CATALOG DOCUMENTATION
NATIONAL COASTAL ASSESSMENT- NORTHEAST DATABASE
YEARS 2000-2006
SEDIMENT CHEMISTRY DATA: "SEDCHEM"

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1. DATASET IDENTIFICATION

1.1 Title of Catalog document
National Coastal Assessment-Northeast Region Database
Years 2000-2006
SEDIMENT CHEMISTRY DATA

1.2 Authors of the Catalog entry

John Kiddon, U.S. EPA NHEERL-AED
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1.3 Catalog revision date
October 2009

1.4 Dataset name
SEDCHEM

1.5 Task Group
National Coastal Assessment-Northeast

1.6 Dataset identification code
007

1.7 Version
001

1.8 Requested Acknowledgment
EMAP requests that all individuals who download EMAP data acknowledge the source of these data in any reports, papers, or presentations. If you publish these data, please include a statement similar to: "Some or all of the data described in this article were produced by the U. S. Environmental Protection Agency through its Environmental Monitoring and Assessment Program (EMAP)".

2. INVESTIGATOR INFORMATION (for full addresses see Section 13)

2.1 Principal Investigators (NCA Northeast Region)

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2.3 Sample Processing Investigators

John Macauley, U.S. EPA NHEERL-GED

3. DATASET ABSTRACT

3.1 Abstract of the Dataset

The SEDCHEM data file reports the concentrations of chemical contaminants in sediment samples collected in Northeast estuaries sampled during the summer of 2000-2006. Sediment samples were analyzed for 77 chemical constituents, including metals, polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and pesticides. One record is presented per analyte. For concentration values smaller than the MDL (non-detects), the result is reported as zero, the method detection limit (MDL) is listed, and the record is flagged; thereby giving the data user options for alternative treatment of non-detects (see Section 4.3).

3.2 Keywords for the Dataset

Sediment contaminants, metals, polynuclear aromatic hydrocarbons, PAH, polychlorinated biphenyls, PCB, pesticides, DDT.

4. OBJECTIVES AND INTRODUCTION

4.1 Program Objective

The National Coastal Assessment (NCA) is a national monitoring and assessment program with the primary goal of providing a consistent evaluation of the estuarine condition in U.S. estuaries. It is an initiative of the Environmental Monitoring and Assessment Program (EMAP), and is a partnership of several federal and state environmental agencies, including: EPA's Regions, Office of Research and Development, and Office of Water; state environmental protection agencies in the 24 marine coastal states and Puerto Rico; and the United States Geological Survey (USGS) and the National Oceanic and Atmospheric Agency (NOAA). The NCA program was initiated in 2000 and completed in 2006.

Stations were randomly selected using EMAP's probabilistic sampling framework and were usually sampled once during a summer index period (June to October). Where possible, a consistent suite of indicators was used to measure conditions in the water, sediment, and in benthic and fish communities. The measured data may be used by the states to meet their reporting requirements under the Clean Water Act, Section 305(b). The data were also used to generate a series of national reports characterizing the condition of the Nation's estuaries http://www.epa.gov/nccr/.

4.2 Dataset Objective

The objective of the sediment chemistry data file is to report the concentrations of chemical contaminants in estuarine sediment samples collected in the northeast NCA program in 2000-2006.

4.3 Dataset Background Discussion

Parameters contained in SEDCHEM data file are listed in Section 4.4. This current section provides background information on several of these parameters. The information here pertains to data collected in 2000-2006 in northeastern coastal region, Maine through Virginia.

The NCA suite of analytes measured are the same contaminants measured by EPA's Environmental Monitoring and Assessment Program (EMAP) and NOAA's National Status and Trends program. Four classes of analytes are measured: polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), organo-chlorine pesticides, and metals. The twenty-two measured PAHs compounds include the 16 priority pollutants defined by the Superfund program and several alkylated derivatives which are useful in identifying sources of these compounds. The concentrations of 20 PCBs and 20 pesticides, all Superfund priority pollutants, are also measured. Sediment grain-size and Total Organic Carbon (TOC) measurements made on the same sediments are reported in the SEDGRAIN file.

The analytes in this file are identified with an abbreviated code name (listed in Section 7.1.3). Full chemical names and CAS numbers are listed in the ANALYTES data table.

The Tables below indicate the number of records reporting analyte results by ST_COOP and Year, and can be used to identify systematic absences of data collection by coops. (Some absent blocks reflect coop name changes in 2005/6; essentially ST_COOP NJ-C = NJ, NJ-DB = DB, and DE = DI in the Table below. See the metadata file for STATIONS for discussion of the ST_COOP parameter). Note that RI, MA, and CT did not collect nutrient data in 2002. Only 2005/06 data for MD and VA are contained in this database; contact John Macauley (Section 13) for information regarding earlier data for these states.

Number of Metal records by ST_COOP and Year:

# Metal records	Year							
ST_COOP	2000	2001	2002	2003	2004	2005	2006	Grand Total
ME	390	690	298	435	435	330	345	2923
NH	510	540	300	345	240	240	330	2505
MA	540	615		255	315	345	345	2415
RI	510	525		240	270	375	375	2295
CT	405	528	169	164	269	118	480	2133
NY	406	420	645	322	308	350		2451
NJ-C	390	600	426	330	540			2286
NJ						240	690	930
NJ-DB	420	465	492	435	510			2322
DB						300	420	720

DE	255	315	300	285	300			1455
DI						375	360	735
MD						330	375	705
VA						750	735	1485
Grand Total	3826	4698	2630	2811	3187	3753	4455	25360

Number of PAH records by ST_COOP and Year

# PAH records	Year							
ST_COOP	2000	2001	2002	2003	2004	2005	2006	Grand Total
ME	572	1012	484	484	638	484	506	4180
NH	748	792	440	462	352	352	484	3630
MA	792	924		374	462	506	506	3564
RI	748	770		352	396	550	550	3366
CT	594	748	286	242	396	176	704	3146
NY	638	682	924	506	484	528		3762
NJ-C	572	880	660	484	792			3388
NJ						352	1012	1364
NJ-DB	616	660	792	638	748			3454
DB						440	616	1056
DE	374	462	440	418	440			2134
DI						550	528	1078
MD						462	550	1012
VA						1078	1078	2156
Grand Total	5654	6930	4026	3960	4708	5478	6534	37290

Number of PCB records by ST_COOP and Year

# PCB records	Year							
ST_COOP	2000	2001	2002	2003	2004	2005	2006	Grand Total
ME	520	920	440	609	609	462	482	4042
NH	680	720	400	483	336	336	459	3414
MA	720	840		357	441	483	483	3324
RI	680	700		336	378	525	525	3144
CT	540	720	260	230	378	168	667	2963
NY	609	651	924	470	462	504		3620
NJ-C	520	800	600	462	756			3138
NJ						336	966	1302
NJ-DB	560	600	720	609	714			3203
DB						420	588	1008
DE	340	420	400	399	420			1979
DI						525	504	1029
MD						462	525	987
VA						1050	1021	2071
Grand Total	5169	6371	3744	3955	4494	5271	6220	35224

Number of Pesticide records by ST_COOP and Year

# Pesticide records	Year							
ST_COOP	2000	2001	2002	2003	2004	2005	2006	Grand Total
ME	516	920	418	580	580	440	460	3914
NH	664	720	394	460	320	320	440	3318
MA	720	840		340	420	460	460	3240
RI	678	700		320	360	500	500	3058
CT	513	684	247	219	359	158	640	2820
NY	522	527	836	437	418	456		3196
NJ-C	520	800	592	440	720			3072
NJ						320	920	1240
NJ-DB	560	600	698	580	680			3118
DB						400	560	960
DE	340	420	400	380	400			1940
DI						500	480	980
MD						440	500	940
VA						1000	980	1980
Grand Total	5033	6211	3585	3756	4257	4994	5940	33776

Routinely, the concentration values from clean sites were reported as smaller than the method detection limit (MDL). In this file, these 'non-detects' are reported as zero and the QACODE is set to "CHM-A" to indicate the assignment. While the concentration of the analyte is clearly small, it is not strictly zero. The MDL is therefore listed as a guideline to users who wish to substitute values other than zero, i.e., setting the non-detect value to the MDL value, half the MDL value, etc. Furthermore, results of organic analytes may routinely show non-zero values that are less than the MDL. This apparent inconsistency is possible because, by convention, the MDLs for organic analyses are calculated to indicate the threshold of reliable measurements, rather than the stricter limit of instrumental detection. In these cases, the best estimate of the concentration is reported (i.e., the value reported by the analytical laboratory), the QACODE is set to "CHM-B", and the MDL is listed. The user can be confident that the analyte is present, but there is a high degree of uncertainty in the reported concentration. Note that the value of the MDL depends on the dilution history of the sample; therefore, its magnitude can differ widely among samples. Most results in this file are larger than the MDL and are reported directly without MDL values or QACODEs. Finally, records flagged with "CHM-C" indicate that the concentration value is uncertain because an interference was noted in the blank analysis performed with the sample; caution is advised in interpreting these results. To summarize:

QACODE	INTERPRETATION	CONC reported	MDL reported
<none>	result is detectable and > MDL	as measured	<none>
CHM-A	result is ≤ MDL and undetectable	zero	MDL is listed
CHM-B	result is ≤ MDL but detectable	best estimate	MDL is listed
CHM-C	result may be affected by interference	best estimate	<none>

Samples collected in 2000-2006 were analyzed by a variety of state and national-contract analytical labs, identified by the parameter LABCODE.

The Table below lists the number of metal records analyzed by the indicated labs by ST_COOP and year (laboratory participation was identical for PAHs, PCBs, and pesticides). While some indications of minor systematic laboratory biases may be evident for some analytes and labs, the biases were not considered great enough to exclude the results from the database. The parameter LABCODE can be used to more carefully examine the results for laboratory bias. Addresses of the participating labs follow the Table.

Count of nutrient records by ST_COOP, LABCODE, and Year:

# Metal records		Year						
ST_COOP	LABCODE	2000	2001	2002	2003	2004	2005	2006
ME	NAT_ADL	516	920					
	NAT_ERI			418				
	NAT_GPL				580	580	440	60
	NAT_CRG							400
NH	NAT_ADL	664	720					
	NAT_ERI			114				
	NAT_GPL			280	460	320	320	180
	NAT_CRG							260
MA	NAT_ADL	720	840					
	NAT_GPL				340	420	460	
	NAT_CRG							460
RI	NAT_ADL	678	700					
	NAT_GPL				320	360	500	180
	NAT_CRG							320
CT	CT (ERI)	513	684	247				
	NAT_GPL				200	340	120	
	NY				19	19	38	
	NAT_CRG							640
NY	NY	522	527	836	437	418	456	
NJ-C	NAT_ADL	520	800					
	NAT_ERI			152				
	NAT_GPL			440	440	720		
NJ	NAT_GPL						320	200
	NAT_CRG							720
NJ-DB	NAT_ADL	560	600					
	NAT_ERI			418				
	NAT_GPL			280	580	680		
DB	NAT_GPL						400	
	NAT_CRG							560
DE	NAT_ADL	340	420					
	NAT_GPL			400	380	400		
DI	NAT_GPL						500	480
MD	NAT_GPL						440	
	NAT_CRG							500
VA	NAT_GPL						1000	100
	NAT_CRG							880

Samples collected in 2000-2006 were analyzed by one of several analytical labs, identified by the parameter LABCODE in Section 4.4. Participating labs in 2000-2006 were:

LABCODE = NAT_ERI: Environmental Research Institute, University of Connecticut, Storrs, CT 06269-5210.

LABCODE = NAT_GPL: GPL Laboratories, 7210A Corporate Court, Frederick, MD 21703

LABCODE =NY: (NY analyses only) New York Dept of Health Services, Wadsworth Center, Empire State Plaza, Albany, NY 12201

LABCODE = CT(ERI): (Connecticut analyses only) Environmental Research Institute, University of Connecticut, Storrs, CT 06269-5210.

LABCODE = NAT_CRG: CRG Marine Laboratories, Inc., 2020 Del Amo Blvd, Suite 200, Torrance, CA 90503

NCA planners provide two alternate locations for a station location in the event that the original location cannot be sampled. The parameter STA_ALT indicates whether the station location was the original site, first alternate, or second alternate—STA_ALT = "A", "B", or "C", respectively. Also refer to discussion in the STATIONS metadata file regarding use of this parameter during analysis of the data.

Massachusetts did not participate in the NCA program in 2003. Rhode Island conducted fish trawls only in 2003, and collected physical water parameters in conjunction with the trawls. Connecticut collected all parameters, but at an abbreviated group of in-shore stations (stations in the Long Island Sound intended for sampling in 2003 were sampled in 2003).

4.4 Summary of Dataset Parameters

* denotes parameters that should be used as key fields when merging data files

*STATION	Station name
*STAT_ALT	Alternate Site Code (A, B, C)
*EVNTDATE	Event date
*ANALYTE	Name of analyte measured. A list of the ANALYTE codes and their full chemical names is presented in the file ANALYTES; also see Section 7.1.3.
CONC	Concentration of analyte. Results fall into one of three categories: 1) the analyte concentration was large and reliably reported; 2) the analyte concentration was less than the method detection limit, but the best estimate of the concentration is reported; and 3) and the analyte was not detected and is reported as zero. See Section 4.3 for further discussion.
CHMUNITS	Concentration units used to report results, reported as the mass of analyte per dry mass of sediment: Metals ug/g (ppm) PAHs, PCBs, Pesticides ng/g (ppb)

MDL — Method Detection Limit; reported only when measured concentration is < MDL (see Section 4.3)

QACODE — QA/QC codes:

- <blank> — CONC > MDL; concentration value is reliable
- CHM-A — CONC is undetectable; value set to zero (user may wish to substitute another value)
- CHM-B — CONC ≤ MDL, but is detectable; best estimate reported
- CHM-C — failed QA criteria: an interference was noted in the blank analysis performed with the sample; caution is advised in interpreting the result. See Section 4.3 for further discussion.

LABCODE — Code identifying laboratory responsible for performing chemical analyses

- CT(ERI) — State laboratory for CT samples only
- NY — State laboratory for NY samples only
- NAT_ERI — National contract lab (ERI)
- NAT_GPL — National contract lab (GPL)
- NAT_ADL — National contract lab (ADL)
- NAT_CRG — National contract lab (CRG)

ANALTYPE — Code identifying type of analysis

- PEST — Pesticides
- PAHs — Polynuclear aromatic hydrocarbons
- PCBs — Polychlorinated biphenyls
- METALS — Metals

5.0 DATA ACQUISITION AND PROCESSING METHODS

5.1 Data Acquisition / Field Sampling

The sample collection methods used by USEPA trained field crews will be described here. Any significant variations by NCA partners are noted in Section 5.1.12. Details regarding NCA partners are reported in the STATIONS data file.

5.1.1 Sampling Objective

Sediment sub-samples were collected for the analysis of metallic and organic chemical constituents. Separate sub-samples from the same grab were used for sediment grain-size analyses and toxicity testing. Additional sediment grabs were taken for benthic macrofaunal analysis.

5.1.2 Sample Collection: Methods Summary

Sediment was collected with a 0.04-m^2 Young-modified Van-Veen grab or similar sampler. Only the top two centimeters of a grab were retained for physical, chemical, and toxicological analyses. A sufficient number of grabs were processed to provide three liters of the 2-cm composite material. The composite was homogenized and separated into two fractions for storage until analysis. One fraction was frozen and used in the measurement of total organic carbon (TOC) and concentrations of chemical contaminants. The second fraction was chilled but not frozen during storage, and was used for grain-size and toxicity analyses. Separate sediment grabs were taken for benthic macrofaunal analysis.

5.1.3 Beginning Sampling Dates
25 June 2003

5.1.4 Ending Sampling Dates
31 October 2003

5.1.5 Sampling Platform
Samples were collected from gasoline or diesel powered boats, 18 to 133 feet in length.

5.1.6 Sampling Equipment
A 1/25 m2, stainless steel (coated with Kynar), Young-modified Van Veen grab sampler was used to collect sediments.

5.1.7 Manufacturer of Sampling Equipment
Young's Welding, Sandwich, MA

5.1.8 Key Variables
Not applicable

5.1.9 Sample Collection: Methods Calibration
The sampling gear does not require calibration, although it was inspected regularly for damage by mishandling or impact on rocky substrates.

5.1.10 Sample Collection: Quality Control
Care was taken to minimize disturbance to the sediment grabs. Grabs that were incomplete, slumped, less than 7 cm in depth, or comprised chiefly of shelly substrates were discarded. The chance of sampling the same location was minimized by repositioning the boat five meters downstream after three sampling attempts.

5.1.11 Sample Collection: References
Strobel, C.J. 2000. Environmental Monitoring and Assessment Program: Coastal 2000 - Northeast component: field operations manual. Narragansett (RI): U.S. Environmental Protection Agency, National Health and Environmental Effects Research Laboratory, Atlantic Ecology Division. Report nr EPA/620/R-00/002. 68 p.

5.1.12 Sample Collection: Alternate Methods
Different grab samplers used by NCA partners include the Smith-MacIntyre and Ponar grab samplers.

5.2 Data Preparation and Sample Processing

5.2.1 Sample Processing Objective
Sediment samples were analyzed for total metals, PAHs, PCBs and pesticides.

5.2.2 Sample Processing: Methods Summary
All analyses were performed on samples that were stored frozen. Sediments analyzed for total metals were dried and completely digested in nitric/hydrofluoric acids (acid persulfate for mercury). The

analytical methods used to measure analyte concentrations were: cold vapor atomic analysis (AA) for mercury; graphite furnace AA for silver, arsenic, cadmium, lead, antimony, tin and thallium; hydride generation atomic fluorescence for selenium; and optical-emission ionically coupled plasma (ICP) for the remaining metals. For the organic analyses, sediments were extracted using the procedures of NOAA National Status and Trends Program (Lauenstein and Cantillo, 1993). The PAHs were analyzed by gas-chromatography / mass-spectrometry (GC/MS); pesticides and PCBs were analyzed by GC/ECD (electron capture detector).

5.2.3 Sample Processing: Calibration

The analytical instruments were calibrated by standard laboratory procedures including: constructing calibration curves, running blank and spiked quality control samples, and analyzing standard reference materials.

5.2.4 Sample Processing: Quality Control (QC)

Each batch of samples was accompanied by QC analyses consisting of method blanks, matrix spikes, matrix spike duplicates, and standard reference materials (SRMs). In total, approximately 5% of all analyses were QC analyses. Processing quality was considered acceptable if the following criteria were met: blanks were less than three times the minimum detection limit; accuracy, as determined by analysis of certified reference materials, was within 30% for organic analytes and within 15% for inorganic analytes; and precision, as determined by replicate analyses, was within 30% for organic analytes and within 15% for inorganic analytes. Additional specifications and guidelines are presented in U.S. EPA 2001.

5.2.5 Sample Processing: References

Lauenstein, G. G. and A. Y. Cantillo (eds.). 1993. Sampling and analytical methods of the National Status and Trends Program National Benthic Surveillance and Mussel Watch Projects 1984-1992: Comprehensive descriptions of trace organic analytical methods, Volume IV NOAA Technical Memorandum NOS ORCA 71, Silver Spring, MD. 182 pp.

Texas A & M University, Geochemical and Environmental Research Group. 1990. NOAA Status and Trends, Mussel Watch Program, Analytical Methods. Submitted to NOAA. Rockville (MD): U.S. Dept. of Commerce, National Oceanic & Atmospheric Administration, Ocean Assessment Division.

U.S. EPA. 1995. Environmental Monitoring and Assessment Program (EMAP): Laboratory Methods Manual-Estuaries, Volume 1: Biological and Physical Analyses. Narragansett (RI): U.S. Environmental Protection Agency, Office of Research and Development, EPA/620/R-95/008.

U.S. EPA. 2001. Environmental Monitoring and Assessment Program (EMAP): National Coastal Assessment Quality Assurance Project Plan 2001-2004. U.S. Environmental Protection Agency, Office of Research and Development, National Health and Environmental Effects Research Laboratory, Gulf Ecology Division, Gulf Breeze, FL. EPA/620/R-01/002. 189 p

5.2.6 Sample Processing: Alternate Methods

Not applicable

6. DATA ANALYSIS AND MANIPULATIONS

6.1 Name of New or Modified Values
Not applicable

6.2 Data Manipulation Description
Concentrations of metallic analytes smaller than the method detection limit were reported as zero (see Section 4.3 for details).

7. DATA DESCRIPTION

7.1 Description of Parameters

7.1.1 Components of the Dataset

PARAMETER	TYPE	LENGTH	LABEL
ANALYTE	Char	8	Code for Analyte Measured
CONC	Num	8	Concentration of Analyte in Sample
CHMUNITS	Char	10	Unit of Measure
MDL	Num	8	Method Detection Limit
STATION	Char	9	Station Name
STAT_ALT	Char	1	Station Name
EVNTDATE	Num	8	Event Date
QACODE	Char	10	QA Code(s)
LABCODE	Char	10	Contract/Lab Identifier
ANALTYPE	Char	10	Code for type of analyisis

7.1.2 Precision of Reported Values
All values have been rounded to three significant digits.

7.1.3 Minimum and Maximum Value in Dataset (non-zero data)

ID	NAME	MIN	MAX
METALS			
AG	Silver	0.005	29.2
AL	Aluminum	4	109000
AS	Arsenic	0.32	88.1
CD	Cadmium	0.005	40.6
CR	Chromium	0.42	489
CU	Copper	0.35	741
FE	Iron	159	126000
HG	Mercury	0.001	5.3
MN	Manganese	6.03	2790
NI	Nickel	0.4	86
PB	Lead	1	539
SB	Antimony	0.004	97.3
SE	Selenium	0.015	40.8

SN	Tin	0.04	317
ZN	Zinc	1.19	1640
PAHs			
ACENTHE	Acenaphthene	0.02	1300
ACENTHY	Acenaphthylene	0.01	730
ANTHRA	Anthracene	0.01	4260
BENANTH	Benz(a)anthracene	0.01	7500
BENAPY	Benz(a)pyrene	0.021	7700
BENZOBFL	Benzo(b)fluoranthene	0.04	8800
BENZOKFL	Benzo(k)fluoranthene	0.016	3000
BENZOP	Benzo(g,h,i)perylene	0.019	3900
BIPHENYL	Biphenyl	0.02	860
CHRYSENE	Chrysene	0.01	6900
DIBENTP	Dibenzothiophene	0.01	780
DIBENZ	Dibenz(a,h)anthracene	0.003	933
DIMETH	2,6-dimethylnaphthalene	0.006	4730
FLUORANT	Fluoranthene	0.073	15000
FLUORENE	Fluorene	0.01	1700
INDENO	Indeno (1,2,3-c,d) pyrene	0.018	4100
MENAP1	1-methylnaphthalene	0.03	10400
MENAP2	2-methylnaphthalene	0.033	13800
MEPHEN1	1-methylphenanthrene	0.008	1600
NAPH	Naphthalene	0.06	7880
PYRENE	Pyrene	0.05	14000
TRIMETH	2,3,5-trimethylnaphthalene	0.021	360
PCBs			
PCB101	2,2',4,5,5'-pentachlorobiphenyl	0.01	3800
PCB105	2,3,3',4,4'-pentachlorobiphenyl	0.003	680
PCB110	2,3,3',4',6-pentachlorobiphenyl	0.2	9700
PCB118	2,3',4,4',5-pentachlorobiphenyl	0.008	690
PCB126	3,3',4,4',5-pentachlorobiphenyl	0.014	19
PCB128	2,2',3,3',4,4'-hexachlorobiphenyl	0.004	280
PCB138	2,2',3,4,4',5'-hexachlorobiphenyl	0.008	2600
PCB153	2,2',4,4',5,5'-hexachlorobiphenyl	0.012	5200
PCB170	2,2',3,3',4,4',5-heptachlorobiphenyl	0.01	370
PCB18	2,2',5-trichlorobiphenyl	0.014	8400
PCB180	2,2',3,4,4',5,5'-heptachlorobiphenyl	0.005	580
PCB187	2,2',3,4',5,5',6-heptachlorobiphenyl	0.005	1100
PCB195	2,2',3,3',4,4',5,6-octachlorobiphenyl	0.003	48
PCB206	2,2',3,3',4,4',5,5',6-nonachlorobiphenyl	0.003	110
PCB209	2,2'3,3',4,4',5,5',6,6'-decachlorobiphenyl	0.002	48
PCB28	2,4,4'-trichlorobiphenyl	0.007	18000
PCB44	2,2',3,5'-tetrachlorobiphenyl	0.013	7300
PCB52	2,2',5,5'-tetrachlorobiphenyl	0.01	18000
PCB66	2,3',4,4'-tetrachlorobiphenyl	0.007	7900
PCB77	3,3',4,4'-tetrachlorobiphenyl	0.1	4700
PCB77_CO	PCB77/PCB110 coeluted	0.032	25

PCB8	2,4'-dichlorobiphenyl	0.021	3800
PEST			
ALDRIN	Aldrin	0.28	12
CISCHL	Alpha-Chlordane	0.005	340
DIELDRIN	Dieldrin	0.005	100
ENDOSUI	Endosulfan I	0.024	11.8
ENDOSUII	Endosulfan II	0.013	21
ENDOSULF	Endosulfan Sulfate	0.005	7.7
ENDRIN	Endrin	0.034	1200
HEPTACHL	Heptachlor	0.012	9
HEPTAEPO	Heptachlor epoxide	0.006	7.8
HEXACHL	Hexachlorobenzene	0.002	220
LINDANE	Lindane (gamma-BHC)	0.005	270
MIREX	Mirex	0.005	9
OPDDD	2,4'-DDD	0.012	120
OPDDE	2,4'-DDE	0.014	550
OPDDT	2,4'-DDT	0.007	14.4
PPDDD	4,4'-DDD	0.009	360
PPDDE	4,4'-DDE	0.001	280
PPDDT	4,4'-DDT	0.006	580
TNONCHL	Trans-Nonachlor	0.004	18

7.1.4 Maximum Value in Dataset
See Section 7.1.3

7.2 Data Record Example

7.2.1 Column Names for Example Records

STATION STAT_ALT EVNTDATE ANALYTE CONC QACODE MDL CHMUNITS LABCODE ANALTYPE

7.2.2 Example Data Records

STATION	STAT_ALT	EVNTDATE	ANALYTE	CONC	QACODE	MDL	CHMUNITS	LABCODE	ANALTYPE
BU01-0001	A	8/22/2001	AG	0	CHM-A	0.1	ug/dry g	NAT_ADL	METALS
BU01-0001	A	8/22/2001	AL	16500			ug/dry g	NAT_ADL	METALS
BU01-0001	A	8/22/2001	AS	0	CHM-A	1	ug/dry g	NAT_ADL	METALS

8. GEOGRAPHIC AND SPATIAL INFORMATION

8.1 Minimum Longitude (Westernmost)
-77.304 decimal degrees

8.2 Maximum Longitude (Easternmost)
-66.946 decimal degrees

8.3 Minimum Latitude (Southernmost)
36.564 decimal degrees

8.4 Maximum Latitude (Northernmost)
45.1848 decimal degrees

8.5 Name of Region
The National Coastal Assessment Northeast Region covers the northeastern US coastline from Maine to Delaware

9. QUALITY CONTROL AND QUALITY ASSURANCE

9.1 Measurement Quality Objectives
The measurement quality objectives of the EMAP-Estuaries program (see U.S. EPA 2001)specify accuracy goals of 35% and 20% respectively for analyses of organics and inorganics; and precision goals of 30% for all sediment chemistry analyses.

9.2 Data Quality Assurance Procedures
QA procedures included running blanks, spiked samples, and standard reference materials with each batch of samples. Any batch failing to meet the specifications presented in Section 9.1 was reanalyzed or rejected.

9.3 Actual Measurement Quality
All of the data reported in this data file met the QA specifications listed in Section 9.1 or are flagged in a variable called "QACODE".

10. DATA ACCESS

10.1 Data Access Procedures
Data can be downloaded from the web
http://www.epa.gov/emap/nca/html/regions/index.html

10.2 Data Access Restrictions
None

10.3 Data Access Contact Persons
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10.4 Dataset Format
ASCII (CSV) and SAS Export files

10.5 Information Concerning Anonymous FTP
Not available

10.6 Information Concerning WWW
No gopher access, see Section 10.1 for WWW access

10.7 EMAP CD-ROM Containing the Dataset
Data not available on CD-ROM

11. REFERENCES

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Strobel, C.J. 2000. Environmental Monitoring and Assessment Program: Coastal 2000 - Northeast component: field operations manual. Narragansett (RI): U.S. Environmental Protection Agency, National Health and Environmental Effects Research Laboratory, Atlantic Ecology Division. Report nr EPA/620/R-00/002. 68 p.

Texas A & M University, Geochemical and Environmental Research Group. 1990. NOAA Status and Trends, Mussel Watch Program, Analytical Methods. Submitted to NOAA. Rockville (MD): U.S. Dept. of Commerce, National Oceanic & Atmospheric Administration, Ocean Assessment Division.

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U.S. EPA. 2001. Environmental Monitoring and Assessment Program (EMAP): National Coastal Assessment Quality Assurance Project Plan 2001-2004. U.S. Environmental Protection Agency, Office of Research and Development, National Health and Environmental Effects Research Laboratory, Gulf Ecology Division, Gulf Breeze, FL. EPA/620/R-01/002. 189 p

12. TABLE OF ACRONYMS

AED	Atlantic Ecology Division
EMAP	Environmental Monitoring and Assessment Program
EPA	Environmental Protection Agency
MDL	Method Detection Limit
NCA	National Coastal Assessment
ng/g	Nano gram per gram
NHEERL	National Health and Environmental Effects Research Laboratory
PAH	Polynuclear Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyls
ppb	parts per billion
ppm	parts per million
QA/QC	Quality Assurance/Quality Control
SRM	Standard Reference Material
TOC	Total Organic Carbon
ug/g	Micro gram per gram
WWW	World Wide Web

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