	S8	64	Chironomidae	3	8
95-04-10	S8	64	Membranipora tenuis	1	1
95-04-10	S8	64	Membranipora tenuis	2	0
95-04-10	S8	64	Membranipora tenuis	3	0
95-04-10	HM7	64	Micrura leidyi	1	0
95-04-10	HM7	64	Micrura leidyi	2	1
95-04-10	HM7	64	Micrura leidyi	3	0
95-04-10	HM7	64	Nereis succinea	1	0
95-04-10	HM7	64	Nereis succinea	2	1
95-04-10	HM7	64	Nereis succinea	3	0
95-04-10	HM7	64	Scolecolepides viridis	1	34
95-04-10	HM7	64	Scolecolepides viridis	2	54
95-04-10	HM7	64	Scolecolepides viridis	3	37
95-04-10	HM7	64	Streblospio benedicti	1	0
95-04-10	HM7	64	Streblospio benedicti	2	3
95-04-10	HM7	64	Streblospio benedicti	3	3
95-04-10	HM7	64	Tubificoides sp.	1	4
95-04-10	HM7	64	Tubificoides sp.	2	1
95-04-10	HM7	64	Tubificoides sp.	3	6
95-04-10	HM7	64	Macoma balthica	1	33
95-04-10	HM7	64	Macoma balthica	2	41
95-04-10	HM7	64	Macoma balthica	3	26
95-04-10	HM7	64	Macoma mitchelli	1	0

95-04-10	HM7	64	Macoma mitchelli	2	2
95-04-10	HM7	64	Macoma mitchelli	3	1
95-04-10	HM7	64	Rangia cuneata	1	26
95-04-10	HM7	64	Rangia cuneata	2	21
95-04-10	HM7	64	Rangia cuneata	3	10
95-04-10	HM7	64	Cyathura polita	1	11
95-04-10	HM7	64	Cyathura polita	2	17
95-04-10	HM7	64	Cyathura polita	3	11
95-04-10	HM7	64	Leptocheirus plumulosus	1	119
95-04-10	HM7	64	Leptocheirus plumulosus	2	68
95-04-10	HM7	64	Leptocheirus plumulosus	3	64
95-04-10	HM7	64	Corophium lacustre	1	5
95-04-10	HM7	64	Corophium lacustre	2	5
95-04-10	HM7	64	Corophium lacustre	3	3
95-04-10	HM7	64	Melita nitida	1	3
95-04-10	HM7	64	Melita nitida	2	4
95-04-10	HM7	64	Melita nitida	3	0
95-04-10	HM7	64	Monoculodes edwardsi	1	1
95-04-10	HM7	64	Monoculodes edwardsi	2	0
95-04-10	HM7	64	Monoculodes edwardsi	3	0
95-04-10	HM7	64	Chironomidae	1	4
95-04-10	HM7	64	Chironomidae	2	10
95-04-10	HM7	64	Chironomidae	3	5
95-04-10	HM9	64	Heteromastus filiformis	1	5
95-04-10	HM9	64	Heteromastus filiformis	2	6
95-04-10	HM9	64	Heteromastus filiformis	3	3
95-04-10	HM9	64	Nereis succinea	1	3
95-04-10	HM9	64	Nereis succinea	2	0
95-04-10	HM9	64	Nereis succinea	3	5
95-04-10	HM9	64	Polydora ligni	1	0
95-04-10	HM9	64	Polydora ligni	2	1
95-04-10	HM9	64	Polydora ligni	3	2
95-04-10	HM9	64	Scolecolepides viridis	1	120
95-04-10	HM9	64	Scolecolepides viridis	2	147
95-04-10	HM9	64	Scolecolepides viridis	3	155
95-04-10	HM9	64	Streblospio benedicti	1	3
95-04-10	HM9	64	Streblospio benedicti	2	6
95-04-10	HM9	64	Streblospio benedicti	3	3
95-04-10	HM9	64	Tubificoides sp.	1	18

95-04-10	HM9	64	Tubificoides sp.	2	37
95-04-10	HM9	64	Tubificoides sp.	3	29
95-04-10	HM9	64	Congeria leucophaeta	1	1
95-04-10	HM9	64	Congeria leucophaeta	2	2
95-04-10	HM9	64	Congeria leucophaeta	3	4
95-04-10	HM9	64	Macoma balthica	1	40
95-04-10	HM9	64	Macoma balthica	2	61
95-04-10	HM9	64	Macoma balthica	3	34
95-04-10	HM9	64	Macoma mitchelli	1	1
95-04-10	HM9	64	Macoma mitchelli	2	0
95-04-10	HM9	64	Macoma mitchelli	3	0
95-04-10	HM9	64	Rangia cuneata	1	19
95-04-10	HM9	64	Rangia cuneata	2	53
95-04-10	HM9	64	Rangia cuneata	3	38
95-04-10	HM9	64	Mya arenaria	1	2
95-04-10	HM9	64	Mya arenaria	2	2
95-04-10	HM9	64	Mya arenaria	3	2
95-04-10	HM9	64	Balanus improvisus	1	0
95-04-10	HM9	64	Balanus improvisus	2	0
95-04-10	HM9	64	Balanus improvisus	3	8
95-04-10	HM9	64	Cyathura polita	1	10
95-04-10	HM9	64	Cyathura polita	2	9
95-04-10	HM9	64	Cyathura polita	3	17
95-04-10	HM9	64	Edotea triloba	1	1
95-04-10	HM9	64	Edotea triloba	2	0
95-04-10	HM9	64	Edotea triloba	3	1
95-04-10	HM9	64	Leptocheirus plumulosus	1	59
95-04-10	HM9	64	Leptocheirus plumulosus	2	24
95-04-10	HM9	64	Leptocheirus plumulosus	3	20
95-04-10	HM9	64	Corophium lacustre	1	6
95-04-10	HM9	64	Corophium lacustre	2	6
95-04-10	HM9	64	Corophium lacustre	3	8
95-04-10	HM9	64	Melita nitida	1	2
95-04-10	HM9	64	Melita nitida	2	0
95-04-10	HM9	64	Melita nitida	3	0
95-04-10	HM9	64	Monoculodes edwardsi	1	0
95-04-10	HM9	64	Monoculodes edwardsi	2	0
95-04-10	HM9	64	Monoculodes edwardsi	3	3
95-04-10	HM9	64	Chironomidae	1	0

95-04-10	HM9	64	Chironomidae	2	1
95-04-10	HM9	64	Chironomidae	3	0
95-04-10	HM9	64	Rhithropanopeus harrisii	1	0
95-04-10	HM9	64	Rhithropanopeus harrisii	2	0
95-04-10	HM9	64	Rhithropanopeus harrisii	3	4
95-04-10	HM9	64	Membranipora tenuis	1	37
95-04-10	HM9	64	Membranipora tenuis	2	22
95-04-10	HM9	64	Membranipora tenuis	3	59
95-04-10	HM12	64	Micrura leidyi	1	2
95-04-10	HM12	64	Micrura leidyi	2	4
95-04-10	HM12	64	Micrura leidyi	3	1
95-04-10	HM12	64	Heteromastus filiformis	1	3
95-04-10	HM12	64	Heteromastus filiformis	2	3
95-04-10	HM12	64	Heteromastus filiformis	3	4
95-04-10	HM12	64	Nereis succinea	1	3
95-04-10	HM12	64	Nereis succinea	2	0
95-04-10	HM12	64	Nereis succinea	3	3
95-04-10	HM12	64	Eteone heteropoda	1	0
95-04-10	HM12	64	Eteone heteropoda	2	0
95-04-10	HM12	64	Eteone heteropoda	3	1
95-04-10	HM12	64	Scolecolepides viridis	1	1
95-04-10	HM12	64	Scolecolepides viridis	2	22
95-04-10	HM12	64	Scolecolepides viridis	3	29
95-04-10	HM12	64	Streblospio benedicti	1	0
95-04-10	HM12	64	Streblospio benedicti	2	2
95-04-10	HM12	64	Streblospio benedicti	3	2
95-04-10	HM12	64	Tubificoides sp.	1	5
95-04-10	HM12	64	Tubificoides sp.	2	10
95-04-10	HM12	64	Tubificoides sp.	3	14
95-04-10	HM12	64	Macoma balthica	1	57
95-04-10	HM12	64	Macoma balthica	2	81
95-04-10	HM12	64	Macoma balthica	3	91
95-04-10	HM12	64	Macoma mitchelli	1	2
95-04-10	HM12	64	Macoma mitchelli	2	0
95-04-10	HM12	64	Macoma mitchelli	3	2
95-04-10	HM12	64	Rangia cuneata	1	11
95-04-10	HM12	64	Rangia cuneata	2	13
95-04-10	HM12	64	Rangia cuneata	3	17
95-04-10	HM12	64	Mya arenaria	1	0

95-04-10	HM12	64	Mya arenaria	2	2
95-04-10	HM12	64	Mya arenaria	3	0
95-04-10	HM12	64	Cyathura polita	1	7
95-04-10	HM12	64	Cyathura polita	2	16
95-04-10	HM12	64	Cyathura polita	3	9
95-04-10	HM12	64	Leptocheirus plumulosus	1	27
95-04-10	HM12	64	Leptocheirus plumulosus	2	22
95-04-10	HM12	64	Leptocheirus plumulosus	3	26
95-04-10	HM12	64	Corophium lacustre	1	0
95-04-10	HM12	64	Corophium lacustre	2	0
95-04-10	HM12	64	Corophium lacustre	3	1
95-04-10	HM12	64	Melita nitida	1	0
95-04-10	HM12	64	Melita nitida	2	0
95-04-10	HM12	64	Melita nitida	3	1
95-04-10	HM12	64	Monoculodes edwardsi	1	0
95-04-10	HM12	64	Monoculodes edwardsi	2	1
95-04-10	HM12	64	Monoculodes edwardsi	3	0
95-04-10	HM12	64	Chironomidae	1	4
95-04-10	HM12	64	Chironomidae	2	1
95-04-10	HM12	64	Chironomidae	3	0
95-04-10	HM12	64	Membranipora tenuis	1	1
95-04-10	HM12	64	Membranipora tenuis	2	9
95-04-10	HM12	64	Membranipora tenuis	3	1
95-04-10	HM16	64	Heteromastus filiformis	1	7
95-04-10	HM16	64	Heteromastus filiformis	2	1
95-04-10	HM16	64	Heteromastus filiformis	3	5
95-04-10	HM16	64	Nereis succinea	1	2
95-04-10	HM16	64	Nereis succinea	2	0
95-04-10	HM16	64	Nereis succinea	3	1
95-04-10	HM16	64	Scolecolepides viridis	1	35
95-04-10	HM16	64	Scolecolepides viridis	2	38
95-04-10	HM16	64	Scolecolepides viridis	3	61
95-04-10	HM16	64	Streblospio benedicti	1	5
95-04-10	HM16	64	Streblospio benedicti	2	0
95-04-10	HM16	64	Streblospio benedicti	3	1
95-04-10	HM16	64	Tubificoides sp.	1	22
95-04-10	HM16	64	Tubificoides sp.	2	10
95-04-10	HM16	64	Tubificoides sp.	3	13
95-04-10	HM16	64	Congeria leucophaeta	1	1

95-04-10	HM16	64	Congeria leucophaeta	2	0
95-04-10	HM16	64	Congeria leucophaeta	3	0
95-04-10	HM16	64	1Eteone heteropoda	1	0
95-04-10	HM16	64	1Eteone heteropoda	2	1
95-04-10	HM16	64	1Eteone heteropoda	3	0
95-04-10	HM16	64	Macoma balthica	1	38
95-04-10	HM16	64	Macoma balthica	2	37
95-04-10	HM16	64	Macoma balthica	3	46
95-04-10	HM16	64	Macoma mitchelli	1	2
95-04-10	HM16	64	Macoma mitchelli	2	1
95-04-10	HM16	64	Macoma mitchelli	3	0
95-04-10	HM16	64	Rangia cuneata	1	5
95-04-10	HM16	64	Rangia cuneata	2	1
95-04-10	HM16	64	Rangia cuneata	3	3
95-04-10	HM16	64	Cyathura polita	1	7
95-04-10	HM16	64	Cyathura polita	2	13
95-04-10	HM16	64	Cyathura polita	3	12
95-04-10	HM16	64	Leptocheirus plumulosus	1	105
95-04-10	HM16	64	Leptocheirus plumulosus	2	76
95-04-10	HM16	64	Leptocheirus plumulosus	3	89
95-04-10	HM16	64	Corophium lacustre	1	1
95-04-10	HM16	64	Corophium lacustre	2	0
95-04-10	HM16	64	Corophium lacustre	3	0
95-04-10	HM16	64	Melita nitida	1	3
95-04-10	HM16	64	Melita nitida	2	0
95-04-10	HM16	64	Melita nitida	3	3
95-04-10	HM16	64	Chironomidae	1	1
95-04-10	HM16	64	Chironomidae	2	0
95-04-10	HM16	64	Chironomidae	3	2
95-04-10	HM16	64	Membranipora tenuis	1	1
95-04-10	HM16	64	Membranipora tenuis	2	0
95-04-10	HM16	64	Membranipora tenuis	3	0
95-04-10	HM22	64	Micrura leidyi	1	2
95-04-10	HM22	64	Micrura leidyi	2	0
95-04-10	HM22	64	Micrura leidyi	3	0
95-04-10	HM22	64	Heteromastus filiformis	1	2
95-04-10	HM22	64	Heteromastus filiformis	2	0
95-04-10	HM22	64	Heteromastus filiformis	3	0
95-04-10	HM22	64	Polydora ligni	1	1

95-04-10	HM22	64	Polydora ligni	2	0
95-04-10	HM22	64	Polydora ligni	3	0
95-04-10	HM22	64	Scolecolepides viridis	1	21
95-04-10	HM22	64	Scolecolepides viridis	2	31
95-04-10	HM22	64	Scolecolepides viridis	3	30
95-04-10	HM22	64	Tubificoides sp.	1	0
95-04-10	HM22	64	Tubificoides sp.	2	3
95-04-10	HM22	64	Tubificoides sp.	3	0
95-04-10	HM22	64	Macoma balthica	1	27
95-04-10	HM22	64	Macoma balthica	2	33
95-04-10	HM22	64	Macoma balthica	3	32
95-04-10	HM22	64	Rangia cuneata	1	9
95-04-10	HM22	64	Rangia cuneata	2	5
95-04-10	HM22	64	Rangia cuneata	3	6
95-04-10	HM22	64	Mya arenaria	1	1
95-04-10	HM22	64	Mya arenaria	2	1
95-04-10	HM22	64	Mya arenaria	3	0
95-04-10	HM22	64	Cyathura polita	1	6
95-04-10	HM22	64	Cyathura polita	2	2
95-04-10	HM22	64	Cyathura polita	3	8
95-04-10	HM22	64	Leptocheirus plumulosus	1	38
95-04-10	HM22	64	Leptocheirus plumulosus	2	14
95-04-10	HM22	64	Leptocheirus plumulosus	3	29
95-04-10	HM22	64	Corophium lacustre	1	1
95-04-10	HM22	64	Corophium lacustre	2	2
95-04-10	HM22	64	Corophium lacustre	3	0
95-04-10	HM22	64	Melita nitida	1	1
95-04-10	HM22	64	Melita nitida	2	0
95-04-10	HM22	64	Melita nitida	3	0
95-04-10	HM22	64	Chironomidae	1	9
95-04-10	HM22	64	Chironomidae	2	16
95-04-10	HM22	64	Chironomidae	3	16
95-04-10	HM22	64	Membranipora tenuis	1	0
95-04-10	HM22	64	Membranipora tenuis	2	1
95-04-10	HM22	64	Membranipora tenuis	3	1
95-04-10	HM26	64	Micrura leidyi	1	2
95-04-10	HM26	64	Micrura leidyi	2	3
95-04-10	HM26	64	Micrura leidyi	3	0
95-04-10	HM26	64	Heteromastus filiformis	1	2

95-04-10	HM26	64	Heteromastus filiformis	2	1
95-04-10	HM26	64	Heteromastus filiformis	3	0
95-04-10	HM26	64	Scolecolepides viridis	1	23
95-04-10	HM26	64	Scolecolepides viridis	2	6
95-04-10	HM26	64	Scolecolepides viridis	3	20
95-04-10	HM26	64	Streblospio benedicti	1	18
95-04-10	HM26	64	Streblospio benedicti	2	1
95-04-10	HM26	64	Streblospio benedicti	3	2
95-04-10	HM26	64	Tubificoides sp.	1	362
95-04-10	HM26	64	Tubificoides sp.	2	297
95-04-10	HM26	64	Tubificoides sp.	3	272
95-04-10	HM26	64	Macoma balthica	1	62
95-04-10	HM26	64	Macoma balthica	2	69
95-04-10	HM26	64	Macoma balthica	3	44
95-04-10	HM26	64	Macoma mitchelli	1	1
95-04-10	HM26	64	Macoma mitchelli	2	1
95-04-10	HM26	64	Macoma mitchelli	3	3
95-04-10	HM26	64	Rangia cuneata	1	25
95-04-10	HM26	64	Rangia cuneata	2	7
95-04-10	HM26	64	Rangia cuneata	3	4
95-04-10	HM26	64	Cyathura polita	1	4
95-04-10	HM26	64	Cyathura polita	2	1
95-04-10	HM26	64	Cyathura polita	3	3
95-04-10	HM26	64	Leptocheirus plumulosus	1	85
95-04-10	HM26	64	Leptocheirus plumulosus	2	39
95-04-10	HM26	64	Leptocheirus plumulosus	3	74
95-04-10	HM26	64	Corophium lacustre	1	0
95-04-10	HM26	64	Corophium lacustre	2	0
95-04-10	HM26	64	Corophium lacustre	3	1
95-04-10	HM26	64	Gammarus tigrinus	1	1
95-04-10	HM26	64	Gammarus tigrinus	2	0
95-04-10	HM26	64	Gammarus tigrinus	3	0
95-04-10	HM26	64	Melita nitida	1	9
95-04-10	HM26	64	Melita nitida	2	3
95-04-10	HM26	64	Melita nitida	3	3
95-04-10	HM26	64	Monoculodes edwardsi	1	1
95-04-10	HM26	64	Monoculodes edwardsi	2	0
95-04-10	HM26	64	Monoculodes edwardsi	3	0
95-04-10	HM26	64	Chironomidae	1	27

95-04-10	HM26	64	Chironomidae	2	18
95-04-10	HM26	64	Chironomidae	3	29
95-04-10	HM26	64	Membranipora tenuis	1	1
95-04-10	HM26	64	Membranipora tenuis	2	0
95-04-10	HM26	64	Membranipora tenuis	3	0
95-04-10	G5	64	Micrura leidyi	1	0
95-04-10	G5	64	Micrura leidyi	2	1
95-04-10	G5	64	Micrura leidyi	3	0
95-04-10	G5	64	Nereis succinea	1	0
95-04-10	G5	64	Nereis succinea	2	0
95-04-10	G5	64	Nereis succinea	3	1
95-04-10	G5	64	Scolecolepides viridis	1	22
95-04-10	G5	64	Scolecolepides viridis	2	29
95-04-10	G5	64	Scolecolepides viridis	3	23
95-04-10	G5	64	Tubificoides sp.	1	0
95-04-10	G5	64	Tubificoides sp.	2	24
95-04-10	G5	64	Tubificoides sp.	3	12
95-04-10	G5	64	Macoma balthica	1	50
95-04-10	G5	64	Macoma balthica	2	59
95-04-10	G5	64	Macoma balthica	3	57
95-04-10	G5	64	Macoma mitchelli	1	0
95-04-10	G5	64	Macoma mitchelli	2	3
95-04-10	G5	64	Macoma mitchelli	3	0
95-04-10	G5	64	Rangia cuneata	1	1
95-04-10	G5	64	Rangia cuneata	2	6
95-04-10	G5	64	Rangia cuneata	3	2
95-04-10	G5	64	Cyathura polita	1	1
95-04-10	G5	64	Cyathura polita	2	22
95-04-10	G5	64	Cyathura polita	3	16
95-04-10	G5	64	Leptocheirus plumulosus	1	203
95-04-10	G5	64	Leptocheirus plumulosus	2	168
95-04-10	G5	64	Leptocheirus plumulosus	3	116
95-04-10	G5	64	Corophium lacustre	1	4
95-04-10	G5	64	Corophium lacustre	2	3
95-04-10	G5	64	Corophium lacustre	3	1
95-04-10	G5	64	Melita nitida	1	6
95-04-10	G5	64	Melita nitida	2	4
95-04-10	G5	64	Melita nitida	3	1
95-04-10	G5	64	Chironomidae	1	0

95-04-10	G5	64	Chironomidae	2	5
95-04-10	G5	64	Chironomidae	3	4
95-04-10	G5	64	Membranipora tenuis	1	0
95-04-10	G5	64	Membranipora tenuis	2	1
95-04-10	G5	64	Membranipora tenuis	3	0
95-04-10	G25	64	Micrura leidyi	1	2
95-04-10	G25	64	Micrura leidyi	2	2
95-04-10	G25	64	Micrura leidyi	3	4
95-04-10	G25	64	Heteromastus filiformis	1	0
95-04-10	G25	64	Heteromastus filiformis	2	2
95-04-10	G25	64	Heteromastus filiformis	3	2
95-04-10	G25	64	Nereis succinea	1	0
95-04-10	G25	64	Nereis succinea	2	1
95-04-10	G25	64	Nereis succinea	3	13
95-04-10	G25	64	Polydora ligni	1	2
95-04-10	G25	64	Polydora ligni	2	0
95-04-10	G25	64	Polydora ligni	3	2
95-04-10	G25	64	Scolecolepides viridis	1	9
95-04-10	G25	64	Scolecolepides viridis	2	8
95-04-10	G25	64	Scolecolepides viridis	3	66
95-04-10	G25	64	Streblospio benedicti	1	1
95-04-10	G25	64	Streblospio benedicti	2	2
95-04-10	G25	64	Streblospio benedicti	3	4
95-04-10	G25	64	Tubificoides sp.	1	15
95-04-10	G25	64	Tubificoides sp.	2	20
95-04-10	G25	64	Tubificoides sp.	3	22
95-04-10	G25	64	Macoma balthica	1	40
95-04-10	G25	64	Macoma balthica	2	81
95-04-10	G25	64	Macoma balthica	3	33
95-04-10	G25	64	Macoma mitchelli	1	0
95-04-10	G25	64	Macoma mitchelli	2	2
95-04-10	G25	64	Macoma mitchelli	3	2
95-04-10	G25	64	Rangia cuneata	1	10
95-04-10	G25	64	Rangia cuneata	2	14
95-04-10	G25	64	Rangia cuneata	3	19
95-04-10	G25	64	Mya arenaria	1	0
95-04-10	G25	64	Mya arenaria	2	0
95-04-10	G25	64	Mya arenaria	3	2
95-04-10	G25	64	Balanus improvisus	1	0
95-04-10	G25	64	Balanus improvisus	2	0
95-04-10	G25	64	Balanus improvisus	3	25
95-04-10	G25	64	Cyathura polita	1	7

95-04-10	G25	64	Cyathura polita	2	10
95-04-10	G25	64	Cyathura polita	3	23
95-04-10	G25	64	Leptocheirus plumulosus	1	41
95-04-10	G25	64	Leptocheirus plumulosus	2	92
95-04-10	G25	64	Leptocheirus plumulosus	3	28
95-04-10	G25	64	Corophium lacustre	1	0
95-04-10	G25	64	Corophium lacustre	2	1
95-04-10	G25	64	Corophium lacustre	3	4
95-04-10	G25	64	Gammarus tigrinus	1	0
95-04-10	G25	64	Gammarus tigrinus	2	0
95-04-10	G25	64	Gammarus tigrinus	3	3
95-04-10	G25	64	Melita nitida	1	0
95-04-10	G25	64	Melita nitida	2	4
95-04-10	G25	64	Melita nitida	3	1
95-04-10	G25	64	Chiridotea almyra	1	1
95-04-10	G25	64	Chiridotea almyra	2	0
95-04-10	G25	64	Chiridotea almyra	3	0
95-04-10	G25	64	Monoculodes edwardsi	1	1
95-04-10	G25	64	Monoculodes edwardsi	2	0
95-04-10	G25	64	Monoculodes edwardsi	3	0
95-04-10	G25	64	Chironomidae	1	0
95-04-10	G25	64	Chironomidae	2	3
95-04-10	G25	64	Chironomidae	3	0
95-04-10	G25	64	Rhithropanopeus harrisii	1	0
95-04-10	G25	64	Rhithropanopeus harrisii	2	0
95-04-10	G25	64	Rhithropanopeus harrisii	3	22
95-04-10	G25	64	Membranipora tenuis	1	36
95-04-10	G25	64	Membranipora tenuis	2	6
95-04-10	G25	64	Membranipora tenuis	3	56
95-04-10	R2-TOP	154	Nereis succinea	1	2
95-04-10	R2-TOP	154	Polydora ligni	1	2
95-04-10	R2-TOP	154	Congeria leucophaeta	1	3
95-04-10	R2-TOP	154	Balanus improvisus	1	3
95-04-10	R2-TOP	154	Balanus subalbidus	1	3
95-04-10	R2-TOP	154	Corophium lacustre	1	2
95-04-10	R2-TOP	154	Gammarus tigrinus	1	3
95-04-10	R2-TOP	154	Chironomidae	1	2

95-04-10	R2-TOP	154	Cordylophora caspia	1	2
95-04-10	R2-TOP	154	Membranipora tenuis	1	2
95-04-10	R2-BOTTOM	154	Nereis succinea	1	2
95-04-10	R2-BOTTOM	154	Polydora ligni	1	2
95-04-10	R2-BOTTOM	154	Scolecolepides viridis	1	3
95-04-10	R2-BOTTOM	154	Congeria leucophaeta	1	2
95-04-10	R2-BOTTOM	154	Balanus improvisus	1	3
95-04-10	R2-BOTTOM	154	Gammarus tigrinus	1	3
95-04-10	R2-BOTTOM	154	Melita nitida	1	3
95-04-10	R2-BOTTOM	154	Chironomidae	1	3
95-04-10	R2-BOTTOM	154	Cordylophora caspia	1	1
95-04-10	R2-BOTTOM	154	Membranipora tenuis	1	2
95-04-10	R3-TOP	154	Nereis succinea	1	3
95-04-10	R3-TOP	154	Polydora ligni	1	2
95-04-10	R3-TOP	154	Congeria leucophaeta	1	3
95-04-10	R3-TOP	154	Balanus subalbidus	1	3
95-04-10	R3-TOP	154	Corophium lacustre	1	2
95-04-10	R3-TOP	154	Gammarus tigrinus	1	2
95-04-10	R3-TOP	154	Chironomidae	1	2
95-04-10	R3-TOP	154	Cordylophora caspia	1	2
95-04-10	R3-TOP	154	Membranipora tenuis	1	3
95-04-10	R3-BOTTOM	154	Nereis succinea	1	3
95-04-10	R3-BOTTOM	154	Polydora ligni	1	2
95-04-10	R3-BOTTOM	154	Congeria leucophaeta	1	3
95-04-10	R3-BOTTOM	154	Corophium lacustre	1	1
95-04-10	R3-BOTTOM	154	Heteromastus filiformisEteone heteropoda	1	3
95-04-10	R3-BOTTOM	154	Gammarus tigrinus	1	3
95-04-10	R3-BOTTOM	154	Chironomidae	1	3
95-04-10	R3-BOTTOM	154	Cordylophora caspia	1	2
95-04-10	R3-BOTTOM	154	Membranipora tenuis	1	1
95-04-10	R4-TOP	154	Nereis succinea	1	3
95-04-10	R4-TOP	154	Polydora ligni	1	3
95-04-10	R4-TOP	154	Scolecolepides viridis	1	3
95-04-10	R4-TOP	154	Congeria leucophaeta	1	3
95-04-10	R4-TOP	154	Balanus improvisus	1	3
95-04-10	R4-TOP	154	Balanus subalbidus	1	2
95-04-10	R4-TOP	154	Corophium lacustre	1	2
95-04-10	R4-TOP	154	Gammarus tigrinus	1	2
95-04-10	R4-TOP	154	Chironomidae	1	3
95-04-10	R4-TOP	154	Cordylophora caspia	1	1

95-04-10	R4-TOP	154	Membranipora tenuis	1	3
95-04-10	R4-BOTTOM	154	Nereis succinea	1	3
95-04-10	R4-BOTTOM	154	Polydora ligni	1	2
95-04-10	R4-BOTTOM	154	Balanus subalbidus	1	2
95-04-10	R4-BOTTOM	154	Corophium lacustre	1	1
95-04-10	R4-BOTTOM	154	Gammarus tigrinus	1	2
95-04-10	R4-BOTTOM	154	Chironomidae	1	3
95-04-10	R4-BOTTOM	154	Cordylophora caspia	1	1
95-04-10	R5-TOP	154	Polydora ligni	1	3
95-04-10	R5-TOP	154	Balanus subalbidus	1	3
95-04-10	R5-TOP	154	Corophium lacustre	1	2
95-04-10	R5-TOP	154	Gammarus tigrinus	1	3
95-04-10	R5-TOP	154	Monoculodes edwardsi	1	3
95-04-10	R5-TOP	154	Chironomidae	1	3
95-04-10	R5-TOP	154	Cordylophora caspia	1	3
95-04-10	R5-BOTTOM	154	Nereis succinea	1	2
95-04-10	R5-BOTTOM	154	Polydora ligni	1	2
95-04-10	R5-BOTTOM	154	Balanus improvisus	1	3
95-04-10	R5-BOTTOM	154	Balanus subalbidus	1	3
95-04-10	R5-BOTTOM	154	Corophium lacustre	1	1
95-04-10	R5-BOTTOM	154	Gammarus tigrinus	1	3
95-04-10	R5-BOTTOM	154	Chironomidae	1	3
95-04-10	R5-BOTTOM	154	Cordylophora caspia	1	2
95-04-10	R5-BOTTOM	154	Membranipora tenuis	1	1
95-08-07	S1	64	Micrura leidyi	1	2
95-08-07	S1	64	Micrura leidyi	2	0
95-08-07	S1	64	Micrura leidyi	3	1
95-08-07	S1	64	Heteromastus filiformis	1	1
95-08-07	S1	64	Heteromastus filiformis	2	0
95-08-07	S1	64	Heteromastus filiformis	3	0
95-08-07	S1	64	Scolecolepides viridis	1	39
95-08-07	S1	64	Scolecolepides viridis	2	18
95-08-07	S1	64	Scolecolepides viridis	3	37
95-08-07	S1	64	Macoma balthica	1	5
95-08-07	S1	64	Macoma balthica	2	0
95-08-07	S1	64	Macoma balthica	3	1
95-08-07	S1	64	Macoma mitchelli	1	1
95-08-07	S1	64	Macoma mitchelli	2	0
95-08-07	S1	64	Macoma mitchelli	3	0
95-08-07	S1	64	Rangia cuneata	1	37
95-08-07	S1	64	Rangia cuneata	2	39
95-08-07	S1	64	Rangia cuneata	3	58

95-08-07	S1	64	Cyathura polita	1	14
95-08-07	S1	64	Cyathura polita	2	23
95-08-07	S1	64	Cyathura polita	3	35
95-08-07	S1	64	Cassidinidea lunifrons	1	1
95-08-07	S1	64	Cassidinidea lunifrons	2	0
95-08-07	S1	64	Cassidinidea lunifrons	3	0
95-08-07	S1	64	Leptocheirus plumulosus	1	4
95-08-07	S1	64	Leptocheirus plumulosus	2	6
95-08-07	S1	64	Leptocheirus plumulosus	3	15
95-08-07	S1	64	Melita nitida	1	1
95-08-07	S1	64	Melita nitida	2	1
95-08-07	S1	64	Melita nitida	3	0
95-08-07	S1	64	Chiridotea almyra	1	22
95-08-07	S1	64	Chiridotea almyra	2	23
95-08-07	S1	64	Chiridotea almyra	3	11
95-08-07	S1	64	Monoculodes edwardsi	1	15
95-08-07	S1	64	Monoculodes edwardsi	2	10
95-08-07	S1	64	Monoculodes edwardsi	3	7
95-08-07	S1	64	Membranipora tenuis	1	1
95-08-07	S1	64	Membranipora tenuis	2	0
95-08-07	S1	64	Membranipora tenuis	3	0
95-08-07	S2	64	Micrura leidyi	1	0
95-08-07	S2	64	Micrura leidyi	2	2
95-08-07	S2	64	Micrura leidyi	3	1
95-08-07	S2	64	Nereis succinea	1	5
95-08-07	S2	64	Nereis succinea	2	3
95-08-07	S2	64	Nereis succinea	3	3
95-08-07	S2	64	Polydora ligni	1	1
95-08-07	S2	64	Polydora ligni	2	0
95-08-07	S2	64	Polydora ligni	3	0
95-08-07	S2	64	Scolecolepides viridis	1	0
95-08-07	S2	64	Scolecolepides viridis	2	1
95-08-07	S2	64	Scolecolepides viridis	3	1
95-08-07	S2	64	Streblospio benedicti	1	7
95-08-07	S2	64	Streblospio benedicti	2	2
95-08-07	S2	64	Streblospio benedicti	3	5
95-08-07	S2	64	Tubificoides sp.	1	2
95-08-07	S2	64	Tubificoides sp.	2	1
95-08-07	S2	64	Tubificoides sp.	3	26

95-08-07	S2	64	Congeria leucophaeta	1	2
95-08-07	S2	64	Congeria leucophaeta	2	1
95-08-07	S2	64	Congeria leucophaeta	3	1
95-08-07	S2	64	Macoma balthica	1	0
95-08-07	S2	64	Macoma balthica	2	0
95-08-07	S2	64	Macoma balthica	3	2
95-08-07	S2	64	Macoma mitchelli	1	0
95-08-07	S2	64	Macoma mitchelli	2	0
95-08-07	S2	64	Macoma mitchelli	3	1
95-08-07	S2	64	Rangia cuneata	1	1
95-08-07	S2	64	Rangia cuneata	2	1
95-08-07	S2	64	Rangia cuneata	3	4
95-08-07	S2	64	Balanus improvisus	1	168
95-08-07	S2	64	Balanus improvisus	2	60
95-08-07	S2	64	Balanus improvisus	3	260
95-08-07	S2	64	Balanus subalbidus	1	0
95-08-07	S2	64	Balanus subalbidus	2	1
95-08-07	S2	64	Balanus subalbidus	3	0
95-08-07	S2	64	Cyathura polita	1	2
95-08-07	S2	64	Cyathura polita	2	3
95-08-07	S2	64	Cyathura polita	3	7
95-08-07	S2	64	Cassidinidea lunifrons	1	2
95-08-07	S2	64	Cassidinidea lunifrons	2	0
95-08-07	S2	64	Cassidinidea lunifrons	3	1
95-08-07	S2	64	Corophium lacustre	1	2
95-08-07	S2	64	Corophium lacustre	2	1
95-08-07	S2	64	Corophium lacustre	3	1
95-08-07	S2	64	Melita nitida	1	13
95-08-07	S2	64	Melita nitida	2	0
95-08-07	S2	64	Melita nitida	3	2
95-08-07	S2	64	Rhithropanopeus harrisii	1	27
95-08-07	S2	64	Rhithropanopeus harrisii	2	12
95-08-07	S2	64	Rhithropanopeus harrisii	3	13
95-08-07	S2	64	Membranipora tenuis	1	68
95-08-07	S2	64	Membranipora tenuis	2	59
95-08-07	S2	64	Membranipora tenuis	3	61
95-08-07	S3	64	Micrura leidyi	1	10
95-08-07	S3	64	Micrura leidyi	2	7
95-08-07	S3	64	Micrura leidyi	3	8

95-08-07	S3	64	Heteromastus filiformis	1	6
95-08-07	S3	64	Heteromastus filiformis	2	1
95-08-07	S3	64	Heteromastus filiformis	3	3
95-08-07	S3	64	Scolecolepides viridis	1	33
95-08-07	S3	64	Scolecolepides viridis	2	31
95-08-07	S3	64	Scolecolepides viridis	3	15
95-08-07	S3	64	Streblospio benedicti	1	65
95-08-07	S3	64	Streblospio benedicti	2	78
95-08-07	S3	64	Streblospio benedicti	3	20
95-08-07	S3	64	Tubificoides sp.	1	27
95-08-07	S3	64	Tubificoides sp.	2	54
95-08-07	S3	64	Tubificoides sp.	3	32
95-08-07	S3	64	Macoma balthica	1	80
95-08-07	S3	64	Macoma balthica	2	92
95-08-07	S3	64	Macoma balthica	3	103
95-08-07	S3	64	Macoma mitchelli	1	2
95-08-07	S3	64	Macoma mitchelli	2	1
95-08-07	S3	64	Macoma mitchelli	3	2
95-08-07	S3	64	Rangia cuneata	1	87
95-08-07	S3	64	Rangia cuneata	2	43
95-08-07	S3	64	Rangia cuneata	3	112
95-08-07	S3	64	Cyathura polita	1	53
95-08-07	S3	64	Cyathura polita	2	37
95-08-07	S3	64	Cyathura polita	3	41
95-08-07	S3	64	Leptocheirus plumulosus	1	24
95-08-07	S3	64	Leptocheirus plumulosus	2	34
95-08-07	S3	64	Leptocheirus plumulosus	3	24
95-08-07	S3	64	Melita nitida	1	4
95-08-07	S3	64	Melita nitida	2	3
95-08-07	S3	64	Melita nitida	3	5
95-08-07	S3	64	Monoculodes edwardsi	1	3
95-08-07	S3	64	Monoculodes edwardsi	2	1
95-08-07	S3	64	Monoculodes edwardsi	3	3
95-08-07	S3	64	Chironomidae	1	1
95-08-07	S3	64	Chironomidae	2	3
95-08-07	S3	64	Chironomidae	3	1
95-08-07	S4	64	Micrura leidyi	1	10
95-08-07	S4	64	Micrura leidyi	2	11
95-08-07	S4	64	Micrura leidyi	3	9

95-08-07	S4	64	Heteromastus filiformis	1	6
95-08-07	S4	64	Heteromastus filiformis	2	4
95-08-07	S4	64	Heteromastus filiformis	3	5
95-08-07	S4	64	Nereis succinea	1	0
95-08-07	S4	64	Nereis succinea	2	0
95-08-07	S4	64	Nereis succinea	3	2
95-08-07	S4	64	Scolecolepides viridis	1	2
95-08-07	S4	64	Scolecolepides viridis	2	27
95-08-07	S4	64	Scolecolepides viridis	3	5
95-08-07	S4	64	Streblospio benedicti	1	99
95-08-07	S4	64	Streblospio benedicti	2	50
95-08-07	S4	64	Streblospio benedicti	3	45
95-08-07	S4	64	Tubificoides sp.	1	30
95-08-07	S4	64	Tubificoides sp.	2	25
95-08-07	S4	64	Tubificoides sp.	3	30
95-08-07	S4	64	Macoma balthica	1	28
95-08-07	S4	64	Macoma balthica	2	65
95-08-07	S4	64	Macoma balthica	3	25
95-08-07	S4	64	Macoma mitchelli	1	1
95-08-07	S4	64	Macoma mitchelli	2	0
95-08-07	S4	64	Macoma mitchelli	3	2
95-08-07	S4	64	Rangia cuneata	1	75
95-08-07	S4	64	Rangia cuneata	2	90
95-08-07	S4	64	Rangia cuneata	3	48
95-08-07	S4	64	Balanus improvisus	1	0
95-08-07	S4	64	Balanus improvisus	2	0
95-08-07	S4	64	Balanus improvisus	3	29
95-08-07	S4	64	Cyathura polita	1	28
95-08-07	S4	64	Cyathura polita	2	38
95-08-07	S4	64	Cyathura polita	3	62
95-08-07	S4	64	Edotea triloba	1	0
95-08-07	S4	64	Edotea triloba	2	1
95-08-07	S4	64	Edotea triloba	3	0
95-08-07	S4	64	Leptocheirus plumulosus	1	6
95-08-07	S4	64	Leptocheirus plumulosus	2	42
95-08-07	S4	64	Leptocheirus plumulosus	3	8
95-08-07	S4	64	Corophium lacustre	1	0
95-08-07	S4	64	Corophium lacustre	2	0
95-08-07	S4	64	Corophium lacustre	3	1

95-08-07	S4	64	Melita nitida	1	0
95-08-07	S4	64	Melita nitida	2	9
95-08-07	S4	64	Melita nitida	3	3
95-08-07	S4	64	Monoculodes edwardsi	1	3
95-08-07	S4	64	Monoculodes edwardsi	2	7
95-08-07	S4	64	Monoculodes edwardsi	3	1
95-08-07	S4	64	Chironomidae	1	1
95-08-07	S4	64	Chironomidae	2	1
95-08-07	S4	64	Chironomidae	3	0
95-08-07	S4	64	Rhithropanopeus harrisii	1	2
95-08-07	S4	64	Rhithropanopeus harrisii	2	0
95-08-07	S4	64	Rhithropanopeus harrisii	3	15
95-08-07	S4	64	Membranipora tenuis	1	8
95-08-07	S4	64	Membranipora tenuis	2	4
95-08-07	S4	64	Membranipora tenuis	3	25
95-08-07	S5	64	Micrura leidyi	1	6
95-08-07	S5	64	Micrura leidyi	2	1
95-08-07	S5	64	Micrura leidyi	3	2
95-08-07	S5	64	Heteromastus filiformis	1	4
95-08-07	S5	64	Heteromastus filiformis	2	2
95-08-07	S5	64	Heteromastus filiformis	3	3
95-08-07	S5	64	Scolecolepides viridis	1	7
95-08-07	S5	64	Scolecolepides viridis	2	2
95-08-07	S5	64	Scolecolepides viridis	3	1
95-08-07	S5	64	Streblospio benedicti	1	16
95-08-07	S5	64	Streblospio benedicti	2	13
95-08-07	S5	64	Streblospio benedicti	3	18
95-08-07	S5	64	Tubificoides sp.	1	15
95-08-07	S5	64	Tubificoides sp.	2	6
95-08-07	S5	64	Tubificoides sp.	3	14
95-08-07	S5	64	Congeria leucophaeta	1	5
95-08-07	S5	64	Congeria leucophaeta	2	0
95-08-07	S5	64	Congeria leucophaeta	3	0
95-08-07	S5	64	Macoma balthica	1	68
95-08-07	S5	64	Macoma balthica	2	76
95-08-07	S5	64	Macoma balthica	3	54
95-08-07	S5	64	Macoma mitchelli	1	0
95-08-07	S5	64	Macoma mitchelli	2	2
95-08-07	S5	64	Macoma mitchelli	3	2

95-08-07	S5	64	Rangia cuneata	1	28
95-08-07	S5	64	Rangia cuneata	2	24
95-08-07	S5	64	Rangia cuneata	3	28
95-08-07	S5	64	Cyathura polita	1	36
95-08-07	S5	64	Cyathura polita	2	49
95-08-07	S5	64	Cyathura polita	3	23
95-08-07	S5	64	Leptocheirus plumulosus	1	30
95-08-07	S5	64	Leptocheirus plumulosus	2	27
95-08-07	S5	64	Leptocheirus plumulosus	3	30
95-08-07	S5	64	Melita nitida	1	6
95-08-07	S5	64	Melita nitida	2	2
95-08-07	S5	64	Melita nitida	3	4
95-08-07	S5	64	Chironomidae	1	4
95-08-07	S5	64	Chironomidae	2	7
95-08-07	S5	64	Chironomidae	3	8
95-08-07	S5	64	Rhithropanopeus harrisii	1	0
95-08-07	S5	64	Rhithropanopeus harrisii	2	1
95-08-07	S5	64	Rhithropanopeus harrisii	3	0
95-08-07	S5	64	Membranipora tenuis	1	1
95-08-07	S5	64	Membranipora tenuis	2	1
95-08-07	S5	64	Membranipora tenuis	3	7
95-08-07	S6	64	Micrura leidyi	1	13
95-08-07	S6	64	Micrura leidyi	2	10
95-08-07	S6	64	Micrura leidyi	3	15
95-08-07	S6	64	Heteromastus filiformis	1	14
95-08-07	S6	64	Heteromastus filiformis	2	12
95-08-07	S6	64	Heteromastus filiformis	3	12
95-08-07	S6	64	Polydora ligni	1	1
95-08-07	S6	64	Polydora ligni	2	0
95-08-07	S6	64	Polydora ligni	3	1
95-08-07	S6	64	Scolecolepides viridis	1	21
95-08-07	S6	64	Scolecolepides viridis	2	16
95-08-07	S6	64	Scolecolepides viridis	3	26
95-08-07	S6	64	Streblospio benedicti	1	507
95-08-07	S6	64	Streblospio benedicti	2	318
95-08-07	S6	64	Streblospio benedicti	3	261
95-08-07	S6	64	Tubificoides sp.	1	42

95-08-07	S6	64	Tubificoides sp.	2	42
95-08-07	S6	64	Tubificoides sp.	3	24
95-08-07	S6	64	Macoma balthica	1	102
95-08-07	S6	64	Macoma balthica	2	101
95-08-07	S6	64	Macoma balthica	3	96
95-08-07	S6	64	Macoma mitchelli	1	6
95-08-07	S6	64	Macoma mitchelli	2	0
95-08-07	S6	64	Macoma mitchelli	3	6
95-08-07	S6	64	Rangia cuneata	1	137
95-08-07	S6	64	Rangia cuneata	2	80
95-08-07	S6	64	Rangia cuneata	3	131
95-08-07	S6	64	Cyathura polita	1	21
95-08-07	S6	64	Cyathura polita	2	40
95-08-07	S6	64	Cyathura polita	3	27
95-08-07	S6	64	Edotea triloba	1	1
95-08-07	S6	64	Edotea triloba	2	0
95-08-07	S6	64	Edotea triloba	3	1
95-08-07	S6	64	Leptocheirus plumulosus	1	32
95-08-07	S6	64	Leptocheirus plumulosus	2	39
95-08-07	S6	64	Leptocheirus plumulosus	3	43
95-08-07	S6	64	Melita nitida	1	0
95-08-07	S6	64	Melita nitida	2	3
95-08-07	S6	64	Melita nitida	3	0
95-08-07	S6	64	Monoculodes edwardsi	1	2
95-08-07	S6	64	Monoculodes edwardsi	2	3
95-08-07	S6	64	Monoculodes edwardsi	3	4
95-08-07	S6	64	Chironomidae	1	19
95-08-07	S6	64	Chironomidae	2	26
95-08-07	S6	64	Chironomidae	3	28
95-08-07	S6	64	Rhithropanopeus harrisii	1	17
95-08-07	S6	64	Rhithropanopeus harrisii	2	0
95-08-07	S6	64	Rhithropanopeus harrisii	3	1
95-08-07	S6	64	Membranipora tenuis	1	1
95-08-07	S6	64	Membranipora tenuis	2	1
95-08-07	S6	64	Membranipora tenuis	3	0
95-08-07	S7	64	Micrura leidyi	1	5
95-08-07	S7	64	Micrura leidyi	2	3

95-08-07	S7	64	Micrura leidyi	3	3
95-08-07	S7	64	Heteromastus filiformis	1	1
95-08-07	S7	64	Heteromastus filiformis	2	1
95-08-07	S7	64	Heteromastus filiformis	3	0
95-08-07	S7	64	Nereis succinea	1	1
95-08-07	S7	64	Nereis succinea	2	0
95-08-07	S7	64	Nereis succinea	3	0
95-08-07	S7	64	Eteone heteropoda	1	0
95-08-07	S7	64	Eteone heteropoda	2	1
95-08-07	S7	64	Eteone heteropoda	3	0
95-08-07	S7	64	Polydora ligni	1	5
95-08-07	S7	64	Polydora ligni	2	4
95-08-07	S7	64	Polydora ligni	3	3
95-08-07	S7	64	Scolecolepides viridis	1	68
95-08-07	S7	64	Scolecolepides viridis	2	14
95-08-07	S7	64	Scolecolepides viridis	3	41
95-08-07	S7	64	Streblospio benedicti	1	18
95-08-07	S7	64	Streblospio benedicti	2	10
95-08-07	S7	64	Streblospio benedicti	3	18
95-08-07	S7	64	Tubificoides sp.	1	23
95-08-07	S7	64	Tubificoides sp.	2	22
95-08-07	S7	64	Tubificoides sp.	3	20
95-08-07	S7	64	Macoma balthica	1	18
95-08-07	S7	64	Macoma balthica	2	14
95-08-07	S7	64	Macoma balthica	3	18
95-08-07	S7	64	Macoma mitchelli	1	1
95-08-07	S7	64	Macoma mitchelli	2	1
95-08-07	S7	64	Macoma mitchelli	3	1
95-08-07	S7	64	Rangia cuneata	1	359
95-08-07	S7	64	Rangia cuneata	2	452
95-08-07	S7	64	Rangia cuneata	3	517
95-08-07	S7	64	Balanus improvisus	1	4
95-08-07	S7	64	Balanus improvisus	2	1
95-08-07	S7	64	Balanus improvisus	3	0
95-08-07	S7	64	Cyathura polita	1	58
95-08-07	S7	64	Cyathura polita	2	93
95-08-07	S7	64	Cyathura polita	3	42
95-08-07	S7	64	Edotea triloba	1	6
95-08-07	S7	64	Edotea triloba	2	1
95-08-07	S7	64	Edotea triloba	3	2
95-08-07	S7	64	Leptocheirus plumulosus	1	2

95-08-07	S7	64	Leptocheirus plumulosus	2	2
95-08-07	S7	64	Leptocheirus plumulosus	3	1
95-08-07	S7	64	Corophium lacustre	1	1
95-08-07	S7	64	Corophium lacustre	2	1
95-08-07	S7	64	Corophium lacustre	3	0
95-08-07	S7	64	Melita nitida	1	3
95-08-07	S7	64	Melita nitida	2	3
95-08-07	S7	64	Melita nitida	3	1
95-08-07	S7	64	Monoculodes edwardsi	1	4
95-08-07	S7	64	Monoculodes edwardsi	2	1
95-08-07	S7	64	Monoculodes edwardsi	3	6
95-08-07	S7	64	Rhithropanopeus harrisii	1	14
95-08-07	S7	64	Rhithropanopeus harrisii	2	16
95-08-07	S7	64	Rhithropanopeus harrisii	3	4
95-08-07	S7	64	Membranipora tenuis	1	8
95-08-07	S7	64	Membranipora tenuis	2	45
95-08-07	S7	64	Membranipora tenuis	3	18
95-08-07	S8	64	Micrura leidyi	1	4
95-08-07	S8	64	Micrura leidyi	2	8
95-08-07	S8	64	Micrura leidyi	3	12
95-08-07	S8	64	Heteromastus filiformis	1	1
95-08-07	S8	64	Heteromastus filiformis	2	2
95-08-07	S8	64	Heteromastus filiformis	3	6
95-08-07	S8	64	Scolecolepides viridis	1	16
95-08-07	S8	64	Scolecolepides viridis	2	12
95-08-07	S8	64	Scolecolepides viridis	3	21
95-08-07	S8	64	Streblospio benedicti	1	7
95-08-07	S8	64	Streblospio benedicti	2	28
95-08-07	S8	64	Streblospio benedicti	3	106
95-08-07	S8	64	Tubificoides sp.	1	4
95-08-07	S8	64	Tubificoides sp.	2	9
95-08-07	S8	64	Tubificoides sp.	3	10
95-08-07	S8	64	Macoma balthica	1	66
95-08-07	S8	64	Macoma balthica	2	53
95-08-07	S8	64	Macoma balthica	3	46
95-08-07	S8	64	Macoma mitchelli	1	4
95-08-07	S8	64	Macoma mitchelli	2	0

95-08-07	S8	64	Macoma mitchelli	3	2
95-08-07	S8	64	Rangia cuneata	1	39
95-08-07	S8	64	Rangia cuneata	2	50
95-08-07	S8	64	Rangia cuneata	3	91
95-08-07	S8	64	Cyathura polita	1	29
95-08-07	S8	64	Cyathura polita	2	89
95-08-07	S8	64	Cyathura polita	3	39
95-08-07	S8	64	Edotea triloba	1	0
95-08-07	S8	64	Edotea triloba	2	0
95-08-07	S8	64	Edotea triloba	3	1
95-08-07	S8	64	Leptocheirus plumulosus	1	59
95-08-07	S8	64	Leptocheirus plumulosus	2	55
95-08-07	S8	64	Leptocheirus plumulosus	3	74
95-08-07	S8	64	Melita nitida	1	4
95-08-07	S8	64	Melita nitida	2	7
95-08-07	S8	64	Melita nitida	3	1
95-08-07	S8	64	Monoculodes edwardsi	1	4
95-08-07	S8	64	Monoculodes edwardsi	2	6
95-08-07	S8	64	Monoculodes edwardsi	3	3
95-08-07	S8	64	Chironomidae	1	16
95-08-07	S8	64	Chironomidae	2	14
95-08-07	S8	64	Chironomidae	3	24
95-08-07	S8	64	Rhithropanopeus harrisii	1	0
95-08-07	S8	64	Rhithropanopeus harrisii	2	1
95-08-07	S8	64	Rhithropanopeus harrisii	3	0
95-08-07	S8	64	Membranipora tenuis	1	0
95-08-07	S8	64	Membranipora tenuis	2	0
95-08-07	S8	64	Membranipora tenuis	3	1
95-08-07	HM7	64	Micrura leidyi	1	2
95-08-07	HM7	64	Micrura leidyi	2	0
95-08-07	HM7	64	Micrura leidyi	3	3
95-08-07	HM7	64	Heteromastus filiformis	1	0
95-08-07	HM7	64	Heteromastus filiformis	2	0
95-08-07	HM7	64	Heteromastus filiformis	3	1
95-08-07	HM7	64	Scolecolepides viridis	1	13
95-08-07	HM7	64	Scolecolepides viridis	2	25
95-08-07	HM7	64	Scolecolepides viridis	3	25

95-08-07	HM7	64	Streblospio benedicti	1	20
95-08-07	HM7	64	Streblospio benedicti	2	7
95-08-07	HM7	64	Streblospio benedicti	3	9
95-08-07	HM7	64	Tubificoides sp.	1	4
95-08-07	HM7	64	Tubificoides sp.	2	4
95-08-07	HM7	64	Tubificoides sp.	3	7
95-08-07	HM7	64	Congeria leucophaeta	1	1
95-08-07	HM7	64	Congeria leucophaeta	2	0
95-08-07	HM7	64	Congeria leucophaeta	3	0
95-08-07	HM7	64	Macoma balthica	1	95
95-08-07	HM7	64	Macoma balthica	2	32
95-08-07	HM7	64	Macoma balthica	3	43
95-08-07	HM7	64	Macoma mitchelli	1	0
95-08-07	HM7	64	Macoma mitchelli	2	1
95-08-07	HM7	64	Macoma mitchelli	3	1
95-08-07	HM7	64	Rangia cuneata	1	339
95-08-07	HM7	64	Rangia cuneata	2	220
95-08-07	HM7	64	Rangia cuneata	3	158
95-08-07	HM7	64	Cyathura polita	1	40
95-08-07	HM7	64	Cyathura polita	2	42
95-08-07	HM7	64	Cyathura polita	3	28
95-08-07	HM7	64	Edotea triloba	1	0
95-08-07	HM7	64	Edotea triloba	2	1
95-08-07	HM7	64	Edotea triloba	3	0
95-08-07	HM7	64	Leptocheirus plumulosus	1	12
95-08-07	HM7	64	Leptocheirus plumulosus	2	14
95-08-07	HM7	64	Leptocheirus plumulosus	3	32
95-08-07	HM7	64	Melita nitida	1	0
95-08-07	HM7	64	Melita nitida	2	2
95-08-07	HM7	64	Melita nitida	3	3
95-08-07	HM7	64	Monoculodes edwardsi	1	3
95-08-07	HM7	64	Monoculodes edwardsi	2	2
95-08-07	HM7	64	Monoculodes edwardsi	3	4
95-08-07	HM7	64	Chironomidae	1	9
95-08-07	HM7	64	Chironomidae	2	22
95-08-07	HM7	64	Chironomidae	3	18
95-08-07	HM9	64	Micrura leidyi	1	3
95-08-07	HM9	64	Micrura leidyi	2	4
95-08-07	HM9	64	Micrura leidyi	3	12

95-08-07	HM9	64	Heteromastus filiformis	1	2
95-08-07	HM9	64	Heteromastus filiformis	2	6
95-08-07	HM9	64	Heteromastus filiformis	3	6
95-08-07	HM9	64	Nereis succinea	1	12
95-08-07	HM9	64	Nereis succinea	2	1
95-08-07	HM9	64	Nereis succinea	3	3
95-08-07	HM9	64	Polydora ligni	1	17
95-08-07	HM9	64	Polydora ligni	2	18
95-08-07	HM9	64	Polydora ligni	3	13
95-08-07	HM9	64	Scolecolepides viridis	1	11
95-08-07	HM9	64	Scolecolepides viridis	2	6
95-08-07	HM9	64	Scolecolepides viridis	3	5
95-08-07	HM9	64	Streblospio benedicti	1	28
95-08-07	HM9	64	Streblospio benedicti	2	18
95-08-07	HM9	64	Streblospio benedicti	3	21
95-08-07	HM9	64	Tubificoides sp.	1	33
95-08-07	HM9	64	Tubificoides sp.	2	35
95-08-07	HM9	64	Tubificoides sp.	3	43
95-08-07	HM9	64	Congeria leucophaeta	1	2
95-08-07	HM9	64	Congeria leucophaeta	2	0
95-08-07	HM9	64	Congeria leucophaeta	3	3
95-08-07	HM9	64	Macoma balthica	1	26
95-08-07	HM9	64	Macoma balthica	2	26
95-08-07	HM9	64	Macoma balthica	3	38
95-08-07	HM9	64	Macoma mitchelli	1	1
95-08-07	HM9	64	Macoma mitchelli	2	1
95-08-07	HM9	64	Macoma mitchelli	3	0
95-08-07	HM9	64	Rangia cuneata	1	690
95-08-07	HM9	64	Rangia cuneata	2	632
95-08-07	HM9	64	Rangia cuneata	3	577
95-08-07	HM9	64	Balanus improvisus	1	5
95-08-07	HM9	64	Balanus improvisus	2	0
95-08-07	HM9	64	Balanus improvisus	3	5
95-08-07	HM9	64	Cyathura polita	1	43
95-08-07	HM9	64	Cyathura polita	2	43
95-08-07	HM9	64	Cyathura polita	3	70
95-08-07	HM9	64	Edotea triloba	1	4
95-08-07	HM9	64	Edotea triloba	2	2
95-08-07	HM9	64	Edotea triloba	3	1
95-08-07	HM9	64	Leptocheirus plumulosus	1	1
95-08-07	HM9	64	Leptocheirus	2	2

			plumulosus		
95-08-07	HM9	64	Leptocheirus plumulosus	3	2
95-08-07	HM9	64	Corophium lacustre	1	1
95-08-07	HM9	64	Corophium lacustre	2	1
95-08-07	HM9	64	Corophium lacustre	3	1
95-08-07	HM9	64	Melita nitida	1	9
95-08-07	HM9	64	Melita nitida	2	2
95-08-07	HM9	64	Melita nitida	3	6
95-08-07	HM9	64	Monoculodes edwardsi	1	1
95-08-07	HM9	64	Monoculodes edwardsi	2	1
95-08-07	HM9	64	Monoculodes edwardsi	3	5
95-08-07	HM9	64	Rhithropanopeus harrisii	1	18
95-08-07	HM9	64	Rhithropanopeus harrisii	2	9
95-08-07	HM9	64	Rhithropanopeus harrisii	3	14
95-08-07	HM9	64	Membranipora tenuis	1	16
95-08-07	HM9	64	Membranipora tenuis	2	35
95-08-07	HM9	64	Membranipora tenuis	3	11
95-08-07	HM12	64	Micrura leidyi	1	20
95-08-07	HM12	64	Micrura leidyi	2	18
95-08-07	HM12	64	Micrura leidyi	3	3
95-08-07	HM12	64	Heteromastus filiformis	1	7
95-08-07	HM12	64	Heteromastus filiformis	2	18
95-08-07	HM12	64	Heteromastus filiformis	3	17
95-08-07	HM12	64	Nereis succinea	1	2
95-08-07	HM12	64	Nereis succinea	2	1
95-08-07	HM12	64	Nereis succinea	3	2
95-08-07	HM12	64	Eteone heteropoda	1	2
95-08-07	HM12	64	Eteone heteropoda	2	0
95-08-07	HM12	64	Eteone heteropoda	3	0
95-08-07	HM12	64	Scolecolepides viridis	1	2
95-08-07	HM12	64	Scolecolepides viridis	2	17
95-08-07	HM12	64	Scolecolepides viridis	3	6
95-08-07	HM12	64	Streblospio benedicti	1	12
95-08-07	HM12	64	Streblospio benedicti	2	1
95-08-07	HM12	64	Streblospio benedicti	3	4
95-08-07	HM12	64	Tubificoides sp.	1	47
95-08-07	HM12	64	Tubificoides sp.	2	21
95-08-07	HM12	64	Tubificoides sp.	3	8

95-08-07	HM12	64	Macoma balthica	1	125
95-08-07	HM12	64	Macoma balthica	2	113
95-08-07	HM12	64	Macoma balthica	3	112
95-08-07	HM12	64	Macoma mitchelli	1	0
95-08-07	HM12	64	Macoma mitchelli	2	1
95-08-07	HM12	64	Macoma mitchelli	3	3
95-08-07	HM12	64	Rangia cuneata	1	72
95-08-07	HM12	64	Rangia cuneata	2	81
95-08-07	HM12	64	Rangia cuneata	3	60
95-08-07	HM12	64	Cyathura polita	1	52
95-08-07	HM12	64	Cyathura polita	2	44
95-08-07	HM12	64	Cyathura polita	3	43
95-08-07	HM12	64	Edotea triloba	1	0
95-08-07	HM12	64	Edotea triloba	2	1
95-08-07	HM12	64	Edotea triloba	3	0
95-08-07	HM12	64	Leptocheirus plumulosus	1	82
95-08-07	HM12	64	Leptocheirus plumulosus	2	43
95-08-07	HM12	64	Leptocheirus plumulosus	3	62
95-08-07	HM12	64	Melita nitida	1	6
95-08-07	HM12	64	Melita nitida	2	10
95-08-07	HM12	64	Melita nitida	3	1
95-08-07	HM12	64	Monoculodes edwardsi	1	5
95-08-07	HM12	64	Monoculodes edwardsi	2	2
95-08-07	HM12	64	Monoculodes edwardsi	3	2
95-08-07	HM12	64	Chironomidae	1	1
95-08-07	HM12	64	Chironomidae	2	4
95-08-07	HM12	64	Chironomidae	3	1
95-08-07	HM12	64	Rhithropanopeus harrisii	1	3
95-08-07	HM12	64	Rhithropanopeus harrisii	2	1
95-08-07	HM12	64	Rhithropanopeus harrisii	3	1
95-08-07	HM12	64	Membranipora tenuis	1	0
95-08-07	HM12	64	Membranipora tenuis	2	1
95-08-07	HM12	64	Membranipora tenuis	3	2
95-08-07	HM16	64	Micrura leidyi	1	6
95-08-07	HM16	64	Micrura leidyi	2	2
95-08-07	HM16	64	Micrura leidyi	3	8
95-08-07	HM16	64	Heteromastus filiformis	1	13

95-08-07	HM16	64	Heteromastus filiformis	2	12
95-08-07	HM16	64	Heteromastus filiformis	3	14
95-08-07	HM16	64	Eteone heteropoda	1	0
95-08-07	HM16	64	Eteone heteropoda	2	0
95-08-07	HM16	64	Eteone heteropoda	3	1
95-08-07	HM16	64	Scolecolepides viridis	1	15
95-08-07	HM16	64	Scolecolepides viridis	2	5
95-08-07	HM16	64	Scolecolepides viridis	3	5
95-08-07	HM16	64	Streblospio benedicti	1	0
95-08-07	HM16	64	Streblospio benedicti	2	2
95-08-07	HM16	64	Streblospio benedicti	3	5
95-08-07	HM16	64	Tubificoides sp.	1	0
95-08-07	HM16	64	Tubificoides sp.	2	2
95-08-07	HM16	64	Tubificoides sp.	3	9
95-08-07	HM16	64	Macoma balthica	1	69
95-08-07	HM16	64	Macoma balthica	2	54
95-08-07	HM16	64	Macoma balthica	3	76
95-08-07	HM16	64	Macoma mitchelli	1	1
95-08-07	HM16	64	Macoma mitchelli	2	8
95-08-07	HM16	64	Macoma mitchelli	3	6
95-08-07	HM16	64	Rangia cuneata	1	51
95-08-07	HM16	64	Rangia cuneata	2	33
95-08-07	HM16	64	Rangia cuneata	3	39
95-08-07	HM16	64	Cyathura polita	1	44
95-08-07	HM16	64	Cyathura polita	2	27
95-08-07	HM16	64	Cyathura polita	3	50
95-08-07	HM16	64	Edotea triloba	1	1
95-08-07	HM16	64	Edotea triloba	2	1
95-08-07	HM16	64	Edotea triloba	3	1
95-08-07	HM16	64	Leptocheirus plumulosus	1	50
95-08-07	HM16	64	Leptocheirus plumulosus	2	46
95-08-07	HM16	64	Leptocheirus plumulosus	3	38
95-08-07	HM16	64	Melita nitida	1	7
95-08-07	HM16	64	Melita nitida	2	3
95-08-07	HM16	64	Melita nitida	3	4
95-08-07	HM16	64	Monoculodes edwardsi	1	3
95-08-07	HM16	64	Monoculodes edwardsi	2	3
95-08-07	HM16	64	Monoculodes edwardsi	3	2
95-08-07	HM16	64	Chironomidae	1	2

95-08-07	HM16	64	Chironomidae	2	2
95-08-07	HM16	64	Chironomidae	3	7
95-08-07	HM16	64	Rhithropanopeus harrisii	1	1
95-08-07	HM16	64	Rhithropanopeus harrisii	2	0
95-08-07	HM16	64	Rhithropanopeus harrisii	3	0
95-08-07	HM22	64	Heteromastus filiformis	1	0
95-08-07	HM22	64	Heteromastus filiformis	2	4
95-08-07	HM22	64	Heteromastus filiformis	3	1
95-08-07	HM22	64	Nereis succinea	1	1
95-08-07	HM22	64	Nereis succinea	2	0
95-08-07	HM22	64	Nereis succinea	3	0
95-08-07	HM22	64	Polydora ligni	1	3
95-08-07	HM22	64	Polydora ligni	2	0
95-08-07	HM22	64	Polydora ligni	3	0
95-08-07	HM22	64	Scolecolepides viridis	1	9
95-08-07	HM22	64	Scolecolepides viridis	2	14
95-08-07	HM22	64	Scolecolepides viridis	3	11
95-08-07	HM22	64	Streblospio benedicti	1	12
95-08-07	HM22	64	Streblospio benedicti	2	3
95-08-07	HM22	64	Streblospio benedicti	3	5
95-08-07	HM22	64	Tubificoides sp.	1	0
95-08-07	HM22	64	Tubificoides sp.	2	1
95-08-07	HM22	64	Tubificoides sp.	3	12
95-08-07	HM22	64	Congeria leucophaeta	1	1
95-08-07	HM22	64	Congeria leucophaeta	2	0
95-08-07	HM22	64	Congeria leucophaeta	3	0
95-08-07	HM22	64	Macoma balthica	1	31
95-08-07	HM22	64	Macoma balthica	2	19
95-08-07	HM22	64	Macoma balthica	3	28
95-08-07	HM22	64	Macoma mitchelli	1	1
95-08-07	HM22	64	Macoma mitchelli	2	0
95-08-07	HM22	64	Macoma mitchelli	3	1
95-08-07	HM22	64	Rangia cuneata	1	94
95-08-07	HM22	64	Rangia cuneata	2	66
95-08-07	HM22	64	Rangia cuneata	3	68
95-08-07	HM22	64	Cyathura polita	1	23
95-08-07	HM22	64	Cyathura polita	2	25
95-08-07	HM22	64	Cyathura polita	3	32
95-08-07	HM22	64	Leptocheirus	1	12

			plumulosus		
95-08-07	HM22	64	Leptocheirus plumulosus	2	21
95-08-07	HM22	64	Leptocheirus plumulosus	3	22
95-08-07	HM22	64	Melita nitida	1	4
95-08-07	HM22	64	Melita nitida	2	3
95-08-07	HM22	64	Melita nitida	3	1
95-08-07	HM22	64	Monoculodes edwardsi	1	2
95-08-07	HM22	64	Monoculodes edwardsi	2	3
95-08-07	HM22	64	Monoculodes edwardsi	3	2
95-08-07	HM22	64	Chironomidae	1	8
95-08-07	HM22	64	Chironomidae	2	15
95-08-07	HM22	64	Chironomidae	3	6
95-08-07	HM26	64	Micrura leidyi	1	12
95-08-07	HM26	64	Micrura leidyi	2	18
95-08-07	HM26	64	Micrura leidyi	3	14
95-08-07	HM26	64	Heteromastus filiformis	1	0
95-08-07	HM26	64	Heteromastus filiformis	2	1
95-08-07	HM26	64	Heteromastus filiformis	3	1
95-08-07	HM26	64	Nereis succinea	1	3
95-08-07	HM26	64	Nereis succinea	2	0
95-08-07	HM26	64	Nereis succinea	3	1
95-08-07	HM26	64	Polydora ligni	1	9
95-08-07	HM26	64	Polydora ligni	2	18
95-08-07	HM26	64	Polydora ligni	3	9
95-08-07	HM26	64	Scolecolepides viridis	1	13
95-08-07	HM26	64	Scolecolepides viridis	2	12
95-08-07	HM26	64	Scolecolepides viridis	3	24
95-08-07	HM26	64	Streblospio benedicti	1	1632
95-08-07	HM26	64	Streblospio benedicti	2	1936
95-08-07	HM26	64	Streblospio benedicti	3	1150
95-08-07	HM26	64	Tubificoides sp.	1	481
95-08-07	HM26	64	Tubificoides sp.	2	314
95-08-07	HM26	64	Tubificoides sp.	3	361
95-08-07	HM26	64	Macoma balthica	1	46
95-08-07	HM26	64	Macoma balthica	2	23
95-08-07	HM26	64	Macoma balthica	3	30
95-08-07	HM26	64	Macoma mitchelli	1	1
95-08-07	HM26	64	Macoma mitchelli	2	2
95-08-07	HM26	64	Macoma mitchelli	3	1
95-08-07	HM26	64	Rangia cuneata	1	682

95-08-07	HM26	64	Rangia cuneata	2	565
95-08-07	HM26	64	Rangia cuneata	3	587
95-08-07	HM26	64	Cyathura polita	1	29
95-08-07	HM26	64	Cyathura polita	2	17
95-08-07	HM26	64	Cyathura polita	3	21
95-08-07	HM26	64	Edotea triloba	1	3
95-08-07	HM26	64	Edotea triloba	2	1
95-08-07	HM26	64	Edotea triloba	3	0
95-08-07	HM26	64	Leptocheirus plumulosus	1	29
95-08-07	HM26	64	Leptocheirus plumulosus	2	98
95-08-07	HM26	64	Leptocheirus plumulosus	3	92
95-08-07	HM26	64	Melita nitida	1	0
95-08-07	HM26	64	Melita nitida	2	2
95-08-07	HM26	64	Melita nitida	3	7
95-08-07	HM26	64	Monoculodes edwardsi	1	3
95-08-07	HM26	64	Monoculodes edwardsi	2	3
95-08-07	HM26	64	Monoculodes edwardsi	3	2
95-08-07	HM26	64	Chironomidae	1	59
95-08-07	HM26	64	Chironomidae	2	57
95-08-07	HM26	64	Chironomidae	3	51
95-08-07	HM26	64	Rhithropanopeus harrisii	1	3
95-08-07	HM26	64	Rhithropanopeus harrisii	2	1
95-08-07	HM26	64	Rhithropanopeus harrisii	3	0
95-08-07	G5	64	Micrura leidyi	1	7
95-08-07	G5	64	Micrura leidyi	2	7
95-08-07	G5	64	Micrura leidyi	3	4
95-08-07	G5	64	Heteromastus filiformis	1	0
95-08-07	G5	64	Heteromastus filiformis	2	0
95-08-07	G5	64	Heteromastus filiformis	3	1
95-08-07	G5	64	Nereis succinea	1	0
95-08-07	G5	64	Nereis succinea	2	1
95-08-07	G5	64	Nereis succinea	3	0
95-08-07	G5	64	Polydora ligni	1	1
95-08-07	G5	64	Polydora ligni	2	0
95-08-07	G5	64	Polydora ligni	3	0
95-08-07	G5	64	Scolecolepides viridis	1	1
95-08-07	G5	64	Scolecolepides viridis	2	38

95-08-07	G5	64	Scolecolepides viridis	3	2
95-08-07	G5	64	Streblospio benedicti	1	22
95-08-07	G5	64	Streblospio benedicti	2	4
95-08-07	G5	64	Streblospio benedicti	3	11
95-08-07	G5	64	Tubificoides sp.	1	12
95-08-07	G5	64	Tubificoides sp.	2	2
95-08-07	G5	64	Tubificoides sp.	3	0
95-08-07	G5	64	Macoma balthica	1	80
95-08-07	G5	64	Macoma balthica	2	35
95-08-07	G5	64	Macoma balthica	3	56
95-08-07	G5	64	Macoma mitchelli	1	0
95-08-07	G5	64	Macoma mitchelli	2	3
95-08-07	G5	64	Macoma mitchelli	3	1
95-08-07	G5	64	Rangia cuneata	1	65
95-08-07	G5	64	Rangia cuneata	2	45
95-08-07	G5	64	Rangia cuneata	3	61
95-08-07	G5	64	Cyathura polita	1	49
95-08-07	G5	64	Cyathura polita	2	29
95-08-07	G5	64	Cyathura polita	3	36
95-08-07	G5	64	Edotea triloba	1	0
95-08-07	G5	64	Edotea triloba	2	1
95-08-07	G5	64	Edotea triloba	3	1
95-08-07	G5	64	Leptocheirus plumulosus	1	47
95-08-07	G5	64	Leptocheirus plumulosus	2	29
95-08-07	G5	64	Leptocheirus plumulosus	3	28
95-08-07	G5	64	Melita nitida	1	4
95-08-07	G5	64	Melita nitida	2	4
95-08-07	G5	64	Melita nitida	3	2
95-08-07	G5	64	Monoculodes edwardsi	1	0
95-08-07	G5	64	Monoculodes edwardsi	2	3
95-08-07	G5	64	Monoculodes edwardsi	3	1
95-08-07	G5	64	Chironomidae	1	9
95-08-07	G5	64	Chironomidae	2	7
95-08-07	G5	64	Chironomidae	3	1
95-08-07	G5	64	Rhithropanopeus harrisii	1	0
95-08-07	G5	64	Rhithropanopeus harrisii	2	0
95-08-07	G5	64	Rhithropanopeus harrisii	3	2

95-08-07	G5	64	Membranipora tenuis	1	3
95-08-07	G5	64	Membranipora tenuis	2	0
95-08-07	G5	64	Membranipora tenuis	3	0
95-08-07	G25	64	Micrura leidyi	1	3
95-08-07	G25	64	Micrura leidyi	2	18
95-08-07	G25	64	Micrura leidyi	3	4
95-08-07	G25	64	Heteromastus filiformis	1	1
95-08-07	G25	64	Heteromastus filiformis	2	2
95-08-07	G25	64	Heteromastus filiformis	3	3
95-08-07	G25	64	Nereis succinea	1	6
95-08-07	G25	64	Nereis succinea	2	6
95-08-07	G25	64	Nereis succinea	3	2
95-08-07	G25	64	Polydora ligni	1	1
95-08-07	G25	64	Polydora ligni	2	4
95-08-07	G25	64	Polydora ligni	3	8
95-08-07	G25	64	Scolecolepides viridis	1	0
95-08-07	G25	64	Scolecolepides viridis	2	1
95-08-07	G25	64	Scolecolepides viridis	3	4
95-08-07	G25	64	Streblospio benedicti	1	19
95-08-07	G25	64	Streblospio benedicti	2	32
95-08-07	G25	64	Streblospio benedicti	3	31
95-08-07	G25	64	Tubificoides sp.	1	31
95-08-07	G25	64	Tubificoides sp.	2	33
95-08-07	G25	64	Tubificoides sp.	3	29
95-08-07	G25	64	Congeria leucophaeta	1	1
95-08-07	G25	64	Congeria leucophaeta	2	1
95-08-07	G25	64	Congeria leucophaeta	3	0
95-08-07	G25	64	Macoma balthica	1	44
95-08-07	G25	64	Macoma balthica	2	44
95-08-07	G25	64	Macoma balthica	3	56
95-08-07	G25	64	Macoma mitchelli	1	0
95-08-07	G25	64	Macoma mitchelli	2	0
95-08-07	G25	64	Macoma mitchelli	3	2
95-08-07	G25	64	Rangia cuneata	1	114
95-08-07	G25	64	Rangia cuneata	2	147
95-08-07	G25	64	Rangia cuneata	3	250
95-08-07	G25	64	Balanus improvisus	1	34
95-08-07	G25	64	Balanus improvisus	2	54
95-08-07	G25	64	Balanus improvisus	3	0
95-08-07	G25	64	Cyathura polita	1	40
95-08-07	G25	64	Cyathura polita	2	58
95-08-07	G25	64	Cyathura polita	3	25

95-08-07	G25	64	Leptocheirus plumulosus	1	1
95-08-07	G25	64	Leptocheirus plumulosus	2	0
95-08-07	G25	64	Leptocheirus plumulosus	3	1
95-08-07	G25	64	Melita nitida	1	0
95-08-07	G25	64	Melita nitida	2	5
95-08-07	G25	64	Melita nitida	3	0
95-08-07	G25	64	Monoculodes edwardsi	1	2
95-08-07	G25	64	Monoculodes edwardsi	2	0
95-08-07	G25	64	Monoculodes edwardsi	3	2
95-08-07	G25	64	Chironomidae	1	0
95-08-07	G25	64	Chironomidae	2	0
95-08-07	G25	64	Chironomidae	3	1
95-08-07	G25	64	Rhithropanopeus harrisii	1	6
95-08-07	G25	64	Rhithropanopeus harrisii	2	25
95-08-07	G25	64	Rhithropanopeus harrisii	3	13
95-08-07	G25	64	Membranipora tenuis	1	40
95-08-07	G25	64	Membranipora tenuis	2	37
95-08-07	G25	64	Membranipora tenuis	3	15
95-08-07	R2-TOP	154	Nereis succinea	1	3
95-08-07	R2-TOP	154	Polydora ligni	1	3
95-08-07	R2-TOP	154	Balanus improvisus	1	2
95-08-07	R2-TOP	154	Corophium lacustre	1	3
95-08-07	R2-TOP	154	Rhithropanopeus harrisii	1	2
95-08-07	R2-TOP	154	Cordylophora caspia	1	2
95-08-07	R2-TOP	154	Garvela franciscana	1	2
95-08-07	R2-TOP	154	Membranipora tenuis	1	3
95-08-07	R2-TOP	154	Victorella pavida	1	2
95-08-07	R2-BOTTOM	154	Polydora ligni	1	3
95-08-07	R2-BOTTOM	154	Congeria leucophaeta	1	3
95-08-07	R2-BOTTOM	154	Corophium lacustre	1	2
95-08-07	R2-BOTTOM	154	Melita nitida	1	3
95-08-07	R2-BOTTOM	154	Rhithropanopeus harrisii	1	2
95-08-07	R2-BOTTOM	154	Garvela franciscana	1	2
95-08-07	R2-BOTTOM	154	Stylochus ellipticus	1	3
95-08-07	R2-BOTTOM	154	Membranipora tenuis	1	3

95-08-07	R3-TOP	154	Nereis succinea	1	3
95-08-07	R3-TOP	154	Balanus improvisus	1	1
95-08-07	R3-TOP	154	Leptocheirus plumulosus	1	2
95-08-07	R3-TOP	154	Melita nitida	1	3
95-08-07	R3-TOP	154	Rhithropanopeus harrisii	1	2
95-08-07	R3-TOP	154	Cordylophora caspia	1	2
95-08-07	R3-TOP	154	Garvela franciscana	1	2
95-08-07	R3-TOP	154	Stylochus ellipticus	1	3
95-08-07	R3-TOP	154	Membranipora tenuis	1	2
95-08-07	R3-BOTTOM	154	Nereis succinea	1	3
95-08-07	R3-BOTTOM	154	Congeria leucophaeta	1	2
95-08-07	R3-BOTTOM	154	Balanus improvisus	1	1
95-08-07	R3-BOTTOM	154	Balanus subalbidus	1	3
95-08-07	R3-BOTTOM	154	Corophium lacustre	1	3
95-08-07	R3-BOTTOM	154	Rhithropanopeus harrisii	1	2
95-08-07	R3-BOTTOM	154	Garvela franciscana	1	3
95-08-07	R3-BOTTOM	154	Membranipora tenuis	1	3
95-08-07	R3-BOTTOM	154	Victorella pavida	1	2
95-08-07	R4-TOP	154	Nereis succinea	1	3
95-08-07	R4-TOP	154	Polydora ligni	1	2
95-08-07	R4-TOP	154	Congeria leucophaeta	1	3
95-08-07	R4-TOP	154	Balanus improvisus	1	2
95-08-07	R4-TOP	154	Balanus subalbidus	1	3
95-08-07	R4-TOP	154	Corophium lacustre	1	1
95-08-07	R4-TOP	154	Rhithropanopeus harrisii	1	3
95-08-07	R4-TOP	154	Cordylophora caspia	1	2
95-08-07	R4-TOP	154	Stylochus ellipticus	1	3
95-08-07	R4-TOP	154	Membranipora tenuis	1	2
95-08-07	R4-TOP	154	Victorella pavida	1	1
95-08-07	R4-BOTTOM	154	Nereis succinea	1	3
95-08-07	R4-BOTTOM	154	Polydora ligni	1	2
95-08-07	R4-BOTTOM	154	Balanus improvisus	1	2
95-08-07	R4-BOTTOM	154	Corophium lacustre	1	1
95-08-07	R4-BOTTOM	154	Cordylophora caspia	1	2
95-08-07	R4-BOTTOM	154	Stylochus ellipticus	1	3
95-08-07	R4-BOTTOM	154	Victorella pavida	1	1
95-08-07	R5-TOP	154	Nereis succinea	1	3
95-08-07	R5-TOP	154	Polydora ligni	1	2

95-08-07	R5-TOP	154	Balanus improvisus	1	2
95-08-07	R5-TOP	154	Corophium lacustre	1	2
95-08-07	R5-TOP	154	Rhithropanopeus harrisii	1	2
95-08-07	R5-TOP	154	Cordylophora caspia	1	2
95-08-07	R5-TOP	154	Garvela franciscana	1	2
95-08-07	R5-TOP	154	Stylochus ellipticus	1	3
95-08-07	R5-TOP	154	Victorella pavida	1	1
95-08-07	R5-BOTTOM	154	Nereis succinea	1	2
95-08-07	R5-BOTTOM	154	Polydora ligni	1	2
95-08-07	R5-BOTTOM	154	Balanus improvisus	1	2
95-08-07	R5-BOTTOM	154	Corophium lacustre	1	1
95-08-07	R5-BOTTOM	154	Gammarus tigrinus	1	3
95-08-07	R5-BOTTOM	154	Cordylophora caspia	1	2
95-08-07	R5-BOTTOM	154	Stylochus ellipticus	1	3
95-08-07	R5-BOTTOM	154	Victorella pavida	1	1

CHAPTER 3: ANALYTICAL SERVICES (PROJECT IV)

Analyses Preformed By

Artesian Laboratories, Inc.
630 Churchmans Road
Newark, DE 19702

Interpreted By

Dr. Linda E. Duguay, Principal Investigator
Dr. Douglas G. Capone, Principal Investigator

The University of Maryland Center for Environmental Sciences
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INTRODUCTION

Analyses of contaminant burdens in various species surrounding Hart-Miller Island Confined Disposal Facility (HMI) have been performed since the inception of the monitoring program. In the current monitoring Year 14, however, tissue analysis was restricted to a single species of benthic invertebrate, the clam *Rangia cuneata*, and collected only in the Spring. Fourteen composite tissue samples of *Rangia* from six stations were analyzed by Artesian Laboratories, Inc. for the presence of eight metals. Trace metal detection levels were greatly improved this year, which lead to detectable burdens of all analytes (cadmium, chromium, copper, iron, manganese, nickel, zinc and arsenic) in all samples. No organic analytes were examined this year.

This was the second year since the baseline studies where arsenic had been monitored in tissues and it was detected in all samples. While no *Rangia* were monitored in baseline studies with which to compare current trace metal levels, this species burdens of arsenic, cadmium and nickel are appreciably higher than levels found in the filter feeding clam *Mya arenaria*, from Upper Chesapeake Bay.

METHODS AND MATERIALS

On April 10, 1995, the Chesapeake Biological Laboratory collected fourteen composite samples of the benthic bivalve (clam) *Rangia cuneata* using a 0.05 m^2 Ponar grab. Samples were collected in conjunction with the spring benthic population sampling cruise. Biota samples were enumerated, identified to genus and species, measured, placed in pre-cleaned glass containers with teflon lined lids and immediately frozen onboard. Samples were logged on chain of custody forms with species and station identification and relinquished to Maryland Environmental Service (MES) staff at HMI on the same day of collection.

Samples were held frozen until extraction and analyses by the contractor, Artesian Laboratories, Inc. (ALI) several months later. ALI analyzed for eight metals (arsenic [As], cadmium [Cd], chromium [Cr], copper [Cu], iron [Fe], manganese [Mn], nickel [Ni], and zinc [Zn]). The Year 14 analytical tissue data were accompanied by quality control (QC) data provided by the contractor ALI, as in the previous two monitoring years. MES adopted a program to check the quality of the contractor's analytical methods with reference materials prior to HMI sample analyses. QC method performance was evaluated through replicated analyses of external standard reference material (SRM) for metal analyses (oyster tissue 1566a from the National Institute of Standards and Technology, NIST). Internal QC controls included laboratory reagent blanks and fortified blanks, replicated sample tissue matrix spike recoveries on two samples, surrogate spike recoveries, and replicate analyses on two samples.

WRA-HMI Exterior Monitoring-14th Year

Methods and Quality Control Data-Metals

1. Methods

Samples were dissected and digested according to procedures outlined in Method 200.3 (*"Sample Preparation Procedure for Spectrochemical Determination of Total Recoverable Elements in Biological Tissues"*) contained in EPA/600-4-91-010 (*"Methods for Determination of Metals in Environmental Samples"*, EPA/ORD, Washington, DC, June, 1991). All dissections were performed in a laminar flow clean bench using Teflon-coated utensils. After homogenization, the total tissue weights were determined, and samples were split into two aliquots. one for metals and one for lipids. A copy of the preparation method is attached. Tissue weights utilized for the analyses are presented in Table 1.

Sample analyses were performed as follows using references cited in the analysis report.

ICP	As, Cr, Cd, Cu, Mn, Ni, Zn
Flame atomic absorption	Fe

2. Quality Control Analyses

During sample preparation of the tissues for metals analysis, the following quality control samples were prepared:

- a digestion blank (LRB-Laboratory Reagent Blank)
- one LFB (Laboratory Fortified Blank) for every ten samples (two for the batch)
- one sample duplicate and one matrix spike for every ten samples (two duplicates and two spikes for the batch)
- triplicate analysis of MES-1 SRM

Results of quality control analyses are summarized in Tables 2 and 3.

TABLE 4-1: Tissue Weights: WRA-HMI Monitoring-14th Year

Element	Number of Organisms	Sample Weight (grams)		
		Total Sample	Metals	Lipids
9511781-01	5	27.97	5.00	8.87
9511781-02	5	27.90	5.06	9.95
9511781-03	24	87.82	5.81	10.16
9511781-03 Dup	----	----	5.32	10.07
9511781-03 MS	----	----	5.49	----
9511781-04	20	66.19	5.07	10.20
9511781-05	14	42.66	5.69	10.62
9511781-06	14	50.13	5.21	9.92
9511781-07	13	56.26	5.46	10.69
9511781-07 Dup	----	----	5.38	11.12
9511781-07 MS	----	----	5.62	----
9511781-08	13	50.06	6.40	10.61
9511781-09	13	47.43	6.08	10.00
9511781-10	12	43.94	5.27	10.35
9511781-11	4	10.70	4.51	4.42
9511781-12	5	14.06	4.88	7.43
9511781-13	14	28.41	5.73	10.43
9511781-14	13	24.13	5.23	9.31
9511781-15a Rep 1	----	----	0.55	----
9511781-15b Rep 2	----	----	0.52	----
9511781-15c Rep 3	----	----	0.50	----

TABLE 4-2: Blank and LFB Recoveries

Element	LFB Spike Conc (mg/L)	Analysis Date	LRB Conc (mg/L)	Recovery (%)	
				LFB#1	LFB#2
As	0.50	11/29/95	<0.040	102	92
Cd	0.10	11/29/95	<0.004	107	102
Cr	0.50	11/29/95	<0.008	109	100
Cu	0.50	11/29/95	<0.003	104	99
Fe	0.50	11/29/95	<0.009	106	94
Mn	0.50	11/29/95	<0.003	108	98
Ni	0.50	11/29/95	<0.011	110	100
Zn	0.50	11/29/95	0.006	105	101

TABLE 4-3: Duplicate Analyses and Matrix Spike Recoveries

Sample #: 9511781-03

Element	Duplicate Analysis (mg/Kg)			Ave Conc (mg/Kg)	Spike Conc (mg/Kg)	Rec (mg/Kg)	Rec (%)
	Rep 1	Rep 2	%RPD				
As	0.91	1.23	30%	1.07	4.56	5.35	94%
Cd	0.10	0.13	26%	0.115	0.91	1.02	99%
Cr	0.24	0.31	25%	0.275	4.56	4.85	100%
Cu	1.43	1.47	3%	1.45	4.56	6.03	100%
Fe	46.9	64.0	31%	56.8	45.6	87.5	89%[1]
Mn	8.63	10.5	20%	9.57	4.56	13.31	82%
Ni	4.30	5.41	23%	4.86	4.56	9.16	94%
Zn	16.3	26.5	47%	21.4	18.2	33.6	95%[1]

[1] Calculated on Rep 1

Sample #: 9511781-07

Element	Duplicate Analysis (mg/Kg)			Ave Conc (mg/Kg)	Spike Conc (mg/Kg)	Rec (mg/Kg)	Rec (%)
	Rep 1	Rep 2	%RPD				
As	1.03	1.08	5%	1.055	4.45	5.39	97%
Cd	0.082	0.080	1%	0.081	0.89	1.00	103%
Cr	0.26	0.26	0%	0.26	4.45	4.68	99%
Cu	1.58	1.58	0%	1.58	4.54	5.94	98%
Fe	43.8	42.8	2%	43.3	44.5	81.3	85%
Mn	7.55	6.88	9%	7.22	4.45	12.0	107%
Ni	7.65	7.85	3%	7.75	4.45	11.82	91%
Zn	19.7	19.7	0%	19.7	4.45	24.4	106%

ARTESIAN LABORATORIES

[illegible] Laboratories, Inc.
[illegible] Williams Road
Newark, Delaware [illegible]
[illegible] 20 • 453-[illegible]86 FAX

REPORT OF ANALYSIS

Maryland Environmental Svc
2011 Commerce Park Drive
Annapolis, MD 21401

Attn: Mr. Rex A. Lloyd

Order #: 95-11-781
Date: 06/20/96 09:33
Work ID: HMI 14th Yr Ext Monitoring
Date Received: 08/18/95
Date Completed: 12/08/95

Purchase Order: 93-04-44A/12/94 Acct:2170292
Invoice Number: 53004

Client Code: MES

SAMPLE IDENTIFICATION

Sample Number	Sample Description
01	HM 16-1 95477 Rangia
02	HM 16-2 95478 Rangia
03	G25-1 95479 Rangia
04	G25-2 95480 Rangia
05	G25-3 95481 Rangia
06	G25-4 95482 Rangia
07	HM 12-1 95469 Rangia
08	HM 12-2 95470 Rangai
09	S 4-1 95471 Rangia
10	S 4-2 95472 Rangia
11	S 2-1 95473 Rangia
12	S 2-2 95474 Rangia
13	HM 22-1 95475 Rangia
14	HM 22-2 95476 Rangia
15	MES-1 Replicate 1

This cover page is an integral part of the analytical report that follows.

Results are reported on a wet weight basis.

Sample 9511781-15A (MES-1) was a dried reference material.

Warren Van Arsdall

Certified By
Warren Van Arsdall

JUN 21 1996

TEST RESULTS BY SAMPLE

Sample: 01A HM 16-1 95477 Rangia
Collected: 04/10/95

Category: TISSUE

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
% Lipids in Tissue	2.04		% Lipids	AL	12/04/95
Arsenic, ICP	0.67	0.40	mg/Kg	RJM	11/29/95 19:27
Cadmium, ICP	0.11	0.04	mg/Kg	RJM	11/29/95 20:27
Chromium, ICP	0.40	0.08	mg/Kg	RJM	11/29/95 20:27
Copper, ICP	1.36	0.03	mg/Kg	RJM	11/29/95 20:27
Digestion, Furnace/Ag	11/29/95		date digested	AMH	11/30/95 15:00
Extraction, Tissue	12/04/95		Date extracted	AL	
Iron, Flame AA	23.9	0.10	mg/Kg	JTH	12/07/95 12:15
Manganese, ICP	7.46	0.05	mg/Kg	RJM	11/29/95 20:27
Nickel, ICP	8.06	0.11	mg/Kg	RJM	11/29/95 20:27
Zinc, ICP	16.9	0.03	mg/Kg	RJM	11/29/95 20:27

Sample: 02A HM 16-2 95478 Rangia
Collected: 04/10/95

Category: TISSUE

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
% Lipids in Tissue	3.14		% Lipids	AL	12/04/95
Arsenic, ICP	1.09	0.40	mg/Kg	RJM	11/29/95 19:30
Cadmium, ICP	0.10	0.04	mg/Kg	RJM	11/29/95 19:30
Chromium, ICP	0.50	0.08	mg/Kg	RJM	11/29/95 19:30
Copper, ICP	1.33	0.03	mg/Kg	RJM	11/29/95 19:30
Digestion, Furnace/Ag	11/29/95		date digested	AMH	11/30/95 15:00
Extraction, Tissue	12/04/95		Date extracted	AL	
Iron, Flame AA	49.5	0.10	mg/Kg	JTH	12/07/95 12:15
Manganese, ICP	22.4	0.05	mg/Kg	RJM	11/29/95 19:30
Nickel, ICP	8.68	0.11	mg/Kg	RJM	11/29/95 19:30
Zinc, ICP	21.1	0.03	mg/Kg	RJM	11/29/95 19:30

Sample: 03A G25-1 95479 Rangia
Collected: 04/10/95

Category: TISSUE

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
% Lipids in Tissue	2.64		% Lipids	AL	12/04/95
Arsenic, ICP	0.91	0.40	mg/Kg	RJM	11/29/95 19:17
Cadmium, ICP	0.10	0.04	mg/Kg	RJM	11/29/95 19:17
Chromium, ICP	0.24	0.08	mg/Kg	RJM	11/29/95 19:17
Copper, ICP	1.43	0.03	mg/Kg	RJM	11/29/95 19:17
Digestion, Furnace/Ag	11/29/95		date digested	AMH	11/30/95 15:00
Extraction, Tissue	12/04/95		Date extracted	AL	
Iron, Flame AA	46.9	0.10	mg/Kg	JTH	12/07/95 12:15
Manganese, ICP	8.33	0.05	mg/Kg	RJM	11/29/95 19:17
Nickel, ICP	4.30	0.11	mg/Kg	RJM	11/29/95 19:17
Zinc, ICP	16.3	0.03	mg/Kg	RJM	11/29/95 19:17

JUN 24 1996

TEST RESULTS BY SAMPLE

Sample: 038 G25-1 95479 Rangia Dup **Category: TISSUE**
Collected: 04/10/95

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
Arsenic, ICP	1.23	0.40	mg/Kg	RJM	11/29/95 19:20
Cadmium, ICP	0.13	0.04	mg/Kg	RJM	11/29/95 19:20
Chromium, ICP	0.31	0.08	mg/Kg	RJM	11/29/95 19:20
Copper, ICP	1.47	0.03	mg/Kg	RJM	11/29/95 19:20
Digestion, Furnace/Ag	11/29/95		date digested	AMH	11/30/95 15:00
Extraction, Tissue	12/04/95		Date extracted	AL	
Iron, Flame AA	64.0	0.10	mg/Kg	JTH	12/07/95 12:15
Manganese, ICP	10.5	0.05	mg/Kg	RJM	11/29/95 19:20
Nickel, ICP	5.41	0.11	mg/Kg	RJM	11/29/95 19:20
Zinc, ICP	26.5	0.03	mg/Kg	RJM	11/29/95 19:20

Sample: 03C G25-1 95479 Rangia Mat Spk **Category: TISSUE**
Collected: 04/10/95

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
% Lipids in Tissue	2.96		% Lipids	AL	12/04/95
Arsenic, ICP	5.35	0.40	mg/Kg	RJM	11/29/95 19:24
Cadmium, ICP	1.02	0.04	mg/Kg	RJM	11/29/95 19:24
Chromium, ICP	4.85	0.08	mg/Kg	RJM	11/29/95 19:24
Copper, ICP	6.03	0.03	mg/Kg	RJM	11/29/95 19:24
Digestion, Furnace/Ag	11/29/95		date digested	AMH	11/30/95 15:00
Extraction, Tissue	12/04/95		Date extracted	AL	
Iron, Flame AA	87.5	0.10	mg/Kg	JTH	12/07/95 12:15
Manganese, ICP	13.3	0.05	mg/Kg	RJM	11/29/95 19:24
Nickel, ICP	9.16	0.11	mg/Kg	RJM	11/29/95 19:24
Zinc, ICP	33.6	0.03	mg/Kg	RJM	11/29/95 19:24

Sample: 04A G25-2 95480 Rangia **Category: TISSUE**
Collected: 04/10/95

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
% Lipids in Tissue	2.48		% Lipids	AL	12/04/95
Arsenic, ICP	0.86	0.40	mg/Kg	RJM	11/29/95 19:33
Cadmium, ICP	0.07	0.04	mg/Kg	RJM	11/29/95 19:33
Chromium, ICP	0.31	0.08	mg/Kg	RJM	11/29/95 19:33
Copper, ICP	1.21	0.03	mg/Kg	RJM	11/29/95 19:33
Digestion, Furnace/Ag	11/29/95		date digested	AMH	11/30/95 15:00
Extraction, Tissue	12/04/95		Date extracted	AL	
Iron, Flame AA	96.2	0.10	mg/Kg	JTH	12/07/95 12:15
Manganese, ICP	14.4	0.05	mg/Kg	RJM	11/29/95 19:33
Nickel, ICP	4.68	0.11	mg/Kg	RJM	11/29/95 19:33
Zinc, ICP	16.5	0.03	mg/Kg	RJM	11/29/95 19:33

TEST RESULTS BY SAMPLE

Sample: 05A G25-3 95481 Rangia **Category: TISSUE**
Collected: 04/10/95

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
% Lipids in Tissue	4.51		% Lipids	AL	12/04/95
Arsenic, ICP	1.42	0.40	mg/Kg	RJM	11/29/95 19:36
Cadmium, ICP	0.13	0.04	mg/Kg	RJM	11/29/95 19:36
Chromium, ICP	0.29	0.08	mg/Kg	RJM	11/29/95 19:36
Copper, ICP	1.64	0.03	mg/Kg	RJM	11/29/95 19:36
Digestion, Furnace/Ag	11/29/95		date digested	AMH	11/30/95 15:00
Extraction, Tissue	12/04/95		Date extracted	AL	
Iron, Flame AA	79.1	0.10	mg/Kg	JTH	12/07/95 12:15
Manganese, ICP	14.9	0.05	mg/Kg	RJM	11/29/95 19:36
Nickel, ICP	5.63	0.11	mg/Kg	RJM	11/29/95 19:36
Zinc, ICP	21.5	0.03	mg/Kg	RJM	11/29/95 19:36

Sample: 06A G25-4 95482 Rangia **Category: TISSUE**
Collected: 04/10/95

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
% Lipids in Tissue	3.14		% Lipids	AL	12/04/95
Arsenic, ICP	1.05	0.40	mg/Kg	RJM	11/29/95 19:40
Cadmium, ICP	0.10	0.04	mg/Kg	RJM	11/29/95 19:40
Chromium, ICP	0.34	0.08	mg/Kg	RJM	11/29/95 19:40
Copper, ICP	1.61	0.03	mg/Kg	RJM	11/29/95 19:40
Digestion, Furnace/Ag	11/29/95		date digested	AMH	11/30/95 15:00
Extraction, Tissue	12/04/95		Date extracted	AL	
Iron, Flame AA	62.8	0.10	mg/Kg	JTH	12/07/95 12:15
Manganese, ICP	10.3	0.05	mg/Kg	RJM	11/29/95 19:40
Nickel, ICP	5.90	0.11	mg/Kg	RJM	11/29/95 19:40
Zinc, ICP	18.6	0.03	mg/Kg	RJM	11/29/95 19:40

Sample: 07A HM 12-1 95469 Rangia **Category: TISSUE**
Collected: 04/10/95

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
% Lipids in Tissue	2.59		% Lipids	AL	12/04/95
Arsenic, ICP	1.03	0.40	mg/Kg	RJM	11/29/95 20:05
Cadmium, ICP	0.082	0.04	mg/Kg	RJM	11/29/95 20:05
Chromium, ICP	0.26	0.08	mg/Kg	RJM	11/29/95 20:05
Copper, ICP	1.58	0.03	mg/Kg	RJM	11/29/95 20:05
Digestion, Furnace/Ag	11/29/95		date digested	AMH	11/30/95 15:00
Extraction, Tissue	12/04/95		Date extracted	AL	
Iron, Flame AA	43.8	0.10	mg/Kg	JTH	12/07/95 12:15
Manganese, ICP	7.55	0.05	mg/Kg	RJM	11/29/95 20:05
Nickel, ICP	7.65	0.11	mg/Kg	RJM	11/29/95 20:05
Zinc, ICP	19.7	0.03	mg/Kg	RJM	11/29/95 20:05

Sample: 07B HM 12-1 95469 Rangia Dup **Category: TISSUE**
Collected: 04/10/95

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
% Lipids in Tissue	3.12		% Lipids	AL	12/04/95
Arsenic, ICP	1.08	0.40	mg/Kg	RJM	11/29/95 20:09
Cadmium, ICP	0.080	0.04	mg/Kg	RJM	11/29/95 20:09
Chromium, ICP	0.26	0.08	mg/Kg	RJM	11/29/95 20:09
Copper, ICP	1.58	0.03	mg/Kg	RJM	11/29/95 20:09
Digestion, Furnace/Ag	11/29/95		date digested	AMH	11/30/95 15:00
Extraction, Tissue	12/04/95		Date extracted	AL	
Iron, Flame AA	42.8	0.10	mg/Kg	JTH	12/07/95 12:15
Manganese, ICP	6.88	0.05	mg/Kg	RJM	11/29/95 20:09
Nickel, ICP	7.85	0.11	mg/Kg	RJM	11/29/95 20:09
Zinc, ICP	19.7	0.03	mg/Kg	RJM	11/29/95 20:09

Sample: 07C HM 12-1 95469 Mat Spk **Category: TISSUE**
Collected: 04/10/95

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
Arsenic, ICP	4.85	0.40	mg/Kg	RJM	11/29/95 20:12
Cadmium, ICP	1.00	0.04	mg/Kg	RJM	11/29/95 20:12
Chromium, ICP	4.68	0.08	mg/Kg	RJM	11/29/95 20:12
Copper, ICP	5.94	0.03	mg/Kg	RJM	11/29/95 20:12
Digestion, Furnace/Ag	11/29/95		date digested	AMH	11/30/95 15:00
Iron, Flame AA	81.3	0.10	mg/Kg	JTH	12/07/95 12:15
Manganese, Flame AA	12.3	0.10	mg/Kg	RJM	11/29/95 20:12
Nickel, ICP	11.8	0.11	mg/Kg	RJM	11/29/95 20:12
Zinc, ICP	24.4	0.03	mg/Kg	RJM	11/29/95 20:12

Sample: 08A HM 12-2 95470 Rangai **Category: TISSUE**
Collected: 04/10/95

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
% Lipids in Tissue	3.19		% Lipids	AL	12/05/95
Arsenic, ICP	0.70	0.40	mg/Kg	RJM	11/29/95 19:49
Cadmium, ICP	0.11	0.04	mg/Kg	RJM	11/29/95 19:49
Chromium, ICP	0.32	0.08	mg/Kg	RJM	11/29/95 19:49
Copper, ICP	1.49	0.03	mg/Kg	RJM	11/29/95 19:49
Digestion, Furnace/Ag	11/29/95		date digested	AMH	11/30/95 15:00
Extraction, Tissue	12/05/95		Date extracted	AL	
Iron, Flame AA	48.3	0.10	mg/Kg	JTH	12/07/95 12:15
Manganese, ICP	14.2	0.05	mg/Kg	RJM	11/29/95 19:49
Nickel, ICP	6.45	0.11	mg/Kg	RJM	11/29/95 19:49
Zinc, ICP	20.8	0.30	mg/Kg	RJM	11/29/95 19:49

JUN 21 1996

Sample: 09A S 4-1 95471 Rangia **Category: TISSUE**
Collected: 04/10/95

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
% Lipids in Tissue	2.29		% Lipids	AL	12/05/95

TEST RESULTS BY SAMPLE

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
Arsenic, ICP	1.25	0.40	mg/Kg	RJM	11/29/95 19:53
Cadmium, ICP	0.11	0.04	mg/Kg	RJM	11/29/95 19:53
Chromium, ICP	0.36	0.08	mg/Kg	RJM	11/29/95 19:53
Copper, ICP	1.65	0.03	mg/Kg	RJM	11/29/95 19:53
Digestion, Furnace/Ag	11/29/95		date digested	AMH	11/30/95 15:00
Extraction, Tissue	12/05/95		Date extracted	AL	
Iron, Flame AA	60.5	0.10	mg/Kg	JTH	12/07/95 12:15
Manganese, ICP	18.7	0.05	mg/Kg	RJM	11/29/95 19:53
Nickel, ICP	6.24	0.11	mg/Kg	RJM	11/29/95 19:53
Zinc, ICP	24.3	0.03	mg/Kg	RJM	11/29/95 19:53

Sample: 10A S 4-2 95472 Rangia **Category: TISSUE**
Collected: 04/10/95

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
% Lipids in Tissue	4.34		% Lipids	AL	12/05/95
Arsenic, ICP	0.70	0.40	mg/Kg	RJM	11/29/95 19:56
Cadmium, ICP	0.12	0.04	mg/Kg	RJM	11/29/95 19:56
Chromium, ICP	0.36	0.088	mg/Kg	RJM	11/29/95 19:56
Copper, ICP	1.47	0.03	mg/Kg	RJM	11/29/95 19:56
Digestion, Furnace/Ag	11/29/95		date digested	AMH	11/30/95 15:00
Extraction, Tissue	12/05/95		Date extracted	AL	
Iron, Flame AA	62.8	0.10	mg/Kg	JTH	12/07/95 12:15
Manganese, ICP	24.1	0.05	mg/Kg	RJM	11/29/95 19:56
Nickel, ICP	5.66	0.11	mg/Kg	RJM	11/29/95 19:56
Zinc, ICP	24.3	0.03	mg/Kg	RJM	11/29/95 19:56

Sample: 11A S 2-1 95473 Rangia **Category: TISSUE**
Collected: 04/10/95

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
% Lipids in Tissue	4.10		% Lipids	AL	12/05/95
Arsenic, ICP	0.93	0.40	mg/Kg	RJM	11/29/95 19:59
Cadmium, ICP	0.23	0.04	mg/Kg	RJM	11/29/95 19:59
Chromium, ICP	0.41	0.08	mg/Kg	RJM	11/29/95 19:59
Copper, ICP	1.80	0.03	mg/Kg	RJM	11/29/95 19:59
Digestion, Furnace/Ag	11/29/95		date digested	AMH	11/30/95 15:00
Extraction, Tissue	12/05/95		Date extracted	AL	
Iron, Flame AA	37.2	0.10	mg/Kg	RJM	11/29/95 19:59
Manganese, ICP	15.1	0.05	mg/Kg	RJM	11/29/95 19:59
Nickel, ICP	8.85	0.11	mg/Kg	RJM	11/29/95 19:59
Zinc, ICP	28.6	0.03	mg/Kg	RJM	11/29/95 19:59

Sample: 12A S 2-2 95474 Rangia **Category: TISSUE**
Collected: 04/10/95

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
% Lipids in Tissue	3.91		% Lipids	AL	12/05/95
Arsenic, ICP	1.36	0.40	mg/Kg	RJM	11/29/95 20:38
Cadmium, ICP	0.18	0.04	mg/Kg	RJM	11/29/95 20:38
Chromium, ICP	0.47	0.08	mg/Kg	RJM	11/29/95 20:38

TEST RESULTS BY SAMPLE

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
Copper, ICP	2.06	0.03	mg/Kg	RJM	11/29/95 20:38
Digestion, Furnace/Ag	11/29/95		date digested	AMH	11/30/95 15:00
Extraction, Tissue	12/05/95		Date extracted	AL	
Iron, Flame AA	111	0.10	mg/Kg	JTH	12/07/95 12:15
Manganese, ICP	39.7	0.05	mg/Kg	RJM	11/29/95 20:38
Nickel, ICP	6.56	0.11	mg/Kg	RJM	11/29/95 20:38
Zinc, ICP	39.9	0.03	mg/Kg	RJM	11/29/95 20:38

Sample: 13A HM 22-1 95475 Rangia **Category: TISSUE**
Collected: 04/10/95

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
% Lipids in Tissue	4.14		% Lipids	AL	12/05/95
Arsenic, ICP	1.45	0.40	mg/Kg	RJM	11/29/95 20:15
Cadmium, ICP	0.17	0.04	mg/Kg	RJM	11/29/95 20:15
Chromium, ICP	0.59	0.08	mg/Kg	RJM	11/29/95 20:15
Copper, ICP	2.30	0.03	mg/Kg	RJM	11/29/95 20:15
Digestion, Furnace/Ag	11/29/95		date digested	AMH	11/30/95 15:00
Extraction, Tissue	12/05/95		Date extracted	AL	
Iron, Flame AA	153	0.10	mg/Kg	JTH	12/07/95 12:15
Manganese, ICP	53.7	0.05	mg/Kg	RJM	11/29/95 20:15
Nickel, ICP	12.8	0.11	mg/Kg	RJM	11/29/95 20:15
Zinc, ICP	47.1	0.03	mg/Kg	RJM	11/29/95 20:15

Sample: 14A HM 22-2 95476 Rangia **Category: TISSUE**
Collected: 04/10/95

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
% Lipids in Tissue	3.35		% Lipids	AL	12/05/95
Arsenic, ICP	0.85	0.40	mg/Kg	RJM	11/29/95 20:18
Cadmium, ICP	0.18	0.04	mg/Kg	RJM	11/29/95 20:18
Chromium, ICP	0.50	0.08	mg/Kg	RJM	11/29/95 20:18
Copper, ICP	2.44	0.03	mg/Kg	RJM	11/29/95 20:18
Digestion, Furnace/Ag	11/29/95		date digested	AMH	11/30/95 15:00
Extraction, Tissue	12/05/95		Date extracted	AL	
Iron, Flame AA	141	0.10	mg/Kg	JTH	12/07/95 12:15
Manganese, ICP	77.9	0.05	mg/Kg	RJM	11/29/95 20:18
Nickel, ICP	11.0	0.11	mg/Kg	RJM	11/29/95 20:18
Zinc, ICP	42.4	0.03	mg/Kg	RJM	11/29/95 20:18

Sample: 15A MES-1 Replicate 1 **Category: TISSUE_SRM**
Collected: 04/10/95

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
Arsenic, ICP	17.6	0.40	mg/Kg	RJM	11/29/95 20:28
Cadmium, ICP	3.50	0.04	mg/Kg	RJM	11/29/95 20:28
Chromium, ICP	0.60	0.08	mg/Kg	RJM	11/29/95 20:28
Copper, ICP	58.8	0.03	mg/Kg	RJM	11/29/95 20:28
Digestion, Furnace/Ag	11/29/95		date digested	AMH	11/30/95 15:00
Iron, Flame AA	390	0.10	mg/Kg	JTH	12/07/95 12:15
Manganese, ICP	10.2	0.05	mg/Kg	RJM	11/29/95 20:28

TEST RESULTS BY SAMPLE

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
Nickel, ICP	2.44	0.11	mg/Kg	RJM	11/29/95 20:28
Zinc, ICP	750	0.03	mg/Kg	RJM	11/29/95 20:28

Sample: 15B MES-1 Replicate 2 **Category: TISSUE_SRM**
Collected: 04/10/95

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
Arsenic, ICP	16.2	0.40	mg/Kg	RJM	11/29/95 20:31
Cadmium, ICP	4.05	0.004	mg/Kg	RJM	11/29/95 20:31
Chromium, ICP	0.68	0.08	mg/Kg	RJM	11/29/95 20:31
Copper, ICP	59.4	0.03	mg/Kg	RJM	11/29/95 20:31
Digestion, Furnace/Ag	11/29/95		date digested	AMH	11/30/95 15:00
Iron, Flame AA	390	0.10	mg/Kg	JTH	12/07/95 12:15
Manganese, ICP	10.6	0.05	mg/Kg	RJM	11/29/95 20:31
Nickel, ICP	1.84	0.11	mg/Kg	RJM	11/29/95 20:31
Zinc, ICP	766	0.03	mg/Kg	RJM	11/29/95 20:31

Sample: 15C MES-1 Replicate 3 **Category: TISSUE_SRM**
Collected: 04/10/95

Test Description	Result	Det Limit	Units	By	Analyzed Dt/Tm
Arsenic, ICP	13.7	0.40	mg/Kg	RJM	11/29/95 20:34
Cadmium, ICP	4.10	0.04	mg/Kg	RJM	11/29/95 20:34
Chromium, ICP	0.50	0.08	mg/Kg	RJM	11/29/95 20:34
Copper, ICP	63.2	0.03	mg/Kg	RJM	11/29/95 20:34
Digestion, Furnace/Ag	11/29/95		date digested	AMH	11/30/95 15:00
Iron, Flame AA	450	0.10	mg/Kg	JTH	12/07/95 12:15
Manganese, ICP	11.4	0.05	mg/Kg	RJM	11/29/95 20:34
Nickel, ICP	1.42	0.11	mg/Kg	RJM	11/29/95 20:34
Zinc, ICP	825	0.03	mg/Kg	RJM	11/29/95 20:34

TEST METHODOLOGIES

Acid Digestion, Furnace AA and/or Ag

Wastewater/drinking water	EPA (1983) Sec 4.1.3
RCRA TCLP & groundwater	SW 846 Method 3020
Solids	SW 846 Method 3050

Arsenic (As) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Cadmium (Cd) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Chromium (Cr) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Copper (Cu) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Iron (Fe) - Flame AA

Wastewater & drinking water	EPA (1983) Method 236.1
RCRA TCLP & groundwater	SW 846 Method 7380
Solids	SW 846 Method 7380

Manganese (Mn) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Nickel (Ni) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7
RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Zinc (Zn) - ICP (Inductively Coupled Argon Plasma Emission Spectroscopy)

Wastewater & drinking water	EPA (1983) Method 200.7

TEST METHODOLOGIES

RCRA TCLP & groundwater	SW 846 Method 6010
Solids	SW 846 Method 6010

Percent Lipids

FDA Pesticide Analytical Manual. Vol 1. Sec 211.

Maryland Environmental Service
Sample Chain of Custody

Project Name: WRA–HMI Exterior Monitoring 14th Year Samples
Project Number: 792–7294 1403
Sample Purpose: Benthic Tissue Samples
Form: xmonbn14.wk1, 08/15/95 TRB

Sample Number	MES Number	Sample Location	Date	Time	Weather Code	Tide Code	Sampler	Depth (Feet)	Sample Type	Species	Required Analysis	# of Bottles
HM 16–1	95477	39*13'17/76*22'30	4/10/95	1000	Windy, Cloudy	Ebb	Shoemaker	18	Tissue	Rangia	See Below	1
HM 16–2	95478	39*13'17/76*22'30	4/10/95	1000	Windy, Cloudy	Ebb	Shoemaker	18	Tissue	Rangia	See Below	1
G25–1	95479	39*14'49/76*21'05	4/10/95	1215	Windy, Cloudy	Flood	Shoemaker	17	Tissue	Rangia	See Below	1
G25–2	95480	39*14'49/76*21'05	4/10/95	1215	Windy, Cloudy	Flood	Shoemaker	17	Tissue	Rangia	See Below	1
G25–3	95481	39*14'49/76*21'05	4/10/95	1215	Windy, Cloudy	Flood	Shoemaker	17	Tissue	Rangia	See Below	1
G25–4	95482	39*14'49/76*21'05	4/10/95	1215	Windy, Cloudy	Flood	Shoemaker	17	Tissue	Rangia	See Below	1
HM 12–1	95469	39*14'05/76*20'05	4/10/95	1245	Windy, Cloudy	Flood	Shoemaker	18	Tissue	Rangia	See Below	1
HM 12–2	95470	39*14'05/76*20'05	4/10/95	1245	Windy, Cloudy	Flood	Shoemaker	18	Tissue	Rangia	See Below	1
S 4–1	95471	39*14'40/76*21'28	4/10/95	1400	Windy, Cloudy	Flood	Shoemaker	16	Tissue	Rangia	See Below	1
S 4–2	95472	39*14'40/76*21'28	4/10/95	1400	Windy, Cloudy	Flood	Shoemaker	16	Tissue	Rangia	See Below	1
S 2–1	95473	39*15'25/76*20'35	4/10/95	1500	Windy, Cloudy	Slack	Shoemaker	13	Tissue	Rangia	See Below	1
S 2–2	95474	39*15'25/76*20'35	4/10/95	1500	Windy, Cloudy	Slack	Shoemaker	13	Tissue	Rangia	See Below	1
HM 22–1	95475	39*16'58/76*18'51	4/10/95	1625	Windy, Cloudy	Flood	Shoemaker	14	Tissue	Rangia	See Below	1
HM 22–2	95476	39*16'58/76*18'51	4/10/95	1625	Windy, Cloudy	Flood	Shoemaker	14	Tissue	Rangia	See Below	1
MES–1	MES–1	1566A	10/85						Tissue	Oyster	See Below	1
Samples Frozen? _____ Yes _____ No									Total Number of Bottles			15

Analysis:
1. Please confer with Keith Hausknecht prior to logging samples for analysis. There are special requirements on this project. See Work Plan for analysis of 14th Year samples.
2. Tissues samples must remain frozen until processing begins. Tissue results shall be reported as weight weight.
3. Analyze for the following metals: Arsenic, Cadmium, Chromium, Copper, Nickel, Zinc, Iron and Manganese
6. Analyze for Lipid Content using the FDA Pesticide Analytical Manual, Vol. 1, Section 211.

Relinquished By:	Date	Time	Accepted By:	Date	Time
Cindy Shoemaker	4/10/95		MES staff at Hart–Miller Island	4/10/95	
[signature]	8/18/95	1530			

8/18/95

WATER RESOURCES ADMINISTRATION SAMPLE INFORMATION AND CHAIN OF CUSTODY RECORD

SEQUENCE NUMBER

INCIDENT NAME: HART MILLER COUNTY:

SAMPLE #	DATE	TIME	SAMPLERS NAME	WITNESS NAME	WEATHER CODE	TIDE CODE	DEPTH FEET	PRODUCT SUSPECTED	EXACT LOCATION WHERE SAMPLE WAS TAKEN
WRA HM16-1	4/10/95	1000	SHOEMAKER	PFITZEMEYER	WINDY CLOUDY	EBB	18	RANGIA	39° 13' 17" 76 22' 30
WRA HM16-2	"	"	"	"	"	"	"	"	"
WRA G25-1	"	1215	"	"	"	FLOOD	17	RANGIA	39° 14 49 76° 21 05
WRA G25-2	"	1215	"	"	"	"	"	"	"
WRA G25-3	"	1215	"	"		"	"	"	"
WRA G25-4	"	1215	"	"		"	"	"	"
WRA									

OTHER PERTINENT INFORMATION ABOUT SAMPLE:

SAMPLES TO MES AT HMI

SAMPLES RELINQUISHED BY:	RECEIVED BY:	DATE:	TIME:
	[illegible]	4/10/95	1700
RELINQUISHED BY: [illegible]	RECEIVED BY: Mark Pace	DATE: 4/16/95	TIME: 1530
RELINQUISHED BY: Mark Pace	RECEIVED BY: B.J. Dauphy	DATE:	TIME:

THESE ___ ARE, ___ ARE NOT SECURITY SAMPLES.

RETURN SAMPLE RESULTS TO: _____

CHEMIST IN CHARGE OF ANALYSIS: _____

TYPE OF ANALYSIS REQUESTED:

SAMPLE RESULTS: ___ SEE ATTACHED MEMO.

WHITE COPY: TO LAB. RETURN UPON COMPLETION FOR ENFORCEMENT FILE.

PINK COPY: TO LAB. RETAIN IN LAB FILE.

YELLOW COPY: SAMPLER RETAINS FOR INITIAL CASE FILE.

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9511781

WATER RESOURCES ADMINISTRATION SAMPLE INFORMATION AND CHAIN OF CUSTODY RECORD

SEQUENCE NUMBER

INCIDENT NAME: _____ COUNTY: _____

SAMPLE #	DATE	TIME	SAMPLERS NAME	WITNESS NAME	WEATHER CODE	TIDE CODE	DEPTH FEET	PRODUCT SUSPECTED	EXACT LOCATION WHERE SAMPLE WAS TAKEN
WRA HM12-1	4-10-95	1245	SHOEMAKER	PFITZENMEYER	WINDY, CLOUDY	FLOOD	18'	RANGIA	39° 14' 05' 76° 20' 05'
WRA HM12-2	"	"	"	"	"	"	"	"	"
WRA S-4-1	"	1400	"	"	"	"	16	"	39° 14' 40 76° 21' 28'
WRA S-4-2	"	"	"	"	"	"	"	"	"
WRA 32-1	"	1500	"	"	"	SLACK	13	RANGIA	39° 15' 25' 76° 20 35'
WRA 32-2	"	"	"	"	"	"	"	"	"
WRA HM-22-1	"	1625	"	"	"	FLOOD	14	"	39° - 16' 58 76° 18' 51

OTHER PERTINENT INFORMATION ABOUT SAMPLE:
HM22-2 " " " " " " " "

RECEIVED
FEB 07 1996

SAMPLES TO MES AT HMI

SAMPLES RELINQUISHED BY:	RECEIVED BY: Environmental Service	DATE: 4/10/95	TIME: 1700
RELINQUISHED BY:	RECEIVED BY: Mark Pace	DATE: 4/11/95	TIME: 1330
RELINQUISHED BY: Mark Pace	RECEIVED BY: B. D. Davey	DATE:	TIME:

THESE ___ ARE, ___ ARE NOT SECURITY SAMPLES.

RETURN SAMPLE RESULTS TO: _____

CHEMIST IN CHARGE OF ANALYSIS: _____

TYPE OF ANALYSIS REQUESTED:

SAMPLE RESULTS: ____ SEE ATTACHED MEMO.

WHITE COPY: TO LAB. RETURN UPON COMPLETION FOR ENFORCEMENT FILE.

PINK COPY: TO LAB. RETAIN IN LAS FILE.

YELLOW COPY: SAMPLER RETAINS FOR INITIAL CASE FILE.

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